

Implementing the 2030 Agenda at Higher Education Institutions: Challenges and Responses



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Foreword





Dear colleagues,

Almost four years ago, the Global University Network for Innovation (GUNi) initiated a strategic line of work on sustainable development and higher education as a response to the adoption by the international community of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). In this sense, we have been working collaboratively with institutions and specialists from around the world in two main initiatives: a biennial Conference and a Group of Experts.

I am very glad to present this publication which is the second exercise by this Group of high-level academics and practitioners representing some of the major networks working on sustainable development and higher education.

With the objective of working as a space to share ideas and initiatives from around the world and support HEIs striving to implement sustainable development across their functions and missions (institutional practices, teaching, research and community engagement & transfer), GUNi and the Group have devoted the present volume to the obstacles that higher education institutions find or may find while pursuing this aim. This is because determining and analysing the barriers that HEIs encounter when dealing with sustainable development is essential in order to find, propose and test possible and ways of overcoming them and ultimately achieve our goals. We are well aware that some barriers are in many cases context-specific to the different characteristics, cultures and environments of each institution. However, at GUNi, we believe that sharing problems, initiatives, good practices and innovations among colleagues and sharing knowledge and expertise from around the globe is of the utmost importance and value in order to capitalize efforts and create a rich culture of collaboration between institutions and cultures.

On these pages, you will find small-scale, medium-scale and big-scale initiatives from HEIs from around the world that should provide inspiration. Every region and every HEI has its story, and while some have advanced more than others have in the institutionalization and implementation of sustainable development, all efforts are praiseworthy; from those faculty members who still haven't found enough institutional support and strive from bottom-up initiatives, to those HEIs that have institutionalized sustainable development but find difficulties reaching and engaging their communities.

One of the most valuable tools that this report offers is a series of recommendations for the higher education communities based on the experiences presented and that should be helpful to guide higher education communities and leadership.

I do hope that you enjoy the read.

Joan Elías
GUNi President

Introduction



About GUNi

The Global University Network for Innovation (GUNi) is an international network founded in 1999 by UNESCO, the United Nations University (UNU) and the Universitat Politècnica de Catalunya-BarcelonaTech (UPC). It was created after the first UNESCO World Conference on Higher Education (1998) to continue and facilitate the implementation of its main decisions. Since 2014, the Catalan Association of Public Universities (ACUP) has hosted its permanent secretariat and presidency.

The network currently gathers more than 220 members from 78 countries from among the UNESCO Chairs in higher education, higher education institutions, research centers and networks related to innovation and social commitment in higher education.

GUNi has regional offices around the world and its mission is to strengthen higher education's role in society, and foster its visions, missions and policies on the main global issues in terms of public service, relevance and social responsibility, thereby encouraging higher education institutions to redefine their roles, embrace a process of transformation and strengthen their critical stance within society.

Two of GUNi's main goals are to:

- Promote the exchange of resources, innovative ideas and experiences, while allowing for collective reflection and co-production of knowledge on emerging higher education issues.
- Contribute to and reflect on the role of higher education and the implementation of the 2030 Agenda and the SDGs for a better and more sustainable future.

The GUNi SDGs Initiative:

Since its origin, and like many higher education institutions (HEIs), GUNi had been working on sustainable development and more broadly focusing on issues of social responsibility and engagement. However, the adoption of the 2030 Agenda raised greater awareness of the need for collective action for sustainable development. GUNi took it as an opportunity and a responsibility to respond to the global demand by

establishing a new strategic line of action based on the 2030 Agenda and the Sustainable Development Goals (SDGs).

GUNi's initiative is based on two main activities: the International Conferences on SDGs and Higher Education (it is currently working on the 2nd edition titled "Higher Education & Science Take Action") and the Group of Experts on SDGs and Higher Education. Of course, both activities go hand in hand and complement each other. The first edition of the Conference was held in Barcelona in September 2017 and featured more than 60 speakers from around the globe. The second edition will be held on March 5-6th in Barcelona and will put the spotlight on how higher education institutions are embedding sustainable development in their core missions and taking action in diverse and creative ways. The conference will focus on showcasing, explaining and sharing scientific research, innovative practices, projects, programmes and initiatives that university communities are carrying out to implement the 2030 Agenda and make progress towards achievement of the SDGs.

The report you are now reading is the second publication by the Group of Experts. The first was published in July 2018 and titled *Approaches to SDG 17: Partnerships for the Sustainable Development Goals*¹. This second exercise focuses on the obstacles that HEIs encounter when implementing the SDGs and offers some clues as to what some higher education institutions do to overcome them. In the report you will find regional and institutional approaches to sustainable development and will get a picture of how some higher education institutions can, and do, embed sustainable development in their core missions.

Through this project, GUNi hopes to demonstrate its commitment and reinforce the role of HEIs, partnerships, knowledge and research in the achievement of the goals and a better future for all.

Implementing sustainable development at HEIs: obstacles and responses

HEIs have been working on sustainable development and related issues since well before the adoption of the 2030 Agenda and the 17 SDGs. In fact, their involvement with societal issues dates back to their own inception!

1. Available here: http://www.guninetwork.org/files/approaches_to_sdg17-partnerships_for_the_sdgsgs.pdf

However, since very recently, much of the emphasis has been placed on a narrow approach to sustainability (i.e. the environment). In the first IAU Global Survey on Higher Education and Research for Sustainable Development, 84% of institutions gave “environmental issues” as their answer when asked “What is Sustainable Development in your institution?” as opposed to 60% of respondents who said “cultural considerations” and 68% “societal considerations”². Fortunately, and despite the continuing predominance of “environmental questions”, the approach has broadened in recent years to include all aspects of life. More importantly, the Agenda has triggered renewed interest among different parties and has once again put the spotlight on topics that in some cases were regarded as “secondary”. The 2030 Agenda includes a highly comprehensive array of topics and issues, well beyond the climate and environment (education, food, cities, industry, peace, gender, and many others).

Looking at the 2030 Agenda from a higher education perspective, its main strength is that it has given us the opportunity to once again shed light on the essentiality of embedding certain values and practices in the main missions of our institutions. The 2030 Agenda has given us the chance to rethink the role of higher education institutions, as reflected in GUNi’s mission statement. It also goes a step further by making everyone responsible and calling for collective action. Universities have multiple roles to play in this (in education, research and as institutions in a specific economic and social ecosystem). Another important message of the 2030 Agenda is that even though it appeals to every country, government, organization and citizen, its objectives and targets need to be localized to a certain geography (both metaphorically and literally). The same occurs when we apply this rule to HEIs and that is why the objective of this publication is not to offer a set of recipes or instructions; our aim is instead to bring forth and share examples of how different institutions in different contexts and from diverse regional approaches are tackling the issue. Therefore, our goal is to shed some light on the current initiatives that are being carried out in different parts of the world, raise awareness of the importance of embedding sustainable development and provide some general key recommendations for higher education communities (always taking into account the vital importance of context and location).

Most of the higher education community involved in such topics agree that the main objective for HEIs in the implementation of sustainable development should be its holistic integration in their systems. However, as Leal Filho et al. argue, even though many universities have started to lead the way with different initiatives, “many of those efforts address only one or two of the sustainability domains at HEIs, which continue to foster compartmentalization, instead of a holistic approach” (Leal Filho et al., 2017). These same authors found in their research that most initiatives are focused on education, followed by campus operations, institutional frameworks, outreach and assessment and reporting, research being the least applied area (Leal Filho et al., 2017). With regards to obstacles, their research (based on the responses of a sample of higher education institutions) found that those considered most problematic were (1) lack of institutional support and (2) lack of awareness and concern. In many cases, we find two situations: either there is a leadership that is convinced of the need to embed sustainable development but finds it very difficult to reach academics, service staff and students and make cultural change possible, or we find strong bottom-up approaches coming from enthusiasts that lack clear support from leadership. Other obstacles mentioned as limiting the capacity of universities are budget restrictions (and lack of staff), lack of an encouraging policy environment and lack of coordination and interdisciplinary work. The latter obstacle is of capital importance and the 2030 Agenda has also put the spotlight on the need to break silos and work across disciplines and faculties³. The 2nd IAU Global Survey on HESD has found that most institutions surveyed considered “funding” to be the most relevant burden when asked “what is missing in order to increase sustainable development at your institution”?

On the following pages you will find some approaches and examples as to what kind of obstacles higher education institutions find and how they are trying to overcome them in their specific contexts. In any case, at GUNi we firmly believe that (1) awareness raising, (2) more and stronger partnerships, (3) lobbying for an improved policy environment and (4) support for transdisciplinary work at HEIs, and also between HEIs and other institutions and organizations, will be of key importance in the quest towards implementing the goals set for 2030.

2. <http://iau-hesd.net/sites/default/files/documents/higher-education-paving-the-way-to-sd-iau-2017.pdf>

3. <http://www.guninetwork.org/topic/synergies-between-science-technology-humanities>



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Articles



Obstacles and Opportunities for Achieving the SDGs at Higher Education Institutions: a Regional Arab Perspective

Ghada Ahmadein

Technical Coordinator of the Arab Network for Environment and Development (RAED)

The 2030 Agenda: Leaving no one behind

2015 witnessed significant global events that would have a huge impact on the development process until 2030. On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development – adopted by world leaders in September 2015 at a historic UN Summit – officially came into force. Over the next fifteen years, with these new Goals that universally apply to all, countries will mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind. The SDGs embrace a universal approach to the sustainable development agenda. They explicitly call on businesses to use creativity and innovation to address developmental challenges and recognize the need for governments to encourage sustainability reporting.

However, it is very important to have a clear understanding of the benefits of aligning national and sub-national plans and policy-making processes with the 2030 Agenda and the SDGs, as well as build ownership of it among people, including the marginalized. Although the SDGs are a global agenda, it is critical to support national audiences in linking them to local concerns, thus helping to ensure sustainable public support.

Building public awareness and engaging national, sub-national and local stakeholders in the SDGs is a critical initial and ongoing step towards successful implementation. Beyond awareness, the achievement of a similar level of understanding among governmental and non-governmental stakeholders is critical. This means reaching out to all levels and sectors with information that is tailored to their specific functions, roles, and responsibilities.

A foundation for any effort at raising public awareness of the 2030 Agenda is its universal and integrated nature – connecting the global and local, leaving no one behind, promoting human rights and gender equality, and addressing economic, social and environmental sustainability.

The building of public awareness should be understood as a first step towards a participatory process in implementing the 2030 Agenda. Genuine participation and access to information are cornerstones of empowerment; participation having many instrumental gains as a result of using local knowledge, exposing local preferences, raising resource allocation efficiency, and maximizing the ownership and sustainability of development.

As evidenced, central to the legitimacy and quality of a society-wide agenda is the design of multi-stakeholder policy development and implementation modalities to encourage and facilitate partnerships between government and nationally and sub-nationally active stakeholder networks of civil society, universities, think tanks, the private sector, workers' and employers' organizations, other development actors, and national human rights institutions (UNDP-OHCHR 2012). The inclusion of the full diversity of stakeholders means paying specific attention to the inclusion of all voices, including women and children, with a particular focus on marginalized groups and individuals.

Achieving the SDGs in the Arab Region

Past strategies in Arab countries lacked a holistic and inclusive approach to development. The 2030 Agenda and its enshrined goals, embracing the economic, social, and environmental perspectives of sustainable development provide a historic and promising opportunity for the wellbeing of the world's future generations and the planet. In this context, it has been obvious to Arab countries that it is critically important to reinstate a positive track of development to meet the aspirations of their current and future generations for dignified living. Many of those countries have already taken serious and committed steps towards developing National Strategies for Sustainable Development. However, to achieve it, Arab countries need to address a series of challenges, including:

- Political changes, manifested in the significant political turmoil in some Arab countries, are expected to have far-reaching repercussions on achieving the sustainable development goals. Similarly, the challenges of peace and security will pose additional impediment to the process.
- Scarcity of water, energy, and arable land, aggravated by impacts of climate change, and highly inefficient dependency of the region on fossil fuels to meet its energy needs, all resulting in an extremely high Ecological Footprint.
- Food security threats due to land degradation, water scarcity, and inefficiency of water use in agriculture and the reliance on imported food products to cover between 50 and 100 percent of the region's food needs.
- Climate change impacts, mainly the rise in sea level, worsening water scarcity, land and biodiversity degradation, food security, and the economic impact on the oil producing countries due to the world's shift to renewable sources of energy.
- Unsustainable consumption and production as a result of extreme demographic changes, rising urbanization, changing lifestyles, and subsidy policies.
- Population growth, which represents a major driver of high demand on limited natural resources.
- Heavy subsidies of energy, water, and food led to irrational consumption behaviors, depletion of finite natural capital,

and misallocation of resources, which have made it difficult to upscale sustainable energy and water options.

It is not a matter of diminishing the efforts to promote affirmative actions, or of devaluing the achievements that seek to guarantee free education at the higher and all other levels as a human and public good. It is more a matter that the discussion needs to look even further beyond what has already been achieved.

Examples of regional Initiatives to achieve the SDGs in the Arab Region

The Arab Forum for Sustainable Development is a high-level regional platform for reviewing and following up on the implementation of the 2030 Agenda for Sustainable Development in the Arab region.

The previous sessions of the Forum were held in Amman in 2014 and 2016, Manama in 2015, Rabat in 2017, and Beirut in 2018 & 2019, The Doha Declaration on the Implementation of the 2030 Agenda for Sustainable Development, issued at the twenty-ninth session of ESCWA (held in Doha from 13 to 15 December 2016), enshrines the Forum as an annual meeting of Governments of the Arab States and sustainable development stakeholders to share experiences and study mechanisms to implement the 2030 Agenda at the national and regional levels. Its conclusions are submitted to the high-level political forum on sustainable development, which is held annually in New York in July.

The Arab Forum is growing in stature as a broad, regional stage for all parties to engage in the annual follow-up and review of implementation of the 2030 Agenda. It also serves to promote a common regional approach to and solidarity on cross border issues and challenges facing all the Arab countries. The Forum plays an important role in the exchange of experiences, the dissemination of knowledge and the reaffirmation of commitments to sustainable development at the regional and international levels.

Considerable challenges confronting the countries and peoples of the region are holding back progress. Among the most critical are: increasing poverty; the lack of sustainable, inclusive and equitable economic growth; the proliferation of conflicts, which is crippling the potential for economic and social growth; high unemployment, in particular among young people; the yawning gaps in developmental equality between regions and social groups; and the lack of gender equality. There is a need for institutions that are able to meet the needs of all social groups and regions. Cross-sectoral policy coordination is poor and there is a need to engage all the various stakeholders, including civil society, young people and the private sector. Further challenges are posed by climate change and the scarcity of natural resources, such as water.

Moreover, occupation and conflict have taken a heavy toll on the region's peoples, institutions, natural resources, infrastructure and peace, and on progress towards sustainable development in general. Not only have they circumscribed the region's capacity to regenerate with a programme of transformational development, they have also led to a steep and ongoing reversal of basic development gains, such as those relating to health, education and the empowerment of women and girls.

Thus, it is essential for the Arab countries and the international and regional institutions operating in the region to work to close the large data gap, in particular with regard to the collection of disaggregated data, not only to monitor progress but also to calibrate policies and programmes and bring the Arab countries closer to achieving the goals and targets of the 2030 Agenda. Also, effective institutions, constitutions and legal reforms at the national level remain key factors for achieving sustainable development, equality and justice, and aligning national development plans with the 2030 Agenda.

Arab Network for National Sustainable Development Fora

In 2012, the Arab Network for Environment and Development (RAED), a regional network established in 1990 and including more than 300 member civil society organizations from 18 Arab countries, initiated the Egyptian Sustainable Development Forum (ESDF) after an informal process of dialogue and consultations undertaken during the preparations for Rio+10. ESDF is a "think tank" to facilitate a process of dialogue among the different

stakeholders to determine policy gaps in relation to legislation, strategies and national planning to achieve sustainability. ESDF also provides, on a consensus basis, clear action-oriented recommendations on how to integrate sustainability in the different policies while emphasizing the importance of establishing the partnership approach in achieving this goal. It acts as an effective mechanism for permanent continual communication between representatives of governments, local authorities, parliamentarians and politicians, universities and research centers, civil society organizations, the private sector, media, trade unionists, and other sectors of society.

Based on the success accomplished by the ESDF on the national level, RAED has led the process of initiating similar fora in Arab countries. Up until now 5 Arab countries have launched their National Forum for Sustainable Development; namely Jordan, Lebanon, Yemen, Morocco and Tunisia. In 2019, RAED launched the Arab Network for National Sustainable Development Fora, under the umbrella of the League of Arab States (LAS) with a main objective of ensuring the existence of an Arab entity under the auspices of LAS, which includes all national fora for sustainable development to continue to provide the necessary support for its survival and continuity and the exchange of experiences necessary to achieve more success and achievements at the national and regional levels, as well as to contribute to the fulfillment of international and regional commitments related to sustainable development.

Role of Higher Education Institutions on the National Level

Adapting the SDGs to national contexts involves a multi-stage process whereby initial recommendations are made to address gaps and then undertake a more in-depth systems analysis to lay the foundations to create policy coherence, identifying synergies and translating intermediate targets into national policy frameworks, including recognition of the interconnectedness of national, transnational, regional and global policy frameworks (by the country and on the country).

In the modern age, the world seeks to consider the role of education, particularly higher education, in national development and educational progress. The paramount role of higher education in a country's development is inevitable, and universities are one of the most highly significant resources in human societies. They and the

knowledgeable in both developed and developing countries resolve issues and determine macro strategies at a national level. In the countries where higher education is taught using new methods, progress and development will be swifter.

Role of Higher Education Institutions in achieving the SDGs

The education sector is one of the few sectors that can support, promote, and contribute to achieving all of the 17 United Nations' Sustainable Development Goals (UN SDGs).

Universities, in particular, are essential to achieving the SDGs because they can equip the next generation with the skills, knowledge and understanding to address sustainability challenges and opportunities and perform research that advances the sustainable development agenda.

Universities can also provide examples and use their expertise, capabilities, and leadership to influence stakeholders to adopt and model more sustainable practices. To be effective, however, universities should be fully committed to supporting and implementing the 2030 Agenda for Sustainable Development. The SDGs are an important vehicle for creating positive impact by embedding sustainability into university business strategies, decision-making processes and practices, and for improving their accountability to stakeholders.

The SDGs cover a wide range of complex social, economic and environmental challenges and addressing them will require changes in the way societies and economies function and interact with our planet. Education, research, innovation and leadership will be essential in helping society address these challenges. Universities, with their broad remit around the creation and dissemination of knowledge and their unique position within society, have a critical role to play in the achievement of the SDGs. Arguably none of the SDGs will be achieved without this sector.

Engaging with the SDGs will also greatly benefit universities by helping them demonstrate impact, capture demand for SDG-related education, build new partnerships, access new funding streams, and define a university that is responsible and globally aware.

On the National Level, Higher Education Institutions can contribute by the following:

1. Reviewing existing strategies and plans and identifying areas for change.
2. Making initial recommendations to the leadership of the national government to address SDG gaps in existing strategies and plans.
3. Setting nationally-relevant targets: for nationally-adapted and inclusive SDGs that are achievable, yet ambitious; and
4. Formulating strategies and plans using systems thinking: to incorporate the recommendations and the insights from the above steps into strategies and plans and matching ambition and commitments with resources and capacities.

Education and research are explicitly recognized in a number of the SDGs and universities have a direct role in addressing these. However the contribution of universities to the SDGs is much broader, as they can support the implementation of every one of the SDGs as well as the implementation of the SDG framework itself.

Universities occupy a unique position within society. With a broad remit around the creation and dissemination of knowledge, universities have long been powerful drivers of global, national and local innovation, economic development, and societal wellbeing. As such, they have a critical role in the achievement of the SDGs and will also greatly benefit from engaging with them.

What can universities do?

- Strengthen public engagement and participation in addressing the SDGs
- Initiate and facilitate cross-sectorial dialogue and action on SDG implementation
- Play a lead role in policy development and advocacy for sustainable development
- Demonstrate the importance of the university sector in SDG implementation
- Demonstrate the university sector's commitment to the SDGs

- Support and promote the principles of the Sustainable Development Goals
- Undertake research that provides solutions to sustainable development challenges
- Provide the educational opportunity for our students to acquire the knowledge and skills needed to promote sustainable development
- Contribute to the achievement of the Sustainable Development Goals by ensuring our campuses and major programs are environmentally sustainable and socially inclusive, and
- Report on our activities in support of the Sustainable Development Goals

However, Higher Education Institutions will not be able to accomplish and fulfill their role in the implementation of the SDGs unless they possess the capacities and information and are viewed by governments as one of the main stakeholders. They should also believe that their role is not limited to the university campus, but that they should expand to their surrounding local communities to make a real change.

Obstacles faced by Higher Education Institutions

Although there have been proven and successful developments in the field of Higher Education for Sustainable Development over the past 15 years or so (Leal Filho et al. 2015), there are still numerous challenges to be overcome. Among these is the need for Higher Education Institutions to improve the integration of sustainability in the curriculum and in research, and most importantly, to integrate it holistically in their systems.

Research in this field has shown that institutional obstacles are the most significant ones that should be addressed and overcome to ensure the implementation of the SDGs in higher education institutions. Among those obstacles are lack of support from management, lack of appropriate technology, lack of awareness and concern, lack of an environmental committee, lack of buildings with sustainable performance, government barriers, lack of research and development, lack of legislation and guidelines, lack of knowledge and education on the topic, lack of training and collaboration, lack of defined practices and policies, lack of support from the academic

community, lack of incentives for innovations, many restrictions and much bureaucracy, lack of planning and focus, lack of entrepreneurship and public-private partnership, lack of dialogue, lack of capacity and decision, lack of commitment and discipline, and lack of applicability and continuity of the actions.

Those findings suggest that students, educators and the administration need to reach a consensus on sustainable education through dialogue. Collective efforts should be made to improve the outdated curriculum, policies and standards, which will sustainably transform higher education.

Proposed solutions and initiatives to overcome obstacles

Although there have been proven and successful developments in the field of Higher Education for Sustainable Development over the past 15 years or so (Leal Filho et al. 2015), there are still numerous challenges to be overcome. Among these is the need for Higher Education Institutions to improve the integration of sustainability in the curriculum and in research, and most importantly, to integrate it holistically in their systems.

1. Sustainable Campus Systems: Reimagining systems on campus to advance the well-being and resilience of people and the environment
2. Campus as an Urban Living Laboratory: Utilizing the campus and its urban surroundings as a test-bed for innovation and knowledge generation through research and education
3. Collaborative Partnerships: Harnessing the collective intelligence of networks and communities to solve shared problems, and
4. Leadership and Capacity Building: Engaging and empowering faculty, students, and staff in shaping, applying, and continuously improving sustainability mechanisms.
5. Create an enabling environment for students to be a part of sustainability transitions, as students often challenge underlying assumptions, are inherently curious, eager for change, and seldom represent anyone but themselves.

As a matter of fact, young people have proven that they are the main instruments for change and considered one

of the main stakeholders who should be addressed. They could play a major role in mainstreaming sustainable development and helping to achieve the SDGs in their surrounding communities and through their professional careers, once their capacities have been developed and they have been properly informed of the different aspects of sustainable development.

However, essential actions are required in order to start implementing the SDGs in and through higher education institutions through enhanced dialogue among university students, providing them with the necessary capacities, tools and skills. There is also a need to facilitate information accessibility and dissemination and foster exchange of experience among different institutions.

Opportunities for implementing the SDGs in Higher Education Institutions

On the International Level

The Education 2030 Framework for Action (FFA) was formally adopted and launched at a high-level meeting held alongside the 38th UNESCO General Conference at UNESCO headquarters, Paris on 4 November 2015.

The FFA provides guidance to countries for the implementation of the Education 2030 agenda. It aims to mobilize all stakeholders around the ambitious education goal and targets, and proposes ways of implementing, coordinating, financing and reviewing the 2030 education agenda - globally, regionally and nationally - to guarantee equal educational opportunity for all.

The FFA has been developed through a highly consultative process with its essential elements agreed upon at the World Education Forum held in Incheon, Republic of Korea in May 2015. The resulting Incheon Declaration represents the firm commitment of countries and the global education community to a single, renewed education agenda - Education 2030 - which is holistic, ambitious, inclusive and aspirational.

It aims to mobilize all countries and partners around the Sustainable Development Goal on education and its targets, and proposes ways of implementing, coordinating, financing and monitoring Education 2030 to ensure inclusive and equitable quality education and lifelong learning opportunities for all. It also proposes indicative strategies that countries may wish to draw

upon in developing contextualized plans and strategies, taking into account different national realities, capacities and levels of development and respecting national policies and priorities.

Its vision is to transform lives through education, recognizing the important role of education as a main driver of development and in achieving the other proposed SDGs. This new vision is fully captured by the proposed SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and its corresponding targets. It is transformative and universal, attends to the 'unfinished business' of the EFA agenda and the education-related MDGs, and addresses global and national education challenges. It is inspired by a humanistic vision of education and development based on human rights and dignity; social

justice; inclusion; protection; cultural, linguistic and ethnic diversity; and shared responsibility and accountability.

Mediterranean Strategy on Education for Sustainable Development

The Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025 promotes education, awareness-raising and research for sustainable development. It also encourages the implementation of the Mediterranean Strategy on Education for Sustainable Development (MSESD), which is also referred to in the Athens Ministerial Declaration of the 19th Meeting of the Contracting Parties to the Barcelona Convention and its Protocols by which they "resolve to enhance public awareness and the role of education promoting sustainability and the implementation of the Sustainable Development Goals in the Mediterranean".

The Strategy was drafted through a participatory process carried out under the scientific and technical coordination of the UNESCO Chair on Sustainable Development Management and Education in the Mediterranean, with the support of the Mediterranean Educational Initiative on Environment and Sustainability (MEDIES) of the Mediterranean Information Office for Environment, Culture and Sustainable Development (MIO-ECSDE).

The implementation of the MSESD is driven by countries' priorities and initiatives, addresses their specific needs and circumstances and serves as a flexible framework for the fulfillment of their regional/global but also national agendas.

The MSED Action Plan was adopted by the Conference of Ministers of Education (Nicosia, Cyprus, 8-9 December 2016) co-organized by the Government of Cyprus and the EU-funded SWIM-H2020 support mechanism programme. The Action Plan mobilizes the Strategy through concrete activities and strategic directions, identifying four implementation areas in a comprehensive and concise manner:

1. The priority areas for institutional and operational interventions, with recommended activities and an indicative roadmap;
2. A set of identified common regional programmes and projects of institutional and non-thematic nature;
3. The priority thematic areas for region-wide programmes;
4. Proposed indicators for monitoring progress.

Case Study from Egypt

The Arab Network for Environment and Development (RAED) is a regional network, based in Egypt, with more than 300 NGO members from Arab countries in North Africa and West Asia. It was established in 1990 during the preparations for the Earth Summit in Rio de Janeiro and was recognized by the League of Arab States as the representative of civil society on the Council of Arab Ministers Responsible for the Environment (CAMRE), as well as the Arab Ministerial Council for Water. RAED aims to enhance the role of Arab CSOs as key partners among all relevant stakeholders by developing their internal and external capacities to play a greater role in preserving the environment and achieving sustainable development. Over the past few years, it has been playing an enormous role in developing the capacities of CSOs to share in the implementation of international commitments; the Sustainable Development Goals (SDGs), the Climate Change Paris Agreement (COP21) and the Sendai Framework on Disaster Risk Reduction.

In reference to the Egyptian Sustainable Development Forum (ESDF) and realizing the importance of Higher Education Institutions in achieving the SDGs, ESDF has succeeded over the past few years in establishing strong partnerships with 18 Egyptian universities.

Those partnerships resulted in several successful actions entitled “Role of Youth in Mainstreaming Sustainable Development Elements”, “Climate Change and its impact on Development in Egypt”, and “Engaging Youth in Egypt in Advocating for Ethics-Grounded Climate Action with UNESCO”.

The main objectives of those activities were to develop a high level of awareness, to build the capacities of university students and develop their skills towards the Sustainable Development Goals (SDGs) and the National Strategy on Sustainable Development: Egypt’s Vision 2030, to ensure their future involvement in the developmental process in Egypt.

In those activities, ESDF was keen to focus on:

The Knowledge Aspect: in which students were introduced to the global commitments; Sendai Framework on DRR, Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change (COP21), Energy- water- food – ecosystem nexus, National Strategy on Sustainable Development: Egypt’s Vision 2030 and macro national projects, in addition to integrating sustainability in different sectors, UNESCO Declaration on Climate Change Ethics, Education for Sustainable Development, Sustainable Consumption and Production, etc...

Skills Aspect: through developing youth skills in terms of models for green jobs, communication, networking and negotiations, problem-solving, leadership, advocacy, as well as special skills involved in designing and implementing sustainable initiatives either within their universities or in their surrounding local communities. Those activities were complemented by field visits for the students to observe practical activities on the ground and initiate dialogue around those activities.

One of the main results of those activities was the formation of the “Egyptian Youth Forum for Sustainable Development” which now includes more than 500 young people from different universities. 12 Universities have formed Committees for Sustainable Development to follow up on those activities.

On November 13-27, 2018, Egypt hosted the 14th Conference of Parties for the United Nations Convention of Biodiversity (CBD COP14). In July 2018, The Arab Network for Environment and Development (RAED) was assigned by the Ministry of Environment as the focal point for the participation of youth and civil society organizations in the event.

Based on the strong network of young people and partnerships with universities, RAED held four preparatory meetings in September and October 2018 that were attended by more than 800 university students aiming to:

- Educate participants on Biodiversity, international conventions, the link between the UN Convention on Biodiversity and the SDGs, etc...
- Discuss the role of young people during the CBD COP 14
- Encourage students to undertake different activities all over Egypt before, during and after the event to mainstream biodiversity and engage stakeholders.

320 young people participated in this international event that was attended by around 9,000 participants from 196 countries.

In conclusion, the world is changing rapidly, and education is the main tool of change. Recently, countries have been obliged to achieve and report on several global commitments, which cannot be achieved through the efforts of just one party. They require a participatory approach in which everyone should contribute and be committed to fulfilling their responsibilities. Higher education institutions are considered one of core partners in the achievement of sustainable development in different sectors. Although HEI all over the world and specifically in the Arab Region face many obstacles to the fulfillment of their roles, there are many opportunities to ensure their engagement. Partnerships with other actors in the field of development are essential. Partnering with active civilian organizations has proven to be effective and several success stories have been implemented and presented. These need to be up-scaled and replicated to maximize the impacts.

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The Role of University of Malawi towards Successful Implementation of the SDGs: Obstacles and Opportunities for Higher Education Institutions

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Introduction

Since the publication of “Our Common Future” (WCED, 1987), the United Nations has convened a number of meetings for dialogue to develop frameworks for action towards realisation of sustainable development. One of the latest meetings culminated in the formulation of the 2030 agenda, and the 17 Sustainable Development Goals (SDGs) (UN, 2015). The SDGs are integrated and indivisible, balancing the three pillars of sustainable development, namely; economic, social and environment (UN, 2015). The SDGs provide guidance for action to secure a sustainable, peaceful, prosperous and equitable life through approaches that are universal, transformational and inclusive (UNESCO, 2017). Education has a long history as an international priority, and the right to education was first enshrined in the Universal Declaration of Human Rights in 1948 (Didham and Offei-Manu, 2015). Hence it makes sense that one Goal is dedicated to education (SDG4). Education is also essential for achieving all the goals (UNESCO, 2017). This chapter explores opportunities and challenges for higher education with specific reference to the University of Malawi (UNIMA). The paper draws lessons from a number of initiatives such as Education for Sustainable Development (ESD) (Chiotha 2010; Chiotha, et al., 2018;

UNESCO 2015; Albareda-Tiana, 2018). The chapter ends with recommendations for higher education institutions in Malawi and their partners on possible pathways towards effective implementation of the SDGs.

The UNIMA was established in 1965 and became a critical player in national development and should be a key player in the implementation of SDG4 and the other SDGs.

Lessons can also be drawn on how external universities worked in partnership with faith-based organisations, commissions and trusts to address development challenges through education prior to the establishment of UNIMA (Pauw, 1980; Banda, 1982; McKay, 1994; British Online Archives, 2011).

Opportunities and Challenges for SDG Implementation

Universities have the power to influence how global development challenges are defined, understood and addressed (Halvorsen & Ibsen (2017). This can be achieved by creating and empowering change makers, equipping them with relevant knowledge, skills, values and attitudes to effectively contribute to the SDG agenda (Rieckmann, 2017). Some opportunities and challenges for higher education institutions in Africa, drawing lessons from UNIMA, are highlighted in the next section.

Promoting Access to Quality Education

Early Childhood Development

SDG4 in its quest to leave no one behind includes access to quality early childhood development. The UNIMA has relevant experience for scaling this up. In 2003, the Department of Human Ecology at Chancellor College established a community-based childcare centre (CBCC) in one of the poorest communities in Zomba District, Malawi to improve the care and early learning experiences of children aged 2 to 6 years (Chibwana, 2016). For long-term sustainability, the centre was established and managed in collaboration with local community stakeholders. Since the activity was not budgeted for, the Department financed the centre through proceeds from sales of cakes baked by the department and financial donations from the Municipality of Saanich in Canada (ibid). The evaluation of the project by Chibwana (2016) demonstrated that it had achieved its objective, as shown by highly improved performance, elevated motivation and an enhanced retention rate in primary school. Further, the CBCC was able to contribute to other SDGs beyond SDG4, namely improved nutrition (SDG2) and improved health and sanitation, through the WASH services (SDG3).

Similar experiences were observed in another programme where the UNIMA partnered in a project coordinated by LEAD and implemented with WorldFish and the Department of Forestry called the Lake Chilwa Basin Climate Change Adaptation Programme (LCBCCAP). This programme implemented a number of activities relevant to the SDGs that will be discussed later in the chapter. One of these involved another CBCC in a different district

(Salima) of Malawi that was implemented by default. The LCBCCAP was to support women that had embarked on a group project to raise pigs for to generate income and to use the manure for crop production (Chiotha, et al. 2017). Due to their lack of resources, the women struggled to maintain enough pigs to break even because of challenges related to insufficient animal feedstock, poor animal shelter and shortage of drugs for disease control. While scoping ways to support the women as recommended by the Salima District Council, the LCBCCAP team noted that they had also constructed a substandard hut to serve as a CBCC. The LCBCCAP decided to upgrade the CBCC following Malawi Government approved guidelines and included a safe pit latrine following the Blair toilet design (Morgan, 2011), taking care of WASH services (SDG3). While the women had previously used food for their children and livestock from their household sources, an arrangement was made for the school feeding and livestock programmes to have their own gardens to reduce competition with household food supplies (SDG2). The women were taught about climate smart agriculture approaches that they could also apply in their homesteads (SDG13). Further, seedlings were provided for a school woodlot so that the school could have its own reliable source of energy. The programme also constructed a biogas digester so that the school could try biogas (SDG7) as a form of clean energy (Chiotha et al, 2017; Chiotha et al, 2018). After the upgrade, enrolment rose from 10 to 300 children as more parents enrolled their children (ibid).

While the two above examples are success stories, the challenge is that they were somewhat knee-jerky reactions to chance encounters of poverty, malnutrition, water and sanitation rather than strategically planned interventions. Also, the two examples emerged separately and could have benefited from a systematic knowledge management system, essentially to spur the scaling up of innovations and experiences to support the implementation of the SDGs in a more coherent, efficient and systematic manner. In some cases, such internal cross fertilisation has occurred, such as in the UNIMA-wide research dissemination conferences, but this has been erratic.

Primary and secondary school sector

The UNIMA has also focused on improving the quality of primary and secondary school education through research. For example, it is noted that mathematics is one subject in which learners face challenges with

comprehension in Malawi. Collaborative research between UNIMA's faculty of education at Chancellor College and the University of Stavanger in Norway has shown that the quality of mathematics education in primary schools can be improved through the Professional Development (PD) of mathematics teacher trainers (Kazima et.al. 2016; Fauskanger, et al., 2018). The UNIMA will continue the project's activities after it comes to an end because PD has been institutionalised in the faculty (Fauskanger, et al., 2018). While these research results and others might suggest curricular reform, Mwakapenda (2002) argues that this process in general should be democratic, with the involvement of teachers and students, especially from Community Day Secondary Schools (CDSSs) which constitute the majority of participants in secondary education in Malawi. This view is supported by another Project for Strengthening of Mathematics and Science in Secondary Education (SMASSE) in Malawi conducted by Chancellor College and the Department of Teacher Education and Development (JICA, 2016). This project was designed to improve the quality of teaching and learning by fostering a shift from a teacher-centred to a learner-centred approach. Teachers who participated in the programme acquired relevant skills and knowledge that improved student learning. However, some teachers, and especially those in CDSSs, found it hard to apply the learner-centred approaches to their lessons, due to large classes, limited knowledge of the subject content, and inadequate teaching and learning resources (JICA, 2016).

Special Needs Students

In the spirit of being inclusive in relation to access to quality education (SDG4), it is necessary for the education sector to provide opportunities for learners with special needs. For example, Chancellor College has a special needs section with facilities that help to increase access to learning materials for such students. The facilities include automatic sliding doors, computers installed with specialized software for the hearing impaired, braille printing machines and screen magnifiers for students with low vision (UNIMA, 2018). The first two special needs students with visual and physical impairment, respectively, were enrolled in 1972 into the Law Faculty. The number has gradually increased to 80 in 2019 offering opportunities for more diverse special needs such as hearing, albinism, and learning difficulties. With enhanced partnerships, more special needs students can be enrolled but also to support the graduates with appropriate career prospects.

Building on the Education for Sustainable Development (ESD)

Successful implementation of the SDGs requires doing things differently, supported and championed by a cadre of professionals with relevant knowledge, skills, values and attitudes. Universities need to re-align their training programmes in tandem with the aspirations of UN member nations on sustainable development, as expressed in the SDGs. The United Nations Education for Sustainable Development Decade (UNESD) preceding the SDGs offers a stepping stone. As Rieckmann (2017) has indicated, ESD guides education institutions in achieving the SDGs, through supporting enabling systems to define and introduce relevant learning objectives, content and pedagogies that empower learners to internalize sustainability principles.

The UNIMA embraced ESD through a number of programmes and activities that are relevant to the implementation of the SDGs. For example, UNIMA was a member of MESA (Mainstreaming Environment and Sustainability in African Universities), an initiative coordinated by UNEP, UNESCO and the Association of African Universities (Chiotha, 2010). According to a MESA Report (2008), mainstreaming ESD encompassed all three core functions of universities, namely teaching, research and community engagement, and includes management and partnership. Furthermore, mainstreaming environment and sustainability is considered value-based and involves transformative learning processes (Chiotha, 2010). It involves new ways of thinking about teaching, research and community engagement and represents a transformative agenda that is change-oriented at institutional and societal levels (MESA Report 2008, Chiotha, 2010).

The UNIMA has had a number of systems and structures in place to guide new approaches of relevance to successful implementation of the SDGs. There are lessons from the past on how this can be achieved. For example, in the 1990s, when African universities were beginning to embrace email and internet, it was realised that a vast majority of university staff lacked sufficient understanding of innovative applications of Information Technologies (IT), which is taken for granted now. In order to address the capacity gap and with funding from the Carnegie

Corporation and the Ford Foundation, a team from UNIMA and the Director of the American Association for the Advancement of Science (AAAS) produced an information and general guideline booklet to support IT application in research and other activities in African universities (Levey, et.al., 1995). The report also introduced the early stages of automation and digital library services to the UNIMA (ibid). More recently, in its quest to continue improving the quality of teaching and learning through self-directed and distance learning, the UNIMA approached MESA through LEAD in 2007, to organise training on designing e-learning courses. The five-day workshop at Chancellor College for teaching and library staff from all the five constituent colleges of UNIMA was run by the United Nations University Global Virtual University in Norway and produced a 5-year implementation work plan coordinated by the UNIMA Pro-Vice Chancellor (Chiotha, 2010; UNU-GVU Report, 2008). A follow up course was organised in 2013 for UNIMA, other local universities and also staff from universities in Zimbabwe and South Africa. It was run by the University of Agder in Norway and provided hands-on skills on transforming pedagogy for education for sustainable development, focusing on climate change adaptation and mitigation (Chiotha, et al., 2017). Capacity building of this nature should be institutionalised through the UNIMA Committee on University Teaching and Learning (CUTL) as a way of integrating SDG related issues into teaching and learning. The association with MESA also enhanced UNIMA's access to a large selection of online e-resources through the facility whereby subscription for universities from low and middle income countries is waived. One such facility was HINARI for biomedical and health literature.

Another aspect of ESD that is relevant to the SDGs is the existence of interfaculty courses to foster multidisciplinary and interdisciplinarity. For example, the faculty of science at Chancellor College runs a Masters in Environmental Science (MES) programme designed for teaching course-work along with self-directed research. The programme is faculty-based, but departments manage components of the curriculum in an attempt to move away from the environment being equated with specialist fields such as botany and zoology (Chiotha, 2010). Similarly, MES coordinators rotate between different departments. While MES was a creation of and managed by the faculty of science, the faculty looked outside for expertise that is not traditionally available in-house. For example, the faculty of law was

assigned to Environmental Law and Policy; the faculty of humanities was given Ethics and Communication for Development, and the faculty of social science got Resource and Environmental Economics (Chiotha, 2010).

As shown earlier, implementation of the SDGs may go beyond interfaculty collaboration within one university to partnerships involving several universities because of the leverage such partnerships offer in addressing complex problems. For example, issues related to water resource management are quite complex and no single university may have all the resources and expertise to provide adequate learning opportunities and partnerships to reduce unnecessary competition for resources (Jonker et al., 2012). It is for this reason that UNIMA is a member of WaterNet, a regional network of university departments, research and training institutes for the Southern Africa Development Community (SADC), specialising in water (Blokland, et al. 2009). WaterNet aims to build regional institutional and human capacity in Integrated Water Resources Management (IWRM) through training, education, research and outreach. WaterNet's achievements include the establishment of a regional IWRM Masters programme hosted and jointly implemented by seven member institutions. UNIMA handles the water and environment theme while others take different themes (Jonker et al., 2012). The WaterNet programme can provide opportunities to scale up SDGs 3,6,13 and 14.

Aligning to Societal Needs and Aspirations

The UNIMA has done well in responding to society's needs. In the late 1960s, it responded to the call by the Malawi government to increase the output of secondary school teachers in support of the government policy of expanding the secondary school sector. Similarly, the MES cited above was in response to calls for training to support better environmental management (UNESCO, Malawi, 1983) and training of professionals for newly created positions as district environmental officers under the Malawi Environmental Management Act (Government of Malawi, 2017). The WaterNet programme is a good example of responding to national, regional and international concerns because IWRM as an approach gained prominence after the international conference on water in Dublin and the Earth Summit in Rio de Janeiro in 1992. Furthermore WaterNet was also a response to the adoption of the SADC Protocol on Shared

Watercourses in 1995 which created the need to train experts to implement the protocol (Wright et al., 2001).

The SDGs therefore provide a new opportunity for universities to review and recraft their agendas to incorporate emerging development paradigms. The demand for UNIMA to increase the output of secondary school teachers came direct from the Malawi government, but in many cases universities should be proactive in aligning activities to changing dynamics and emerging needs of local and global society.

The IWRM approach offers lessons for universities in embarking on SDG implementation because just as the IWRM could not be achieved through a fragmented and specialised approach to water management, the same scenarios apply to the SDGs. Apart from dealing with trans-boundary issues, WaterNet provides another important element where member institutions offer a limited number of course modules in the fields in which they have comparative strengths (Wright et al., 2001). Similarly, for the SDGs, each institution does not necessarily need to develop competencies in all the SDGs but collectively they must address all of them.

Partnerships between Academia, Civil Society and Private Sector

The complex nature of the SDGs requires innovative partnerships involving academia, civil society and the private sector, because no sector has the singular financial, human and technical capacity to address all of them effectively; hence SDG17 focuses on partnerships. For example, one of the first landmark multidisciplinary projects for UNIMA was the Lake Chilwa Coordinated Research Project (LCCRP) implemented from 1966 to 1976 taking an ecosystems approach to the whole Lake Chilwa Basin (Kalk, et.al., 1979). This project involved 35 experts from UNIMA's faculties of science, social science and humanities, complemented by experts from several specialised research centres in Africa and abroad (ibid). Funding from UNIMA was supplemented by external resources from 11 organisations some of which included the South African private mining sector in recognition of the contribution of Malawians to that country's gold mines (ibid). Apart from the partnerships, this project also addressed one of the challenges of research projects such as their short duration and lack of successor programmes. As Rai et al. (2015) and Mellmann (2015)

have argued, the impact of interventions for short projects may be realized after the project is over and some changes might not be fully captured to inform future interventions. Being a ten-year project, the LCCRP's outputs included robust data for many publications in refereed international journals and a book. This project also addressed the lack of impact outcomes of some research projects, because it significantly contributed towards international recognition and accreditation of Lake Chilwa as a Ramsar site as well as a UNESCO Man and Biosphere Reserve. Both of these designations provide opportunities for the implementation of the SDGs, some ably addressed by the successor programme (LCBCCAP). These included SDG 1 (value addition on fish, rice and pigeon pea sales; SDG2 and 13 (increasing food production through community based adaptation), SDG3 (treatment of schistosomiasis), SDG4 (Masters and PhD students, curricular review, radio programmes for CBCCs), SDG5 (empowering women through the Gender Transformative Approach) and SDG15 (Catchment afforestation through tree planting and regeneration). The private sector partnership through LCBCCAP was not for financial support but to empower communities in the programme to access more lucrative markets and provide mobile banking services to remote sites (Chiotha et al. 2018).

In some cases, the private sector and civil society may come up with capacity building programmes in areas of sustainable development. Such courses usually offer certificates of attendance. However, the participants sometimes request for conversion into credit hour equivalents to count towards university qualifications for better career advancement. In 2004, two civil society organisations (LEAD and Forum for the Future) addressed the challenge of accreditation through collaboration with Middlesex University (UK) in developing a Masters of Arts in Leadership for Sustainable Development course with funding from VODACOM and the private sector (Middlesex University, 2010).

Lifelong Learning

Some of the problems being addressed by the SDGs are persistent, such as poverty and hunger while others such as climate change are emerging problems and successful action through the SDGs requires the creation of lifelong learning opportunities. UNIMA has a number of courses that target professionals seeking further training. These courses could be targeted at the integration of the SDGs.

For example, the department of political and administrative studies (PAS) at Chancellor College offers short tailor-made courses related to the programmes and courses that it offers to its undergraduate and postgraduate students (PAS Profile, 2019) and these can integrate the SDGs.

Championing Policy

The UNIMA occupies a pivotal position in influencing policy that can be harnessed in pursuit of positive SDG outcomes. For example, in 1995, the UNIMA (through the office of the University Research Coordinator) lobbied the Malawi Broadcasting Corporation radio station to dedicate more airtime to HIV and AIDS awareness, successfully overcoming the resistance to the subject at the time (Chiotha, 2005). The UNIMA launched its internal HIV/AIDS policy in 2003 indicating that it would take a leading role in mainstreaming HIV/AIDS in its core activities of teaching, research and management (UNIMA, 2003). The same approach could be taken for the SDGs. For example, UNIMA has strong foundations for addressing neglected tropical diseases such as Schistosomiasis (Moyo, et al., 2016; Chiotha et al., 2018), Oncocerciasis (Bandason, et al., 2014) and Trypanosomiasis (Madanitsa, et al. 2009) to support SDG3. UNIMA's College of Medicine demonstrated that more than 95% of trypanosomiasis cases live within 5 km of a game reserve boundary, influencing policy on targeted interventions (ibid). Neglected tropical diseases are also relevant to SDG1 in that they predominantly affect the poor.

Student Societies

Quality education covers three domains, namely: cognitive (comprising knowledge and thinking skills), socio emotional (skills such as collaboration, negotiation, communication, and values, attitudes) and behavioural (concerning action competencies) (UNESCO, 2017). While university curricula endeavour to incorporate all these domains, there are usually gaps filled by extracurricular activities such as student societies providing opportunities for implementation of the SDGs. These societies provide platforms for interest in civic engagement through self-identification and motivation (Flanagan and Levine 2010).

Civic youth engagements through student associations benefit society in general (Balsano, 2005; Pauw, 1980). The Dean of students at Chancellor College has compiled forty student associations that are diverse, ranging from faith-based, to those that are discipline specific. This diversity could be nurtured to complement the implementation of the SDGs through sensitisation of their patrons. Some have similar objectives and could be guided to work together. For example, the Chancellor College Green Campus Initiative (GCI) formed by the Faculties of Education and Science merged with the Legal Clinic at the Faculty of Law to form the Environmental Legal Clinic (ELCC) (Chikuni, et al, 2015). The merger of the two societies enhances complementarity, synergy and also leverage of resources through interfaculty collaboration.

Centres of Excellence and Cross Faculty Programmes

A number of programmes have been highlighted above that have been implemented by LEAD as a UNIMA Centre that later became an independent entity affiliated to UNIMA through an MoU. However, there are a number of Centres that are directly part of UNIMA and new ones emerge from time to time. Some of these Centres are affiliated to individual faculties but implement multidisciplinary and interdisciplinary research, consultancies and outreach programmes. These Centres provide great opportunities for UNIMA in its quest to implement the SDGs.

Considering SDG5 (Gender), the UNIMA had the right platform for implementation through the Gender Studies and Outreach Unit (GSU), whose mission was to enhance the understanding of gender issues in Malawi and foster attitudinal and behavioural change, with the view to create a more open society in which men and women are equal partners, participants and beneficiaries of development.

Complementing the work of the GSU, the Centre for Social Research (CSR) at Chancellor College published a manual in 2002 designed to provide gender insight and skills in research and training for field workers. Further, the Sociology Department introduced a Bachelor's Degree in gender studies in 2015 and UNIMA developed a gender equality policy in 2017. These efforts helped UNIMA to attain near-parity enrolment of 49 % females by 2015 (UNIMA, 2017).

Of relevance to SDG16 (peaceful and inclusive societies) is UNIMA's Centre for Peace and Conflict Management launched on 8th September 2019.

While the centres offer a great opportunity for the successful implementation of the SDGs, there are some challenges. First, reliance on external funding sources undermines long-term sustainability. For example, the GSU has become defunct (UNIMA, 2015). Second is the lack of regular updates on projects implemented by the Centres. For example, UNIMA's Center of Education Research and Training (CERT) conducts research to inform policy development in the education sector and is better placed to contribute to SDG4 within UNIMA and the national education sector. While CERT continues to do a commendable job in the sector, it last updated its annotated project bibliography in 2011 (Ukoto, 2011). Third, most of the work done by the centres is commissioned research whose agenda may be determined by the funder, at times raising issues with data and research outcome ownership. In some cases the university may not be the repository of all or parts of the research outputs. This may create unnecessary challenges for successor programmes but the UNIMA Research and Consultancy Policy (2016) may resolve these challenges because it advocates for sharing of copyright ownership of outputs from research financed externally.

From Federal to Unitary System

The UNIMA has operated a federal system of colleges, addressing specific sectors. Thus agriculture was handled by Bunda College, health was handled by two colleges (College of Medicine and Kamuzu College of Nursing), as well as engineering, commerce and applied studies (Malawi Polytechnic) and liberal arts (Chancellor College).

The UNIMA has grown of age and hence Bunda College became a separate university in 2012 and the remaining

UNIMA colleges are to follow suit in 2019 with Chancellor College retaining the UNIMA brand. This is an opportunity because the new universities would fast-track the development of strategies for SDG implementation without the lengthy bureaucratic process of the federal system. However, the new universities may be so overwhelmed by the change process that the SDGs may not be prioritized. The other challenge is that the new universities will need to put into place new quality control and oversight structures and systems previously provided by the larger federal system, thereby losing some elements of multidisciplinary and interdisciplinarity checks and balances. However, this challenge could be addressed through national quality systems overseen by the National Council for Higher Education (NCHE), and through local and international partnerships, building on networks established through the UNIMA federal system and new ones. Since UNIMA has internal quality assurance offices in each constituent college, these could oversee the integration of the SDGs into university programmes. UNIMA might want to leave a legacy on the SDGs and could still construct a joint SDG implementation framework covering all the SDGs but with the new universities specializing in those closely related to the new mandates.

Conclusions and Recommendations

From inception in 1965, UNIMA has excelled in addressing key development issues through training, research, consultancies and outreach. Further, UNIMA has systems, structures and collective expertise that have constantly been adapted through innovation over the years, to address emerging and intangible societal challenges. Hence UNIMA offers a great opportunity for supporting Malawi with the successful implementation of the SDGs. The UNIMA Vice Chancellor, in his recent report (UNIMA, 2017), stressed that the university has set itself an ambitious goal of "establishing a stronger, more relevant and competitive university". With this goal in mind, the UNIMA needs a clear strategy for achieving measurable impact on the SDGs directly and through stakeholder engagement. Some UNIMA documents directly mention the SDGs. Examples include departmental profiles of Political and Administrative Studies (PAS Profile, 2019), where a number of scholarly publications by staff and their partners address the SDGs. Similarly, the UNIMA Thought Leadership Dialogue organised as a side event during the 50th anniversary celebrations refers to SDG

implementation (UNIMA, 2015). However there is a need to go beyond mentioning SDGs by developing an SDG implementation strategy that includes a comprehensive information management strategy (similar to the Higher Education Management Information System by NCHE) that captures UNIMA's knowledge capital from inception to date. However, this requires efficient internet and regular uploading of data. The quality assurance office should develop tools to map progress with SDG integration. In addition, some information only exists as hard copies and there is need to digitise such information before it is lost. The issue of data and report ownership also needs to be resolved through finalization of implementation guidelines for research and consultancy policy. Moreover, there is need for funding mechanisms for research and publications as part of outreach and knowledge management in relation to the SDGs. Since UNIMA has developed new policies and some are still under development, the issue of the SDG implementation strategy may be informed by the existing policies but gaps may be addressed in subsequent policies. The strategy should enhance synergy and leverage in resource mobilisation and implementation of the SDGs, while minimising effort duplication and fragmentation in time and space. UNESCO (2017) provides useful guidelines for developing SDG strategies for education institutions.

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Appendices

The pictures below illustrate how some of the LCBCCAP interventions contributed to the SDGs:



1 - Community Based Child Care Centre

Appendix 1: An original Community Based Child Care Centre (CBCCC) constructed by the mothers and an updated Kapiri CBCCC in Salima by LCBCCAP to enhance early childhood pre-primary education which resulted in an increase in child enrolment. The women were supported in biogas production to help in food production. This support contributed to SDGs 2, 4, 5, 7, 13, 14 and 15 (Zero hunger, Quality education, Gender equality, Affordable and clean energy, Climate action, and Life on land).

2 - Solar Fish Drying

Open fish drying – before the programme



Solar fish drying – after the programme



Appendix 2: Fresh fish post-harvest losses in Malawi can be as high as 40%. To reduce these losses and improve quality, LCBCCAP constructed solar fish dryers to support women in fish value addition. Previously, the fish were dried in unhealthy environments, on open racks and covered with mosquito nets to keep away the dust, flies and predators (picture before programme). Following

the solar fish drying and value addition through packaging, the fish from the solar dryers was sold at 170% more than baseline revenue. With such proceeds, the women were able to open bank accounts for the first time and uplift their households. This support to women contributed to SGDs 1, 3, 5, 7, 13, 14 and 15 (No poverty, Good health and well-being, Gender equality, Affordable and clean energy, Climate action, Life below water, and Life in land). The solar dryer technology has been adopted by other projects within UNIMA and other stakeholders for scaling up in Malawi.

The Huge Challenge for Universities of Latin America to Advance in the Achievement of the Sustainable Development Goals (SDGs)

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Introduction

At the recent Regional Conference on Higher Education (CRES) in Latin America and the Caribbean, held last June 2018 at the National University of Cordoba, Argentina, a critical route map, an action plan and a set of principles and priorities were defined in order for universities and higher education institutions in this region to put the advancement of the targets described under SDG 4, referring to education and higher education, at the centre of their academic and social endeavours. At this conference, the idea was confirmed that higher education is a public good and a human right, and not a commodity; that education at this level that must be open to everyone of all sexes and that the state must guarantee permanent universal access.

In practice, the 17 Goals proposed by the UN are and can be addressed by universities, because they all relate to the development of knowledge in all areas, as well as the professionals who produce and transfer that knowledge to society, as well as issues regarding their inter-coordination, and also because they are organised with a view to cross-cutting forms of education. This made the responsibility of universities in achieving and advancing these goals a fundamental issue for agreement at CRES-2018, as well as at subsequent meetings.

However, the mere will of institutions and other main academic stakeholders in the region alone is not enough, due to the meagre economic conditions and major inequality in which they live (a central issue of the SDGs), as well as conflicts, rampant violence, increasing migration and the inequity in which educational systems operate, meaning that there will be tremendous difficulties

for achieving the goals in the form in which they are proposed. In this study, we look into these difficulties and challenges, as well as the ideas that have been considered for advancing their achievement in the best possible way.

The New Scenario: The 2030 Targets

Despite the massive calls by the United Nations Organization and, in the case of education, by its specialised agency UNESCO, for the international community to achieve the goals desirable for a better world and new development, and for education to be a social driver of many positive consequences for society's welfare, the results, until now, have been ineffective and very poor.

Twenty years on from those calls and the signing of international agreements at the UN and UNESCO, since 2014 there have been fresh, urgent and concerted efforts to achieve a cooperative, feasible, recognised and shared framework for a better world and improved conditions for the survival of mankind on the planet. We are referring to the joint proclamation of the Sustainable Development Goals (SDG) to be achieved between now and 2030¹.

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1. It is worth noting the combined and cross-cutting structure of each of the 17 SDGs, which are defined as follows: ending poverty; zero hunger; health and wellbeing; quality education; gender equality; clean water and sanitation; affordable and non-polluting energy; decent work and economic growth; industry, innovation and infrastructure; reduced inequalities; sustainable cities and communities; responsible production and consumption; climate action; underwater life: life of terrestrial ecosystems; peace, justice and charity institutions; alliances to achieve the goals.

The international agenda that the UN plans to achieve, with its goals and targets for 2030, is part of a fresh attempt (in contrast to the predominant form of development, namely *global unsustainability*), with such a strong focus on a shared effort to overcome inequality, from a high-level vision that requires concerted action by states and main drivers of change, such as universities, to achieve new kinds of development.

This is focused (unlike closed-minded nationalist policy that insists that there is only one country that should stand above all others, such as that being pushed by the current Donald Trump administration) on a collective, urgent, multidimensional and multinational shared effort, on the firm understanding that these cannot and should not be partial or equivalent, because they are differentiated in accordance with the different levels of development and gaps of a regional or national nature, but must observe a cross-cutting agenda that does not depend on the achievement of one or two goals, or any single factor (and particularly not the economic factor), but on the concurrence of the 17 goals that, when adopted by the member countries, are directly related to their contexts of application.

For Latin America, and within this time horizon, if it were possible to maintain stable annual growth of 3% with respect to GDP (for the time being, between now and 2020 projected growth is only expected to be between 0 and 0.5 on average and a maximum of 2%), the SDGs will be impossible to achieve if there is any stagnation or even decrease with respect to these forecasts, and because the region's social or macroeconomic effects are subject to variables of an economic-financial nature, where the aspects related to improved quality of life, sustainability and education are not priorities. It should also be noted that poverty and inequality, in this scenario, will be a permanent and difficult structural condition for millions of people, unless there are radical changes in the forms of government in the region.

However, there have been noteworthy efforts to discuss and plan the SDGs in the region, and to sustain a shared and coordinated plan of action, as was approved at CRES-2018, organised as stated earlier by UNESCO at the National University of Cordoba, Argentina, and which brought together about 12 thousand representatives of university students, associations of rectors, thematic networks, student organisations, researchers and teachers, and where it was agreed in a highly positive manner that, for the first time, within the framework of

the UN and UNESCO agreements, higher education institutions need to be included in such international pronouncements, and the need was agreed to press forward with strategic actions to foster the convergence of the different national, sub-regional and regional agendas, and be able to mobilise universities towards the targets proposed in the SDGs.

Therefore the new global/local role of universities and higher education institutions has been viewed as a particular issue for the SDGs, due to their links and impact in terms of learning and curricular development in education systems as a whole, and because research needs to be guided in a socially responsible manner towards the production of new knowledge and innovation that can positively impact a fresh scenario of development involving justice, equity and wellbeing in response to the present challenges.

These challenges include changing labour markets, technological advances, urbanisation, migration, political instability, environmental degradation, risks and natural disasters, competition for natural resources, demographic changes, increasing global unemployment, persistent poverty, growing insecurity and greater threats to peace and security, challenges that are particularly difficult in underdeveloped and emerging economies and societies.

However, even with a collective and consensual will, the regional context presents complex problems for achievement of the SDGs, due to the major economic and social divides and the growing inequality that has been intensified or at best been maintained in recent decades.

In such a diverse but uncoordinated higher education system, the SDGs may not be achieved unless in the next five years universities and higher education institutions make radical changes to their own organisations, outlooks and curricula; promote socially responsible research and socially beneficial innovations; reinforce their own autonomy and behave in a more responsible manner so that they can influence other stakeholders and interested parties, to get them to make the same efforts and share the same agendas to achieve the 2030 scenario.

For example, in the context of Latin America and the Caribbean, the *Global Education Monitoring Report 2016* states that, if there is no real change in the next five years, it is highly unlikely that many countries will even achieve the most general goals by 2030. It could take them until 2054 to do so, with some countries taking up

to 58 years to achieve them, and others would not get near to them until the end of the century.

The Report says that some governments and education authorities are unable to understand that the educational SDGs are linked to other sustainable development goals and agendas.

In the last decade, social inequality has grown, and access to tertiary education is poorer than it was at the end of the last century: the richest quintile aged 18 to 24 years is between 50% and 60% more likely to go into higher education and finish their degree than the poorest quintile. The figures are even worse for ethnic minorities, people from rural areas, women and for people in the poorest urban districts.

In addition, the current tendency to commercialise higher education (treating students as consumers) is more widespread in this region than in other parts of the world. This has a negative impact on getting the majorities to participate more in the higher education system.

In general terms, the *Global Educational Monitoring Report* finds that the goal of getting 72.7% of 18-24 year olds to complete secondary education will not be possible until 2080 and only if expansion continues at a regular rate.

With 22 million students in higher education, served by 4,200 universities and higher education institutions (48.2% of them in the private sector), only an average of 21.7% people aged 18 to 24 years are accessing places in the region.

In some countries - Cuba, Brazil, Ecuador, Venezuela, Argentina, Uruguay and Bolivia - inequalities have been reduced or have been positively dealt with by education inclusion programmes, but in most countries the higher education system has remained almost static for the last four decades, with the same management structure, the same narrow curriculum, same the high levels of graduate unemployment and the same substandard production of research and performance in the output of knowledge and scientific discoveries.

The shift towards greater social responsibility and critical thinking comes mainly from student movements and, occasionally, from academics and teachers. This shows that in order to achieve the SDGs, and the definition of policies that guarantee accessible, free education on the frontline of the battle against inequality, which, as will be shown later, is a fundamental binomial that needs to

be solved by state policies, will require high-level policies and a progressive mind-set among universities and HEIs in the region, in order for them to provide the strategic leverage to achieve breakthroughs and innovations in the traditional forms of teaching, curricula, research and staffing, with multiple social learning platforms, articulated around innovative structures for the management of highly relevant knowledge and intercultural know-how, and including coverage of the themes presented in the SDGs, as approved at the aforesaid CRES-2018. Universities must put their greatest efforts into achieving changes to education in order to deal with the challenges presented by the 17 SDGs and produce alternatives with respect to the 169 goals, and thereby foster *scientific sovereignty* and guide their processes and results towards the solution of society's biggest and most important problems, and ensure its prosperity and *good living*.

In particular, universities should focus on the issue of **inequality**, in awareness that, as discussed in the following sections, the provision of free higher education alone is not enough to overcome the inequities in the system.

It is not a matter of diminishing the efforts to promote affirmative actions, or of devaluing the achievements that seek to guarantee free education at the higher and all other levels as a human and public good. It is more a matter that the discussion needs to look even further beyond what has already been achieved.

When the Market is Imposed over Human Rights

In a very general manner, the trend towards inequality, which connects to public policies and structural differences in the promotion of added value in terms of knowledge among the world's most capital-endowed and competitive companies, and which has left our region to develop in a dependent manner on a productive and cognitive level, has posed the following paradox: in many countries of Latin America and the Caribbean, free higher education has been legislated as a constitutional standard, and in other countries formulas and public policy programmes have been proposed to make higher education mandatory, with measures to encourage access and universalization of the corresponding school age groups.

This is made apparent by the effects that have been achieved in recent decades in terms of grant policies and different types of free education, along with the universalization of the gross enrolment rate, both on an overall regional level, and when referencing examples of cases by country.

In general terms, there is no question of an upward trend in progress in levels of access to higher education across the region, and that this has been much greater in the countries that promoted, from the first decades of the current century, policies to increase access, inclusion programmes for poor or marginalized sectors, and radical reforms in the area. By far the most prominent such cases are Argentina, Bolivia, Brazil, Ecuador, Venezuela and Uruguay.

The data shows that the increase in enrolment rates for higher education has been considerable since the turn of the century. However, this growth has not led to any structural change in inequality levels, despite the positive actions and the existence of a free higher education service. On the contrary, the sample of studies that have been carried out on the topic suggest quite the opposite: the capacity of the higher education system is described as institutionally segmented in direct relation to the different population sectors, i.e. the son or daughter of a labourer or a peasant always has fewer possibilities of receiving a basic education, or vocational training, and has even less hope of accessing higher education, while the presence of the offspring of the upper middle or upper classes is still rising at all levels of education, whether free or not.

This contradiction between the generation of possibilities to access education in almost all countries in the region, versus equity and possibilities in terms of permanence and graduation, are reproduced in a general manner, and no substantial progress can be verified in recent decades, despite the grant policies that have been implemented in some countries and in certain highly eloquent political situations.

A large part of the growth in the enrolment of the middle and upper classes for higher education in the region has been due to the increased privatisation and commodification that has occurred at this level of education, and this behaviour is so widespread that it is even on the rise on a global level (CINDA, 2016; p. 99), and, ironically, is occurring in one of the most unequal regions of the planet.

So, in general, it can be shown that the tendency towards the commodification and segmentation of the higher education system, rather than its 'diversification' as it is dubbed in the Anglo-Saxon world, has been increasing, and this has not resulted in any compensation in terms of inequality rates, much less the possibilities of opening up to greater equity in access and permanence for highly vulnerable or marginal sectors of the education system, such as indigenous, Afro-descendant, rural, or extremely poor urban populations, and especially women in these sectors.

The foregoing implies that inequality has overridden the efforts and policies that have not managed to get to the heart of the matter. This means that merely declaring education to be free or applying positive action policies has not produced change because there has been no prioritised implementation of effective mechanisms to bring about substantial improvement in the distribution of income, encourage equity, and support the fight against inequality.

The Terms of the Debate

The idea is enshrined in the current legislation of the vast majority of Latin American and Caribbean countries that the state must guarantee the right to all public education, but there are differences between the ways that this has been legislated to foster a shift from the massification phase to the universalization of higher education, or in other words, the obligation to offer this level of education to anyone who wants it, on their merit alone, and regardless of any inequalities in terms of socio-economic, geographical, ethnic, racial or gender status.

It is therefore important for the definitions of state policy in the region to distinguish between two concepts: compulsory and free.

In international law, states are under obligation to make higher education accessible, especially when a desirable level of universalization of basic and secondary education has been achieved, as is generally the case in most countries of the region, as part of a movement to stress 'progressivity', where the free nature of education is viewed as the decisive factor for ensuring the eventual scenario of universalization.

In the Latin American panorama of recent decades, this upward trend has frequently been interrupted or reduced by periods of recovery or cutbacks of public resources

and investments in higher education, often due to drastic changes in the ideas of successive governments, based on arguments on the limitations of political agreements and the validity of certain rights.

Overall, this has led to an emphasis on extending coverage, but not so much permanence, and even less so to guaranteeing satisfactory graduation leading to employment in the relevant market, or the guarantee a formal and stable professional career. Neither have the changes led to fundamental changes in the students' cognitive progress, in the conditions for the creation of alternative curricula, and even less so in the training of transfer skills.

That is why the region is typified by the constant presence of a series of programmes aimed at increasing income, and raising the gross enrolment rate, but not at expanding social skills or comprehensive learning that can have a favourable impact on development rates in a fair and equal manner.

So, in terms of the present debate, such a key issue as free education throughout the region has in fact been viewed as a secondary target, because it has been easier for different governments to gradually focus on fostering the compulsory nature of this level of educational than to deal with inequality.

However, this panorama of uncertainty and lack of consistency in the definitions of state policies has been marked by the frequency and recurrence of social conflicts, especially those involving students and faculty.

To cite some important recent examples, there was the student strike at the UNAM in 1999, which lasted 9 months, when the then rector of the most important university in Mexico tried to raise entrance and permanence fees, precisely in an attempt to put an end to the free nature of that university, as is and continues to be stated in the corresponding article of the Constitution of the Mexican Republic. The case of the different student movements in Colombia between 2016 and 2018 also included successive national strikes at public universities in the country, and mass resistance to the government's insistence on imposing commercialization criteria and curtailing the right to higher education, in a context not of making universities free but of raising their fees, as in the debate on the modification of the so-called Law 30, which regulates higher education at the highest level. Another famous case is that of Chilean students, who from 2014 to date

have continued to fly the flag of free education in opposition to the legalistic trickery that has sought to make higher education functionally free, while it has remained the same as ever, or to rejuvenate it with arguments that are more about formally presenting an image of progressivity than truly guaranteeing a universal right.

In the case of Mexico, the new Education Reform Act (2019), which is now backed by a progressive and anti-neoliberal government, the terms of the debate have been more closely linked to the concept of progressive compulsory higher education, but not to it being free, as the priority objective of a new state policy.

What has been imposed in the region is the exact opposite idea that education is not and should not be free because it is the offer of a service, either a public one or one for individual profit, and so there has been a growing idea, and one that is expanding and being reproduced, that free education only favours those who are already favoured, or those who are able to pay for their education. From this argument, it is claimed that the richer classes are given more guarantees than the less disadvantaged ones, or that guarantees are being violated.

This argument has led to a quest to legitimise apparently democratising government policies that justify the transfer of educational costs to students and their families, through such formulas and mechanisms as bank loans, scholarships, vouchers and many other inventions rather than making any real progress in the elimination of inequality as required by the SDGs.

For example, the OECD (2008) states that there are 4 current models in this regard:

- Free or very low fees, with public student support systems, as in the countries of the Scandinavian peninsula;
- High fees with highly developed student support systems, as in Australia, Holland, Canada, New Zealand, the United Kingdom and the United States;
- High fees with less developed student support systems, as in Austria, Belgium, France, Ireland, Italy, Poland, Portugal, Switzerland, Spain and Mexico (p. 38²).

2. In: Espinoza, Oscar; González, Luis Eduardo (2016). "La educación superior en Chile y la compleja transición desde el régimen de autofinanciamiento hacia el régimen de gratuidad". *Revista Latinoamericana de Educación Comparada*. Pages. 35-51. Year 7, No. 10, Santiago, Chile. ISSN: 1853-3744.

Within the framework of current legislation, the different countries of the region can be grouped by the previous terms as follows:

- a. where free education formally prevails: Argentina, Brazil, Ecuador, Nicaragua, Venezuela and Cuba. As a case of reference, in Chile, President Bachelet's administration sought to gradually promote free education over a period of 6 years. By 2016, free education had been established in a differentiated and optional manner and some 120,000 students were beneficiaries (Espinoza/González; (2016; *ibid.* P. 45);
- b. the countries that have non-payment of fees are: Argentina, Bolivia, Brazil, Cuba, Ecuador, Guatemala, Nicaragua, Peru, the Dominican Republic and Venezuela; and,
- c. those with subsidised payment are Chile and Mexico.

Argentina is an emblematic case, as it was the first country to establish free education in 1994 (the legacy of its historical contribution to the autonomous system through the student movement of 1918 at the University of Cordoba) without differentiation between levels, but this is a case of free education for progressivity, rather than free education per se (see: Decree 29.337 Government of Juan Domingo Perón).

In international law, as can be seen, it is clearly established that states are obliged to guarantee free higher education. And this has also been proclaimed, has been agreed upon and appears in a general manner as a resolution of the various Regional Conferences on higher education, organised by UNESCO from 1996 to 2018 in the region.

So, for example, out of the agreements reached during the recent CRES-2018, it has been proposed that universities should coordinate efforts to achieve the SDGs³, but above all that the current levels of inequality in all its forms should be reversed in as widespread a manner as possible. This has led to a very interesting agenda that covers issues ranging from expanding access to younger people and adults, to the construction of a Latin American knowledge society.

Given the close relationship between the curriculum, the new paradigms of learning and research, the interaction between people from different cultural backgrounds and the social responsibility of universities to the general public, they are a vital part of any agenda for the future.

It remains to be seen, of course, whether the agreed Plan of Action (2019-2030), which includes the guarantor of the convening and actions of the UNESCO Institute for Higher Education in Latin America and the Caribbean (IESALC-UNESCO), will produce progress in this area, or whether it will be no more than yet another mere pronouncement of good intentions.

Conclusions

In recent decades, there has not been a student or university conflict in Latin America and the Caribbean involving other stakeholders in higher education, other popular sectors, or political conjunctures, that has not taken place against the backdrop of the issue of free or guaranteed access to and permanence in higher education.

Neither have the last few decades featured any proposals for educational reform that have not addressed this issue as a priority, either laterally or directly. And when the issue has arisen, it has always been dealt with in one way or another.

From what this study has been able to determine, free education is still more of a recurrent than an occurrent issue. Given the huge abysses of social inequality and educational inequity, it cannot be said that free education has served as a single condition to eliminate or overcome such difficulties. Instead, we could perhaps say that free education has been part of the problem because guarantees of equality in conditions of inequality are not always going to be all that democratising, and this is the **Gordian Knot** that universities must untie here and also in relation to all their core functions, in fulfilment of their social and territorial duties and responsibilities.

3. See Didriksson, Axel (2019). *Perfiles educativos*.

The issue is a similar one to that of autonomy, which must also be guaranteed but, as we know, this has been no obstacle to it being constrained or violated, limited or determined by constant budget cuts, or by the various mechanisms of accreditation or 'quality assurance', thus hindering its full exercise as a fundamental and universal human right.

The prevailing factor of state policies during the current period has instead been that of 'graduality', and this is very different, as we have tried to show in this report, to ensuring totally free higher education systems, which is even less the case when critically evaluating the advances made from the perspective of guaranteeing equality and free mobility in terms of regional integration.

It has not been possible to verify any progress through diagnosis of the context of higher education in the region, given that there is an innumerable series of regional or subregional, national or international thematic networks and associations that are current and active, but, insofar as information is available, there is not one whose main topic has been to research or make proposals related to guaranteeing free higher education through policies that propose structural modifications to the current conditions of economic, educational, cultural, ethnic, urban, rural, gender and geographic inequality.

Therefore, the main challenge is for universities to get themselves heard at the national and regional levels to encourage programmes focused on combating economic and social inequality, as presented in Goal 10 of the SDGs; and guarantee that Goal 4 on Education. Goal 4 does not only include access to all levels of education, but also permanence, the achievement of an adequate and relevant professional profile and the development of lifelong learning capabilities, the guarantee of dignified jobs for graduates; and, moreover, alternatives from within to foster fundamental changes to university curricula, to the organisation of cognitive processes, to the management of modern knowledge, and to research related to scientific sovereignty and innovation of a social nature, in order for the issue of inequality to be a focal point whereby institutions can contribute to positive inclusion policies, and to the elimination of the vast differences that have taken root in such an alarming fashion in the region, because these are still an unforgivable shortcoming that is bringing modern-day universities into question, despite their very highest principles and postulates.

Public policies on higher education have been defined more in terms of the planning and existence of resources, in direct correspondence to the priorities of each government in each situation (for example, to think that the current governments of Brazil, Argentina or Ecuador could possibly prioritise and guarantee free and equitable higher education in their respective systems would be quite illogical, for such matters are an irrelevance in the way that those governments operate their public policies).

So, the Gordian Knot of the debate being presented here is the failure to get to the heart of the matter and advance cross-cutting, coordinated policies to promote programmes based on the joint achievement of the 17 SDGs to reduce inequality, inequity and the poor record of permanence and graduation and that consider the different but connected contexts of application in terms of regions and locations, ethnicity and gender, family histories, acquired knowledge and merits over socio-economic conditions.

Human rights are not negotiable, and although one may claim to be in favour of free education and it may even be a higher law, that does not mean per se that this is the basis for achieving new, fair and equal development, as stated in the call to achieve and monitor the SDGs.

That is the Gordian Knot of the issue, because there is no evidence that progress is being made, and neither can it be demonstrated that the right decisions have been taken or the right solutions found to achieve those goals.

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Are Universities Ready to Have a Real Impact on Achieving the Sustainable Development Goals (SDGs)?

Carme Gual

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Without fundamental change, universities will lose their central role in the creation of knowledge and research. The SDGs are forcing them to ask how they should change in order to respond to the needs of our world in crisis.

The United Kingdom and Ireland have declared a state of climatic emergency. This situation, which should be the result of the scientific research and evidence that has long been reporting that the Earth is at a critical point, was actually triggered by the demands of adolescents worldwide who are making a stand every Friday, inspired by a 16-year-old Swedish girl called Greta Thunberg. It is not a gratuitous statement, but it is based on a declaration by the Irish Minister for Climate Change, Richard Bruton¹.

In a matter of months, the “Fridays for Future” initiative has got thousands of European students to demonstrate every week to demand changes from their governments. It is already mobilising almost 1.5 million students from 125 countries. They are demanding action from adults². And what does this have with to do higher education? As Greta says: “Avoiding climate breakdown will require cathedral thinking. We must lay the foundation while we may not know exactly how to build the ceiling”. For someone who has not finished her secondary education, she seems very able to understand the magnitude of the challenge that mankind faces and has decided to act,

with the resources available to her. The challenge, our survival, requires jumping over what is established. Greta studies, but at the same time, she acts. This is a new paradigm that must be incorporated radically into higher education if it wants to survive and be relevant. Universities must be transformed from the foundations, and must build a new cathedral, even though we still do not know how to make the roof. If the change is not radical, and essential, then other forms of knowledge and organisation of research, which are much more organic and community-rooted, will come to replace the role of the university. Technology, social networks and the perception of global vision are moving the earth on which hundreds of years of higher education have been founded until now, but whose capacity for real impact is beginning to weaken.

Another paradigmatic example of the new trends is the proposal by Salman Khan and his Khan Academy³, which offers free online training to people from all around the world on all types of subjects. Many other institutions and organisations are doing the same. In order to learn and train, one can now choose when and how to do so and can go as far as one likes in a self-taught manner. This is one of the first things that universities need to learn: 4, 5 or 6 years are a long time to acquire knowledge that, too often, is little adapted to society’s needs. Higher education is at a crossroads between being relevant, innovative and leading the changes in our world or becoming a relic, an ancient way of learning and a business that provides coverage to certain elites.

Our species faces future challenges that can only be reversed with a pact between generations, a shared endeavour whereby everyone can learn to care, putting people, the community and the common good at the centre. This change must be systemic for today it is

1. <https://www.irishexaminer.com/breakingnews/ireland/government-declares-climate-emergency-923188.html>

2. <https://www.theguardian.com/environment/2019/apr/23/greta-thunberg-full-speech-to-mps-you-did-not-act-in-time>

3. <https://www.khanacademy.org/about>

patriarchal capitalism that is reproducing and perpetuating the status quo that is leading us to the abyss and pushing us to produce, grow and compete more and more. Universities are part of the conveyor belt for this system, hurling into jobs and life millions of acritical youngsters with a highly relative ability to redesign the world. Susan L. Robertson, in a 2010 article, addresses the commodification of knowledge and questions whether it is possible to reconstruct our universities' missions in order for them to include social and political goals, rather than just economic ones⁴.

And, as part of this foundational change, the SDGs can serve as the ignition, the vital and viral sparks, to put universities in a new, central place in the fields of education and research, which are explicitly recognised in various SDGs. However, their contribution must be broader and much more ambitious in order to be truly relevant in supporting the implementation of each of the goals. One of the virtues of the SDGs is that they call on society as a whole, although this systemic, radical formulation is all too often lost in the silos of each of the agents involved. And so, universities reproduce the general discourse, without the 360 degree vision required by the 2030 Agenda. They are, in all truth, unambitious and irrelevant with their ultimate demand for SDG compliance rankings to be established, without realising that what they really need to do is change what is taught, and how and to who – and also how it is learned.

Universities must instil a new ethical and transformative attitude, and train people who are able, without fail, to solve the most pressing and relevant challenges that we are beginning to discern. Such topics as systems thinking, anticipation skills and integrated problem solving should be on all university curricula. Interdisciplinarity must be at the heart of knowledge and action.

With an eye to development cooperation, such a fresh outlook is fundamental if we are to eradicate inequalities and poverty, and if we intend to respect human rights worldwide. These must be the basic principles of new universities and, from there, they need to question the goals and methods of their teaching, research and assessment of results, not based on the number of students and papers published but rather on real impact on improving the lives of people and the planet.

So, the first thing that needs to be done is to change the outlook of knowledge, and to be aware of the consequences that arise from what we do. For example: the news about a team of architects with 'gender training' (Equal Saree) who studied the bias of school playgrounds, which focus on football. They evidently did not get their 'gender training' from studying architecture, or there would have been no need to emphasise this specific knowledge, which any typical architecture student would have known from the very first day they walked into a lecture hall⁵. And there are so many other approaches like this that would need to be incorporated into all subjects and branches of knowledge to generate professionals who research based on the person and their wellbeing, aware of the social, cultural, economic, political and other implications that any action, innovation or research could have on their immediate, but also their global surroundings. There are positive examples, multiple possibilities and infinite cross-sections, such as the work by Dr Federico Wulff, leader of the EMUVE EU Marie Curie European Project Unit at the Cardiff University, who spent a year working with the community, public administration, refugees and urban planning students in Palermo⁶.

Traditionally, the transformational vision of university cooperation comes from students seeking to add value to their knowledge and think beyond their own professional futures. It is from these advanced nuclei that system failures are examined, leading to foundations or para-university entities with more or less explicit and institutionalised support. However, this does not affect the normal course of education and the faculty of economics will continue to train economists who have no qualms about 'outsourcing' costs to developing countries in order to increase profits. We need to search deep inside ourselves for institutional coherence in order to eliminate this flagrant contradiction, and generate open-hearted debate to work out how universities should

4. Robertson, S.L. (2010) Challenges Facing Universities in a Globalising World, published by the Centre for Globalisation, Education and Societies, University of Bristol, Bristol BS8 1JA, UK at: <http://susanleerobertson.com/publications/> <https://susanleerobertson.files.wordpress.com/2012/07/2010-robertson-challenges.pdf>

5. <https://www.elsetembre.cat/noticia/634/80/dels/patis/son/futbolcentrics>

6. <http://cardiff.academia.edu/FedericoWulffBarreiro/Conference-Presentations>

lead the required changes, through both reflection and action. As Jeffrey D. Sachs says, universities must become an active “network of solutions”⁷. Otherwise, they will become obsolete.

Teachers and students need to understand and address the goals by generating new knowledge, skills and motivations to achieve a true education for sustainable development. We need to focus academic and vocational knowledge on the SDGs, with much more holistic training, with and in values.

Developed countries must make education accessible, affordable and inclusive for all; ensuring skilled students and professionals in developing countries while promoting the mobilisation of their youth.

We also need to avoid falling into mere ‘SDG washing’, making sure that reported achievements are sustainable and do not merely use the SDG to paint the picture that a university is contributing to sustainable development.

From cooperation we can, and want to, play a role in changing the outlook of universities, seeking and generating synergies between university research and development NGOs and other agents to find resources, technologies and spaces for social, technological and economic innovation to improve living conditions in towns and communities that suffer from inequality and risk. In 2019 and for the second year, the Catalan Agency for Development Cooperation called for financial aid to encourage collaborative R&D projects among research groups and development NGOs to compete in Horizon 2020⁸. In addition, the new Master Plan for Cooperation highlights the need for a true education strategy for sustainable development in which universities play an essential role. Certain lines are showing the way forward, and how universities can become real living laboratories with an impact on their communities and that substantially transform teaching and learning. There are also the

service learning programmes that are already being carried out at more than 200 European universities, and which are being led in Catalonia by the Catalan Association of Public Universities (ACUP), which links the university world with schools⁹. The work of Fab Lab Barcelona¹⁰ - within the Institute for Advanced Architecture of Catalonia (IAAC) is another example. It supports different education and research programmes related with the many scales of human habitat and is coordinated by the Fab Academy (a distributed education and research platform in which every Fab Lab in the world operates as a classroom and the planet). It is the largest university campus in the world, where students learn about the principles, applications and implications of digital manufacturing technology.

7. Sachs, Jeffrey. 2015. Achieving the sustainable development goals. *Journal of International Business Ethics*. 8 (2) pp. 53–62 (p.61).

8. http://cooperaciocatalana.gencat.cat/ca/agencia_catalana_de_cooperacio_al_desenvolupament/ajuts-i-subsencions/2018/convocatoria-de-recerca-i-innovacio

9. <http://www.acup.cat/ca/project/la-universitat-dels-nens-i-de-les-nenes-de-catalunya-udn2cat>

10. <https://fablabbcn.org/>

Universities Move to Achieve the SDGs – and Approach the Next Hurdle

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Introduction

The Sustainable Development Goals (SDGs) have risen fast as a concern for universities around the world. The International Association of Universities (IAU) has documented more than 700 institutions around the globe working towards their achievement¹. However, this is likely only a small part of what universities are doing in the field. Many universities will be keen to label their activities as contributing to one or more SDGs. Some of these activities produce evidence about challenges such as climate change or poverty; further activities provide possible solutions, for example by developing technology for renewable energy or raising awareness about gender inequality. Other universities will have similar activities, but not necessarily label them as means to achieving the SDGs.

Looking at Europe, there has been a major shift from these goals being seen as regarding mostly cooperation with the Global South to taking them on board as a challenge to be solved at home.

The climate change challenge in particular has increased awareness that development is not about countries catching up with the rich North, but at least just as much about changing society across the globe in such a way that the planet as we know it can survive.

Particularly for universities, the SDGs have several qualities that make them benchmarks for university researchers and leadership alike: they are directly linked to the societal relevance of research in a way that is immediately

understandable for a large community beyond academia, and they give a sense of purpose and belonging to a greater mission.

The SDGs also offer a holistic framework for university leaders to show all the many facets of what their large and complex institutions are doing. Many of the on-going activities at universities can easily be related to the SDGs, after all sustainability will not be achieved without solutions that are built on knowledge and learning about how societies work and impact on our planet. Aligning with the SDGs creates awareness about how this is done.

For many years, the political discourse about the contribution of particularly university research has been linked to economic competitiveness: new knowledge would pave the way for new innovations, new products and a growing economy. With the SDGs as a common reference point for universities and policy makers alike, it is easier for universities to show how they contribute to a much broader set of challenges, including the environment and wellbeing of citizens. There is a common understanding of the need to find systemic answers to these challenges, where universities play a key role in constant dialogue and coordination with other stakeholders², and this new configuration is well-suited to include the SDGs as a way to achieve a systemic approach.

Moreover, many students identify with the goals and are at times the drivers of the introduction of sustainability-related activities to the learning environment. As part of the overall reform of learning and teaching in Europe, project-based learning and student-led activities have expanded. These projects and initiatives are often driven by students who have strong ownership of the sustainability agenda and are driven by finding solutions to the biggest common challenges³.

2. Reichert, Sybille (2019), *The Role of Universities in Regional Innovation Ecosystems*, EUA, p. 8

3. *Ibid.* p. 26-27

1. See <http://www.iau-hesd.net/>

Politically, achievement of the SDGs is also linked to the increased need for investments in education, research and innovation. In its SDG Brochure, EUA points to the fact that working for SDG4 and SDG9 (Quality Education and Investing in Innovation) facilitates the achievement of all the other goals⁴. This message has not been lost on bigger political players. In its Reflection Paper on sustainable development, the European Commission states that “Education, science, technology, research and innovation are a prerequisite for achieving a sustainable EU economy”⁵. At the time of writing, the European Commission is working to integrate the SDGs deeper into its research policies, but as the leadership of the European Union is changing, it will remain to be seen whether a stronger focus on sustainability will be mainstreamed across the Commission as whole.

There is no doubt that universities are moving forward to support this agenda, but in doing so, they might face a significant hurdle. One of the attractions of the SDGs is that they offer a flexible framework that can link research and learning to a bigger agenda. Research and study programmes in energy can demonstrate how they contribute to SDG7 (Affordable and Clean Energy) and crop scientists can show how they work towards SDG2 (Zero Hunger). Likewise, university leadership can put labels and colours on on-going activities and demonstrate the contribution of the institution as a whole. It is important to stress that this is not ‘greenwashing’. Linking activities to the SDGs raises awareness about the sustainability agenda as a whole and possibly motivates both academic staff and students to work to achieve them. However, it does not necessarily address the challenges that arise from a holistic view of the connections between the goals.

The goals are interconnected. Sometimes achieving one goal can facilitate another: access to quality education, for example, can alleviate gender inequalities and poverty; and investment in innovation through, for instance, research and study programmes in renewable energy help to combat climate change. At other times there are trade-offs that are not always positive: intensive farming methods can prevent hunger, but they might not be good for biodiversity; making air travel more expensive to prevent climate change can increase inequalities by making it a privilege for the rich. For this reason, the

SDGs require integrated implementation. Researchers and students might identify their particular interest in the achievement of one or more goals, but the institution as such would do well to make sure that there is a balance between the activities in one domain and the goals of another part of the institution. With the advent of transversal technologies that can be applied in a myriad of ways this both becomes more challenging and provides more opportunities. Artificial intelligence is perhaps the best example; technologies like machine learning can be used for personalised medicine, mass surveillance or energy efficiency. One would imagine that universities would find incentives so that the technologies that are developed in one department are deployed in a way that supports sustainability-oriented activities in other departments. Likewise, it is imaginable that universities might decide not to work to apply technologies in ways that are seen as detrimental to sustainability. For example, many already prohibit research into military applications.

While some universities are well aware of this, there is still some way to go to make the connections between the SDGs commonly understood. The recently published Times Higher Education Impact Ranking, for instance, not only measures a limited number of the SDGs (the two goals for biodiversity are missing), but measures them separately as well. In this ranking, universities are measured by their impact on sustainability by looking at possibly disparate initiatives regarding individual SDGs, not by their effort to promote sustainability as a common framework for a balanced society.

Another challenge in the sustainability discourse is the tendency to conflate sustainability and climate change.

For example, the drafts for the next European research programme, Horizon Europe, mentions the two together almost interchangeably. While measuring single goals has the advantages of awareness and impact raising, as mentioned above, and while climate change is undeniably a very important goal, the piecemeal approach is not entirely in the spirit of the SDGs. There is a danger that emphasising one goal will only lead to the achievement of that goal, which is a watered-down version of the grand vision behind the SDGs, even if the goal is as central as the one concerning climate. Looking at

4. EUA (2018), *Universities and Sustainable Development – Towards the Global Goals*, EUA

5. European Commission (2019), *Reflection Paper – Towards a Sustainable Europe by 2030*, EU, p. 22

emissions is not necessarily helping to curb the threat to human health or to biodiversity from plastic pollution. Single-goal action is among the low hanging fruit that are being picked fast at the moment; there is a need to think about the next steps once different activities have been labelled and climate has gotten its deserved priority.

The labelling of activities and raising of awareness will not by itself lead to full exploitation of the potential of universities for sustainable development. The steps needed towards qualitative progress at universities are to make the goals work together and consider the influence of impact made in one area on other areas. In some institutions, this work is already underway. However, it is imaginable that there are major governmental, cultural, and legal obstacles to this: Does university leadership have the power and the administrative capacity to allocate resources in a way that not only considers the thematic areas of learning and research but also their combined impact on society? Will staff have the awareness to make these considerations far beyond the field of expertise that they have meticulously developed? Are there sufficient incentives in terms of career assessment and funding structures to create large, interdisciplinary, impact-aware research teams? Not least: how will and how should universities prioritise direct impact on sustainable development with regard to their unique role in promoting curiosity-driven research?

The obstacles can be legal, contextual and cultural in nature. Universities are still using bibliographic metrics such as impact factors for research assessment purposes, and these rarely provide incentives to work in interdisciplinary groups. Rather, they reward publication within one specialised area. The use of these metrics can be a legal requirement in systems that are highly prescriptive and not very autonomous, but they are often contextual or cultural. Funders might use such metrics for evaluation of research that they fund or for assessing proposals, and international rankings use bibliometric data to position universities in their tables. While not legally binding, such external use of bibliometrics is certainly something that universities cannot ignore given the increasingly competitive environment that they operate in. Moreover, there is a cultural obstacle within many research environments, where quantitative, often discipline-oriented, indicators are used to measure the supposed quality of research. Other cultural obstacles could be entrenched silos between different faculties and different institutes or highly hierarchical internal cultures that leave little flexibility to embark on sustainability-oriented, common projects.

The implementation of a truly holistic SDG-led strategy will be a challenge for any university, as there will be battles to be fought in many different fields and with many different stakeholders. However, the societal understanding and acceptance that we are in an emergency situation is growing, and that will impact the whole of the university community; students are already highly aware in many places. If and when universities and the people working and studying there make full use of their potential, they can play a decisive role in achieving the SDGs.

There is clear evidence that they are ready to take on the responsibility, but the next step forward will require tough answers to tough questions.

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Disciplines, Professions and the Sustainable Development Goals (SDGs): Challenges in Higher Education in India

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Introduction

The United Nations ambitious 2030 Agenda was signed more than three years ago by most member countries. It comprises 17 Sustainable Development Goals, which are universally applicable to all countries of the world. Recent UN reports indicate uneven progress towards achieving these goals in most countries¹.

India is one of the critical countries where achievement of the SDGs will be essential for realising the 2030 Agenda in the next decade. One-third of the world's poor are in India² (SDG 1: No Poverty); regular media reports indicate continued hunger amongst some indigenous and caste communities³. (SDG 2: Zero Hunger); child malnutrition indicators in India are worse than in several low income countries (SDG 3: Health & Well-being); entrenched patriarchy restricts education for girls after puberty (SDG 5: Gender Equality); access to safe water is decreasing (SDG 6: Clean Water & Sanitation); and several Indian cities have the worst air pollution levels in the world⁴ (SDG 11: Sustainable Cities & Communities). Much needs to be done in India for systemic progress on the SDGs before 2030.

At the policy level, much of the attention to the SDGs is being led by the national government through NITI Aayog, which has created a national framework not only for regular collection of data on the SDGs but also for acting proactively towards achieving the goals and targets, both quantitatively and qualitatively. The Ministry of Statistics and Programme Implementation (MoSPI) is assisting NITI Aayog in interacting with other ministries and developing indicators reflecting the SDG goals and targets⁵. In addition, NITI Aayog's latest SDG India Index Report (2018)⁶ showed uneven progress on most SDGs, especially in hitherto marginalised communities and regions. Commensurate engagement of civil society is also pushing for further concerted actions at the ground level. However, educational institutions have remained somewhat disconnected from the SDGs.

There is a long history of programmes on Education for Sustainable Development (ESD) through earlier global UNESCO programmes. The ESD program *aims to improve access to quality education on sustainable development at all levels and in all social contexts, to transform society by reorienting education and help people develop knowledge, skills, values and behaviours needed for sustainable development*⁷. Several primary schools and adult education centres have been involved in ESD activities in the past. However, the ESD framework is a pre-SDG era approach to sustainable development;

1. <https://unstats.un.org/sdgs/files/report/2018/TheSustainableDevelopmentGoalsReport2018-EN.pdf>

2. <https://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf>

3. <https://www.outlookindia.com/website/story/the-hidden-epidemic-of-tribal-malnutrition-among-migrants-in-rajasthan-and-madhya-pradesh/327416>

4. <https://www.theguardian.com/cities/2019/mar/05/india-home-to-22-of-worlds-30-most-polluted-cities-greenpeace-says>

5. <https://niti.gov.in/content/niti-aayogs-role>

6. https://niti.gov.in/writereaddata/files/SDX_Index_India_21.12.2018.pdf

7. <https://en.unesco.org/themes/education-sustainable-development>

it does not have the breadth and depth of the 17 SDGs and their many sub-goals.

Status of Higher Education Institutions in India

India's higher education sector is the third largest in the world⁸.

There are 903 universities, more than 10,000 professional technical institutes and 42,000 colleges, in both the public and private sectors.

Including technical and professional institutions, about 36.6 million students were enrolled in these post-secondary educational institutions as per the All India Survey of Higher Education Data (2017-18)⁹. Moreover, these numbers are rapidly increasing. Despite being such a large sector, conversations about the integration of the SDGs in the operations of higher education institutes (HEIs) are still rather weak, and national associations of higher education have not taken up the matter either. The Association of Indian Universities (AIU) is the oldest such network, mostly including public institutions. The Federation of Indian Chambers of Commerce and Industry (FICCI's) Higher Education Committee has been bringing together private institutions for the past two decades. Neither has inspired their members to focus on the SDGs as a core function of HEIs. Not even NITI Aayog's national approach to achieving the SDGs in India contains any mention of HEIs, or their possible contributions¹⁰.

A review of the recent Times Higher Education (THE) ranking report on universities and SDGs shows that only a handful of Indian universities are mentioned; no elite public institutions such as IITs and IIMs are mentioned at all. This report only focuses on a few goals, and looks at how universities operate internally in this regard. It goes on to argue that Indian policymakers need to think about new roles for HEIs in supporting the achievement of the SDGs¹¹.

Perhaps in parallel to this, the University Grants Commission (UGC), the senior policy-making body on higher education in India, has just announced a new policy framework Fostering Social Responsibility and Community Engagement in Higher Education Institutions in India (2019)¹². These new guidelines recommend that

"The goals of fostering social responsibility and community engagement in HEIs" can comprise of

- Improving the quality of teaching/learning in HEIs, by bridging the gap between theory and practice through community engagement;
- Promoting deeper interactions between higher educational institutions and local communities for identification and solution of real-life problems faced by the communities in a spirit of mutual benefit;
- Facilitating partnerships between local communities and institutions of higher education so that students and teachers can learn from local knowledge and wisdom;
- Engaging higher institutions with local communities in order to make curriculum, courses and pedagogies more appropriate to achieving the goals of national development;
- Catalysing acquisition of values of public service and active citizenship amongst students and youth alike, which would also encourage, nurture and harness the natural idealism of youth;
- Undertaking research projects in partnership with local communities through community-based research methods.

Further, the above guidelines recommend that existing courses should be re-designed to integrate interactions with local society in learning process. Additionally, these guidelines propose that new courses that are relevant to changing societal contexts should be offered as options to all students.

9. <http://aishe.nic.in/aishe/viewDocument.action?documentId=245>

10. http://mospi.nic.in/sites/default/files/National_Indicator_Framework_6nov18.pdf

11. <https://www.orfonline.org/expert-speak/sdg-rankings-lessons-for-indian-higher-education-institutes-49917/>

12. https://www.ugc.ac.in/pdfnews/9345940_Guideline-fostering05-2019.pdf

“Such courses can be audited by students, or taken as a part of 25% provision for external (to faculty) courses now allowed by UGC guidelines. These can be short-term certificate courses, or integrated into the existing syllabus. By their very nature, such courses are trans-disciplinary and require community engagement activities by students. Additionally, new courses which teach about Sustainable Development Goals (SDGs) will provide local understanding about some of these goals to students, in addition to learning about Agenda 2030.¹³”

Therefore, discussions about integrating the SDGs within HEIs, their professional associations and networks in India will hopefully gather some momentum soon.

Integrating SDGs in Higher Education

The social responsibility and societal relevance of higher education has only recently been debated in global conversations. The recently published Global University Network for Innovation (GUNi) Report on Higher Education¹⁴ clearly argues that:

“Social responsibility emerges as the need to reconsider the social relevance of universities in light of the encounter of the local with the global, regarding priorities, demands, impacts and knowledge needs in the context of globalization. The competitiveness of nations as the only way to achieve progress should be balanced with inclusive social development and sustainability of the entire global population.”

If an HEI is viewed as a public institution, located in the public sphere, contributing to public purposes, it's the specific (social) responsibilities would be:

- Adopting the mantle of the civic university pursuing the public good by aligning its interests with those of society, and working collaboratively with other HEIs to maximize their collective impact;
- Playing a proactive role in ensuring that the SDGs are included on local agendas, proposing changes to education, conducting research and engaging with local and global communities on sustainable development;
- Imparting education needed to make the SDGs a reality, with the necessary knowledge, skills, competencies,

partnerships, and values thereby helping to produce new SDG leaders;

- Building capacities for SDG policies, planning and management;
- Conducting transversal reviews and refinements of curricula to ensure the mainstreaming of SDG issues across curricula, and including new values and practices for economic development that enhance social equity while reducing environmental risks (GUNi, 2017).

A significant mission of HEIs is to prepare the next generation of professionals and provide young people with the knowledge and competencies required for effective economic and social life as an adult. The integration of the SDGs in teaching as illustrated above is critical for the next generation of professionals and intellectuals. New sustainable frameworks have to be developed, learnt and taught.

Similar expectations arise from the core function of research at HEIs.

“Of particular importance are the increasing expectations from the field of research. In the context of the SDGs, research needs to contribute much more than what it has been doing traditionally. In addition to giving an understanding of phenomena, research is now perceived as being able to provide ‘new solutions, through appreciating and incorporating alternative perspectives of knowledge.’” (Hall and Tandon, 2017)¹⁵

To bridge the gap between research and society, lessons are available from the Science Shops model in Europe, which pursues research based on questions that emerge from the community. The European Union’s Responsible Research & Innovations (RRI) framework also demonstrates how research can be used responsibly and innovatively to further develop objectives.

13. http://unescochair-cbrsr.org/pdf/resource/BHALL_Community_Based_Research_ENG_Dec13.pdf

14. http://www.guninetwork.org/files/download_full_report.pdf (p. 41)

15. Drs. Hall and Tandon. (2017). Community Based Participatory Research and Sustainable Development Goals. Ottawa, Canada: Canadian Commission for UNESCO.

Achievement of the SDGs will also require finding new solutions to various socio-economic challenges, and new knowledge will be essential towards this end.

“Co-creation of such knowledge is a pre-requisite to finding sustainable solutions. This in essence, lays the foundation of engaged research, which requires moving beyond traditional notions of top down research (dictated by academics), to a more collaborative/participative form of research, where research questions are framed in accordance with local community needs, and the research is designed in collaboration with the local stakeholders who are impacted by the particular problem (the research intends to address). (Hall and Tandon, 2017).”

Community-based participatory research (CBPR) has now been recognised as the methodology for co-constructing knowledge worldwide. A global consortium of Knowledge for Change (K4C) is currently working in 12 countries to undertake such research to provide knowledge solutions for effective implementation of the SDGs locally¹⁶. HEIs can develop other similar arrangements at country levels to promote CBPR in finding new knowledge solutions through local partnerships. International associations like the International Association of Universities (IAU) and the Association of Commonwealth Universities (ACU) are already playing such facilitative roles. GUNi's expert group on SDGs is taking recommendations from the 6th World Report on Higher Education¹⁷. Several regional and global networks of HEIs that are working to promote engaged teaching and research are issuing regular global calls in this direction Big Tent¹⁸.

Examples from India

In preparing this paper, the authors issued an invite to a vast number of academics in the country to share what was being done on SDGs in their HEIs. Limited responses followed up with personal contacts seemed to indicate that this is a major shortcoming in present-day Indian Higher Education. Why is this so?

Before returning to this question, illustrated below are some efforts that exemplify ways in which Indian HEIs

are attempting to integrate the SDGs in their core teaching and research functions:

1. Forest Management

An example of expanding the curriculum to introduce the SDGs to a compulsory course for students of the Masters in Forest Management can be found at the Indian Institute of Forest Management in Bhopal. The course on Development Management has been expanded to include an understanding of SDGs in the framework of adaptive management. Foundational teaching of the SDGs is thus linked to development management, thereby preparing students to use adaptive techniques in the context of achieving the SDGs. Given the professional nature of this course, students from this institute go on to become forestry and natural resource management professionals.

The course began two years ago and has continued since then. As the champion of this course, Dr Amitabh Pande explained that the faculty at the Institute were not fully aware of or interested in SDGs. In order to foster a deeper understanding of the SDGs and a sense of the importance of focusing on sustainability issues when teaching the next generation of professionals, the Institute co-organised an International Conference on a Multi-disciplinary Approach to Sustainable Development in February 2019. The conference attracted participants from academia, government, industry and civil society, and a wide range of sustainable development experiences were shared and discussed (www.iifm.ac.in).

2. SDGs & Climate Resilient Strategies in Wayanad District of Kerala

The greater goal of this project is to make Wayanad an SDG ready model for India, meaning it would be climate resilient and able to adapt to climatic changes accordingly. A team of researchers from DEL Lab¹⁹ and the Srishti Institute of Art, Design & Technology²⁰ in Bengaluru undertook this research project in partnership with the local community and government in 2018.

“When we started the field work in Wayanad, our intention was to discuss and document the resilience of communities in dealing with the multiplicity of issues. It also defied several unproven assumptions that development planning has to be structured, policy-centred and responsive using exogenous inputs and experiences²¹. The key principle used in the research was that of the active landscape.”

19. <http://srishti.ac.in/centers-and-labs/law-environment-design-laboratory>

20. <http://srishti.ac.in/index.php/>

16. <http://unescochair-cbrsr.org/index.php/k4c-2/>

17. <http://www.guninetwork.org/news/guni-group-experts-sdgs-and-higher-education>

18. <http://www.guninetwork.org/news/global-networks-higher-education-institutions-call-action-united-nations-sustainable>

“When we say Wayanad is an active landscape, it means the people, their practices and culture are deeply integrated with their surroundings, i.e. the terrain and ambience. With the change in season the landscape changes and so does practise.”

Sustainable Planning and Design Principles emerged from this research²²:

- As Wayanad is a monsoon fed region, design principles should consider rain as an integrated part of planning. The concept of seepage helps to understand the landscape not just in terms of land and water as two sides of a coin but also the intensity of the texture of the landscape depending on the presence of water.
- The concept of porosity needs to be given due consideration. The main issue in the district is finding ways to tackle the problems with drought and flooding. River beds are drying, aquifers are vanishing, and this is due to the non-permeability of the materials we use in construction. The importance of a porous landscape needs to be understood in order to tackle the problems related to water.
- The term sustainable is often misunderstood to mean energy efficiency only. Sustainability, when deriving ideas from the field and local/sensitive practices, is based on the need to be self-reliant and to adapt to changes. Planning principles need to include change and plan accordingly, and also be static.
- Planning needs to be based on the carrying capacity of the terrain, and adapt to the resources, terrain, time and practices. This also changes across seasons.
- In order to be sustainable, climate resilience is an important phenomenon; this can only happen if we are adaptive, anticipative and absorptive towards change.

3. Teaching SDGs to Engineering Students

The Humanities department at Delhi Technological University (DTU) has undertaken some initiatives to teach Sustainable Development Goals (SDGs) to engineering students. Since the SDGs are not part of any course content or pedagogy, a few responsible faculty members, have tried, in their own stride, to introduce this perspective and these ideas to the students. A quarter of the course component is class work. Some faculty members, making good use of this component, have allocated some marks

to the learning of SDGs. Students are expected not just to read about SDGs but also to experience them. At the end of the semester, the students are expected to submit a written assignment on their practice and understanding of the SDGs and the assignment forms a graded component of their education.

Having accessed the assignments by the students, we were able to understand their imagination and understanding of the SDGs. Each project is generally done in groups and the students have tried to highlight the relevance and relation of engineering and sustainable development. Some of the highlights that emerged out of these projects are:

- Engineering students acknowledged the importance of food cycle systems; they felt that engineers can contribute to the processing and transport of natural resources in closed-loop systems. This can reduce waste and increase the efficient use of resources. Likewise, engineers can contribute greatly to the extraction and development of natural resources, the processing and modification of resources, the design and construction of transportation infrastructure, the recovery and reuse of resources and the production and distribution of energy. The idea of Sustainable Engineering also emerged in this assignment.
 - Another assignment was based on the premise that *‘Engineers have an obligation towards the general public in order to seek the various available opportunities to work for the enrichment of wellbeing, security and the communal welfare of the local and global community equally through the practice of sustainable development’*. Engineers are also accountable for undertaking efforts to help to reduce pollution at all levels. The students demonstrated a powerful example of the issue of sustainability in electrical engineering, showing how the use and manufacture of mobile phones has detrimental effects on the environment and suggesting small, doable steps that can be adopted by engineers to help combat these ill effects.
 - Another assignment tried to understand the correlation between Information and Communication Technologies (ICT) and Sustainability. Keeping a holistic picture in mind, they have drawn a connection between ICT and socially relevant mandates of health and well-being,
- A number of these initiatives are wonderful first steps but do not feed into a systemic structure of SDG learning. They are mainly faculty driven and are thus ad-hoc in nature. There is a need for more institutionalized support to make these initiatives more robust. The content

21. <http://fledgein.org/wp-content/uploads/2019/04/Wayanad-Report.pdf>.

22. <http://fledgein.org/wp-content/uploads/2019/04/Wayanad-Report.pdf>

generated by the students is thought-provoking but lacks rigour. This could also be because of their distance from local realities.

Many more similar examples to the above can be provided, and which demonstrate several aspects for integrating SDGs in HEIs:

- a. The first clear lesson is that students are interested in learning about SDGs, and how they can contribute to finding solutions. This reality is globally recognisable students are interested in issues of sustainability, though different higher education courses and programmes may relate to different sets of SDGs.
- b. Most such initiatives are led by individual academics who are passionate about some of these sustainability issues. While such energy and commitment is necessary, it is not sufficient to institutionalise the initiatives. Individual academics are interested in certain SDG goals more than others, and their own professional interests drive such initiatives.
- c. Individual academics focus on either teaching or research, depending on their own persuasion. They are able to include materials on the SDGs in an existing course that they teach; or bring an SDG focus to a research project they are conducting. Holistic attention to both teaching and research is not incorporated this way.
- d. In the absence of deliberations at the level of HEI leadership (such as VC, DVC, Deans & Departmental Heads), the process of institutionalisation does not gain momentum. Conferences and seminars on the SDGs have proven to be an effective means of building awareness and developing action-plans.
- e. The absence of a national policy framework that encourages HEIs to focus teaching and research on the SDGs tends to reduce continued efforts in this direction. Policy guidance and earmarked funding acts as an incentive to introduce new curricula and pedagogy linked to teaching the SDGs.

Bridging the Gap in Teaching & Research on SDGs in HEIs in India

Let us return to the question why the authors received limited responses to their invitation sent to a vast number of academics in the country to share what was being done on the SDGs in their HEIs. The answer(s) lie in the somewhat unique challenges that Indian HEIs face.

The biggest challenge facing institutional integration of the SDGs in teaching and research activities at HEIs comes from academic disciplines. Each discipline has rigidly defined frameworks of what can be taught. Curriculum and course outlines are approved only when they follow rigidly specified disciplinary requirements.

Not only is teaching content at the undergraduate and post-graduate levels rigidly defined, but even the pedagogy of teaching is tightly specified. For example, a course in chemistry specifies the curricular contents, as well as experiments and durations of teaching in the laboratory. Such rigid specifications limit the scope for experimentation by individual teachers. Even an SDG perspective regarding potable drinking water and water quality is difficult to introduce to such rigid chemistry courses.

Disciplines also specify research methodologies. Sociology, economics and physics each prepare researchers in those disciplines to follow a specific methodology. Bound within these disciplinary rules, journals and publications also follow similarly rigid specifications. New approaches to engaged and partnership research is hard to practice in such a rigid disciplinary architecture.

As disciplinary boundaries are rigidly specified, and their pedagogical and research methods are uniquely regulated, it is very difficult to cross disciplinary boundaries to generate multi-disciplinary teaching and research teams. Since all SDGs can only be understood in multi-disciplinary frameworks, the rigidity of disciplinary specifications is a hindrance.

There is a similar challenge emanating from professional education frameworks. The teaching of medicine, nursing and pharmaceuticals alone does not make students understand SDG 3 Health & Well-being. Construction, stress and material standards taught in civil engineering may require significant revisions in the light of climate resilience requirements in order to be relevant to several SDGs. The training of financial managers, bankers and investors to focus attention only on maximising profits,

GDP growth rates and raising stock prices tends to limit their understanding of how the SDGs can improve markets and institutions. Management education still requires substantial attention to the SDGs in order to prepare future managers to take business decisions in the light of sustainability requirements.

So, what can Indian HEIs do to actively integrate SDGs in their teaching and research functions?

HEIs can more actively integrate the SDGs in their teaching and research functions if they are able to overcome the disciplinary rigidities and frameworks of professional education as established and monitored by their respective councils and regulatory bodies. The All India Council for Technical Education (AICTE), Council of Engineers, Medical Council, Bar Council etc. need to proactively design new frameworks for professional education that integrate both the contents and the intents underlying the SDGs. There are 15 professional councils in India²³, each setting its own professional standards. It is clear that these councils and their elite leadership need to seriously study and incorporate the SDGs in the teaching of professionals.

While UGC has begun to establish some enabling framework policy (as described in an earlier section), AICTE, which regulates technical and professional education in India, needs to pay similar attention to the SDGs.

What will it take for HEIs to do what has been argued above? What kinds of actions may be required for a supportive eco-system to emerge that will spur HEIs to make their contributions towards the realization of the SDGs?

Tandon (2017) has argued for more systematic and concrete steps towards integrating the SDGs in the core teaching and research functions of HEIs; many of those are urgently relevant to the Indian context:

- First and foremost, leadership of HEIs and universities must encourage institution-wide appreciation of and learning about SDGs. Platforms of Vice-Chancellors and university presidents must put this urgently on their agenda.
- National and provincial ministries responsible for higher education policy and Higher Education Councils in all countries must encourage, mandate and resource such shifts towards linking the core functions of HEIs and universities to SDGs.
- Associations of teachers, researchers and universities can play a mobilising role to generate demand for such an engagement with SDGs. Such networks and associations can place SDG on the agenda of their forthcoming meetings.

- Students can become key champions of higher education engagement with SDGs. Local, national and international student associations can focus on SDGs in their forthcoming meetings, thereby generating demand for university authorities to act.
- International networks and associations of universities and their leaders can do likewise to promote engagement with SDGs. The International Association of Universities (IAU) is one such example. The Association of Commonwealth Universities (ACU) had taken a lead in the run-up to SDGs and made great contributions. Other regional and sectoral associations can also be so mobilised. GUNI has created a panel of experts which continue to promote integration of SDGs in HEIs²⁴.
- UNESCO has a special role to play in this regard. Its regional and national associations and offices should be proactively convening dialogues with universities to promote such engagement with SDGs.

Finally, civil society in India (and many other countries) needs to begin to demand greater involvement of HEIs in the achievement of the SDGs. HEIs should be held accountable for teaching SDGs to the next generation of students and professionals. The 2030 Agenda and specific SDGs should be the focus of locally relevant research by HEIs.

India's large and rapidly growing higher education sector needs to urgently focus its core functions of teaching and research on the SDGs. Not only will their enormous educational and intellectual resources be valuable for finding local solutions to the SDGs, but they will also be able to mobilise future generations to pay attention to sustainability challenges in the decade ahead.

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Obstacles to Implementation of the SDGs: Feelings Over Facts

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Introduction

In 2015, the United Nations published a list of 17 goals, representing a comprehensive collection of issues that, in their mind, must be addressed if the planet will be able to reach an equilibrium state, balancing the needs of its human inhabitants with and/or against the constraints naturally imposed by the planet itself. The list of goals is perceived as being comprehensive, including physical considerations, such as air and water, as well as behavioral issues that have developed as a result of centuries of human evolution, creating largely unbalanced living circumstances, with extreme and inequitable conditions demonstrated in areas such as wealth, health, education and civil and human rights. The list of goals is broadly perceived as highly logical and reasonable, and with those attributes, is expected to be well received, embraced by broad sectors of its target audience, and ultimately, sufficiently adopted in time to avoid the catastrophic end predicted by current conditions and trends. This article will address two issues – first: barriers to the achievement of the SDGs, created by human emotional behavior, which represents a significant element of danger not addressed by the logical and rational expectations presented by the arguments contained in the components of the SDG listing.; and – secondly: potential remedies, championed by institutions of higher education. The perspective will reflect an American paradigm, but will have global/universal application, and use international examples as appropriate.

An Under-educated Audience

Based on an article in the Global Citizen - K. Watson (2016), millions of children and adults around the world lack the access to education for various reasons — some live in conflict zones, others are not allowed to attend school

because they're girls, or they don't attend because their families need them to work and bring in income to support the family. But because education promotes an understanding of social justice, interdependence, and identity, it is key to eradicating global poverty by 2030. The article presents nine pertinent facts about global education, all of which support inclusion of quality education on the list of Sustainable Development Goals (SDGs).

1. Around the world, 59 million children of primary school age are being denied an education, and almost 65 million adolescents are without access to a secondary school.
2. Conflict and natural disasters have disrupted the education of 75 million children.
3. In one of three countries, less than three quarters of teachers are trained to national standards, resulting in 130 million children enrolled in school who are not even learning the basics.
4. A child whose mother can read is **50 percent more likely to survive** past the age of 5.
5. Nearly **15 million girls** of primary school age will never have the opportunity to learn to read and write in primary school, compared to about 10 million boys.
6. In 2012, there were **168 million** child labor workers aged 5 to 17. This is one reason many children cannot attend school.
7. Over 40 years, equitable access to quality **education can help a country** raise its gross domestic product per capita by 23 percent.
8. If all women had a primary education, there would be **1.7 million fewer malnourished** children.

Susan Kruger (2016) suggests some reasons why education, in the United States especially, is experiencing challenges, and producing less than fully capable graduates. While we hold to our position that ignorance of human development is THE core problem with education in the United States, within this context, there are three specific areas on which to focus:

1 - The Motivation Crisis

Our country suffers from a severe lack of motivation and engagement. Across every gender, racial, geographic, and socioeconomic boundary, students simply do not care. Even students who get "As" are not usually motivated to *learn*; they are only motivated to please people with good grades. If students don't care, they don't learn.

2 – The Lack of Relevance

Technology is *not* to blame for the Motivation Crisis; it is the sheer lack of relevance within existing curriculum. Students are always asking themselves, "Why do I need to know this in real life?" Until a 10th-grader in Houston, Texas can understand how English Literature will impact his future, he won't be naturally inclined to engage with this subject. Students don't see a connection between the classroom and the real world. As a result, school becomes only a game for getting grades.

3 – The Use of Completely Irrational and Ineffective Models for Learning

Our approach to education is completely ignorant of:

- How the human brain learns,
- Human development and age-appropriate learning, and
- The fact that emotions supersede everything related to learning.

Current data demonstrates that children are choosing entertainment over education – 32 hours per week watching television, compared with 2 hours per week reading.

Educational attainment levels in the United States are as follows:

- 29% of Americans aged 25 years and older have a high school diploma
- 22% have a Bachelor's degree
- 21% of American adults read below a fifth-grade level

An Uninformed Target Audience

Recent research demonstrates that people are more confused than knowledgeable about sustainability. While the word is well known, its definition is widely perceived to be elusive.

A 2015 survey found that 62% of consumers believe in climate change but only 54% feel the word "sustainable" conveys something important. Only 59% claim to understand it at all, and 76% consider it "expensive." In the absence of clear definitions, words risk losing meaning altogether or taking on negative associations. Consumers are often confused when they see and hear corporate sustainability communications that are generic and un compelling, or misleading and incomplete.

J Kho (2014) presented the following evidence of consumer confusion on the meaning of sustainability: The debate about the word "sustainability" continues. "We use it openly and freely, and it's not really a consumer word," said Carol Fitzgerald, while presenting new research from a not-yet-completed study on perceptions about sustainability. One surprise is how few US respondents said they hear the word sustainability regularly: only 16% said they see it "very often", with 56% reportedly seeing it "occasionally". And in several different activities meant to help researchers understand consumers' views of sustainability, US respondents chose environmental words such as "environmentally friendly", "natural", "organic", "green", "recycle" and "renewable" as most similar to "sustainability". Meanwhile, words such as "ethical," "trust", "trustworthy", "collaboration", "community" and "transparency" ranked low in their perceived relationship to sustainability. Different generations also had different definitions - Among baby boomers, there is some confusion about what it is. They were more likely to choose words such as "health" and "life", but selected fewer words that reflect the idea of preserving for the future than Gen X or Gen Y respondents. The results signal the need to build more awareness about non-environmental aspects of sustainability.

Consumers as Rational Beings

Classic consumer behavior theory has shown that consumers make purchasing decisions based on their beliefs about a product, and that these beliefs are formed in a very calculating way:

- Beliefs represent the knowledge and inferences that a consumer has about objects, their attributes, and their provided benefits.
- Objects are the products, people, companies, and things about which people hold beliefs and attitudes.
- Benefits are the positive outcomes that attributes provide to the consumer. According to the Fishbein model, attitude towards a product is a function of the importance given to the product's attributes and the evaluation of the product with respect to those attributes.

In addition, traditional marketing wisdom suggests that consumers are very systematic in making their consumption choices.

Consumer Decision-Making Process:

1. Define the problem.
2. Identify the decision criteria.
3. Allocate weights to the criteria.
4. Develop the alternatives.
5. Evaluate the alternatives.
6. Select the best alternative.

Depending on a consumer's experience and knowledge, as well as the attributes (cost, importance, risk, etc.) of the product being considered some consumers may be able to make quick purchase decisions and other consumers may need to get information and be more involved in the decision process before making a purchase. The *level of involvement* reflects how personally important or interested you are in consuming a product and how much information you need to make a decision. The level of involvement in buying decisions may be considered a continuum from decisions that are fairly routine (consumers are not very involved) to decisions that require extensive thought and a high level of involvement. Whether a decision is low, high, or limited, involvement varies by consumer, and historically not by product, although some products, such

as purchasing a house, typically require high-involvement decisions among all consumers. Consumers with no experience when purchasing a product may have more involvement than someone who is replacing a product. Low-involvement decisions, however, typically relate to products that are relatively inexpensive and pose a low risk to the buyer who makes a mistake by purchasing them.

By contrast, high-involvement decisions carry a higher risk to buyers if they fail, are complex, and/or have high price tags. A car, a house, and an insurance policy are examples. These items are not purchased often but are relevant and important to the buyer. Buyers don't engage in routine response behavior when purchasing high-involvement products. Instead, consumers engage in what's called extended problem solving, where they spend a lot of time comparing different aspects such as the features of the products, prices, and warranties.

High-involvement decisions can cause buyers a great deal of post-purchase dissonance (anxiety) if they are unsure about their purchases or if they had a difficult time deciding between two alternatives. Companies that sell high-involvement products are aware that post-purchase dissonance can be a problem. Frequently, they try to offer consumers a lot of information about their products, including why they are superior to competing brands and how they won't let the consumer down. Salespeople may be utilized to answer questions and do a lot of customer "hand-holding."

Much has been written to discuss and debate the structure of these models, which explain how attributes are evaluated and integrated into overall product judgments. Historically, there has been a certain consensus that consumers process information in this fashion in order to facilitate their consumption choices. More recent literature has provided credence to a train of thought that supports a less analytical, and more emotional consumer, that makes purchase decisions based on a spectrum of characteristics that are not product-based. Examples include cultural/demographic characteristics of the customer, consumer self-identity, intersectionality (multiple co-existing and/or overlapping characteristics) and revised perspectives on product categorization. As regarding high and low involvement purchases, product attributes and marketing messages for numerous products that have been traditionally considered high-involvement (e.g. cars and computers), have transitioned from reasoned consumption (operational efficiency, low risk, and high value) to emotional consumption (color, fashion and

Emotional vs Rational Consumer

There are basically two ways to persuade: rational persuasion and emotional persuasion. Rational persuasion employs logical arguments and believable evidence. Emotional persuasion relies on the ability of the message to resonate with the consumer's emotions, whether directly related to the product or not. The choice of method depends on the nature of the product and the type of relationship that consumers have with it. The recall of ad content tends to be better for "thinking" rather than "feeling" ads. However, if one prescribes to the tricomponent attitude model (cognitive, affective and conative aspects), consumer decisions must be preceded not only by a positive rational judgment (cognitive) of the product, but also by an emotional connection (affective), leading to the act of purchase (conative). Panda et al. (2013) argued that emotional advertising is more useful because it draws attention to and fosters an emotional bonding with a brand. Specifically, the authors found that advertising that evokes positive emotions like cheerfulness, happiness, interest and lack of irritation are associated with higher advertising and brand recognition. Gopinath, Thomas, and Krishnamurthi (2014) also revealed that emotional advertising has a stronger impact on sales than rational advertising, due to its slower wear-out phenomenon compared with rational advertising.

Social Identity Theory

Each person has established their own perspective (a self-concept) consisting of the beliefs held about his or her own attributes and how he or she evaluates these qualities. Within that framework exists an ongoing and evolving social comparison, representing the process by which consumers evaluate themselves by comparing themselves with others (particularly comparisons with idealized images of people in advertising).

In Social Identity Theory, a person has not one "personal self", but rather several selves that correspond to widening circles of group membership. Different social

contexts may trigger an individual to think, feel and act on the basis of his or her personal, family or national "level of self"

(Turner, 1987).

Apart from the "level of self", an individual has multiple "social identities". Social identity is the individual's self-concept derived from perceived membership of social groups (Hogg & Vaughan, 2002).

Social Identity Theory (SIT; Tajfel & Turner, 1986) has increasingly influenced how the dynamics and sources of intergroup discrimination are viewed.

Although many forms of intergroup discrimination might profitably be understood solely in terms of in-group favoritism (or group-based nepotism), many other forms of intergroup discrimination seem difficult to understand as instances of in-group favoritism alone. Such forms include widespread interethnic violence, ethnic cleansing, police beatings, lynchings, slavery, colonial expeditions, ethnic war, and other forms of intergroup behavior that can be collectively referred to as group oppression or group subjugation. There is strong reason to believe that these more assertive, intrusive and oppressive forms of group interaction are not simply manifestations of in-group bias but also reflect a desire to actively dominate, humiliate, oppress, and subjugate out-groups. This desire has been given a central role within social dominance theory (SDT), a new and general theory of social hierarchy and group conflict (Sidanius, 1993).

However, SDT makes the further assumption that evaluations of and behaviors toward out-groups are also driven by one's level of social dominance orientation, which refers to the basic desire to have one's own primary in-group (however defined) be considered better than, superior to, and dominant over relevant out-groups (Sidanius, 1993). Within SDT, social dominance orientation not only affects in-group favoritism and outgroup discrimination but also a whole host of other behaviors toward out-groups and their members. These include negative stereotyping of out-groups, internal and negative attributions for out-group failures, and active discrimination and willingness to use violence against out-group members. These assorted behaviors are referred to in this article as differential intergroup social allocations (DISAs).

The greater the degree of in-group identification, the greater the degree to which subjects will engage in DISA.

Subjects with higher levels of social dominance orientation tended to display a greater desire for social distance from, and less willingness to cooperate with, minimally defined out-groups. The tendency to denigrate, distance oneself from, and be uncooperative with out-groups was associated with a tendency to accept group boundaries, a desire to dominate other groups, and a desire to experience a high sense of self-esteem.

This claim is based on the following theoretical assumptions. All societies are to some degree hierarchical. All societies have at least one hegemonic group and one subordinate group, with different behavioral expectations for each. Aggregated individual and institutional discrimination is a normal societal feature. These societal givens are maintained by individual and group identity processes, such as social identification (we adopt the identity of the group we have categorized ourselves as belonging to), social comparison (if our self-esteem is to be maintained, our group needs to compare favorably with other groups), and self-esteem maintenance, which in turn lead to the “social dominance orientation.” Social dominance orientation is a fundamental human desire to view one’s own group as positive and occupying higher social statuses than other relevant groups.

Elitism & Lack of Diversity

Consistent with social identity theory as described above, Esplanade (2012) takes the position that there is a growing elitism in higher education structures and systems. Further, he suggests that those institutions and systems help maintain social inequity in America. Based on his own research, there is a rising proportion of students enrolled in “selective” colleges and universities that come from the top two social-class categories: upper-middle- and upper-class families. This supports the hypothesis that selective private higher education confers, concentrates and consolidates privilege for students who have grown up in well-to-do circumstances. The “Varsity Blues” college admissions scandal reflects our national obsession with image over substance in higher education (Wilcox, 2019).

This belief system (Social Identity Theory) and the resulting behavior present a natural, albeit unintentional, barrier to the prospect of diversity, in all demographic

forms – gender, race/ethnicity, age, religion, etc., as well as in characteristics not tied to human features mentioned above, such as political and social thought, methods for processing information and problem solving. Academia has lost its appetite for “academic discourse”.

From a demographic perspective, there exists a clear gap in administrative talking points and practices for student admission, as well as faculty hiring. Kofi Annan, winner of the Nobel Peace Prize and former Secretary General of the United Nations, famously said: “Education is the premise of progress, in every society, in every family” – and yet academia is failing to achieve this because of structural inequalities in the management regime. A recent analysis conducted by Green Park and Operation Black Vote revealed that 94% of vice-chancellors of the top 50 universities in the U. K. were white (Thompson 2017). “In the United States, colleges and universities lack the diversity needed among faculty to deliver a well-rounded education.” (Heilig, et al, 2019). This study reports that students are least likely to find diversity among faculty at schools granting degrees up to the doctoral level where 4.05% of tenured faculty are black/African-American and 4.6% are Hispanic/Latino. In fact, ethnoracial diversity among tenured faculty continues to lag across institutional types. And, while the overall number of women in faculty positions is nearing that of men, only 32.63% of tenured faculty at doctoral level institutions are women. A 2010 publication that outlines the benefits (and challenges) of diversity, produced by WISELI (Women in Science & Engineering Leadership Institute at University of Wisconsin-Madison), includes a quote by Sylvia Hurtado: “It is time to renew the promise of American higher education in advancing social progress, end America’s discomfort with race and social difference, and deal directly with many of the issues of inequality present in everyday life.”

There is sufficient evidence that the sustainability movement has similar issues with elitism and diversity.

Historically, the poor were inadvertently the population that lived most sustainably. Out of financial necessity, they recycled and reused when possible, lived in urban close-quarters and avoided spending money, and therefore resources, on utilities, food, transportation, consumer goods, technology and the like. Since becoming fashionable, sustainability has acquired a new

definition and demographic. Modern environmentalism is now characterized not by restricting intake but by the consumer effects of greenwashing, whereby shoppers purchase allegedly environmentally-conscious products that cost more. In consequence, eco-friendliness has become a feel-good commodity that is uniquely accessible to those with ample means. In *Globalization*, economist Donald Boudreaux writes, "Environmental quality is very much like leisure time: as people become wealthier, they demand more of it, mostly because they can better afford it." Statistics support the notion that environmentalism is predominately accessed and ordered by the rich: according to a new study by the Scarborough Research Center, consumers who engage in the highest amount of environmentally friendly activities are significantly more likely to earn above \$150K per year. Thus, the barrier to entry of environmentalism is not morals but price, so that ethical shopping has come to resemble a status symbol (Beaton 2014).

Future 500 (self-described as a non-profit consultancy that builds trust between companies, advocates, investors, and philanthropists to advance business as a force for good) has produced a five-part series of essays, entitled "Green, but Mostly White...The Lack of Diversity in the Environmental Movement". In Part 2, Marvin Smith (a former Future 500 Team Member, and an African-American male) makes the following points:

1. The mainstream environmental movement is (albeit unintentionally) exclusive to middle, upper-middle class, white, liberals.
2. It just seems that having groups comprised almost exclusively of wealthier people who are *least* affected by climate change dictating policies and advocacy campaigns to the poorer people who are *most* affected by the issue is a *bit...Kiplingesque*
3. A recent study from the University of Minnesota showed that though minorities emit less carbon than whites, they breathe 38% more nitrogen dioxide than their white counterparts. The vivid images of a crowded Superdome post-Katrina serve as a reminder of exactly who is most affected by extreme weather events. Because they are most affected by climate change, it is these groups that most strongly believe in anthropogenic global warming according to a Pew Research Center study, and would therefore be the strongest allies in a move to enact changes in federal policy. Yet, they are absent from the broader conversation outside of the environmental justice community.

Cognitive Dissonance Theory

There are many circumstances where beliefs and experiences are not consistent. This is frequently applied in purchasing decisions, where the outcome is not aligned with the expectations of the buyer, and often results in what is commonly referred to as "buyer's remorse", and formally presented as cognitive dissonance. Cognitive dissonance theory is widely used in psychological accounts of identity, both explicitly and in rearticulated or parallel conceptions of identity crises, where conceptions of self are no longer validated during interaction with others. Identity theorists use cognitive dissonance theory (Festinger, 1957) to argue that the motivation to change attitudes is based on the desire to relieve the tension one feels when (a) one holds cognitions that are inconsistent with each other or (b) one's cognitions and beliefs are inconsistent with one's acts (Sdorow 1990). As such, in instances where an individual's attitudes or schemata are highly salient, a conflicting cognition may itself be ignored or rationalized away in order to guarantee cognitive consistency. In the context of the current discussion, "elitist" and "prejudiced" are not considered flattering terms. Even though there is clear evidence of each of these behaviors, the typical position of an individual is to deny that characteristic and/or behavior rather than heed Dr. Hurtado's advice to confront the issues, and advocate for a substantive and meaningful discussion that will lead to viable solutions to these social (and environmental) challenges.

Segmenting "Green" Consumers

Ginsberg and Bloom (2004) have divided green consumers into 5 categories based on environmentally friendly behavior, with only three being supportive of the notion of sustainability:

- True Blue Green - These green consumers have strong environmental values and intensive desire to participate in activities and organizations supporting the environment. This group, which forms about 9% of green consumers, intensively refuses to buy products from manufacturers that are unresponsive to the environment.
- Green Back Greens - This sector of green consumers, which makes up about 6% of the total, are not as interested as true-blue green in joining organizations

supporting the environment but do show an interest in buying green products.

- Sprouts – These consumers are only concerned about the environment, and in practice they are less willing to pay the extra price for green products. These types of green consumers, who make up 31% of the total, can be encouraged by appropriate green marketing strategies to buy green products.

The remaining two groups are not supportive of sustainability, and are described as:

- Grousers - Environmental knowledge level in grouser consumers is very low, so this group, which constitutes 19% of total green consumers, believes that green products are of low efficiency/quality and that manufacturers' claims about these products are only devices to increase sales.
- Basic Browns - This group of consumers are more involved with their daily problems and ignores environmental problems.

In terms of consumer resistance to the message of sustainability, it is suggested here that there are emotional and/or social characteristics that drive consumption behavior. For those consumers who do not relate to sustainability messages in general, and the SDGs in particular, the following characteristics are suggested:

1. Self-interest – These individuals benefit from non-sustainable behavior. They include individuals who stand to benefit from corporate practices and/or legislation that are not aligned with sustainability perspectives.
2. Deniers – These individuals may also be parties that benefit from non-sustainable behavior, but also include individuals that are uninformed, misinformed, and those that find themselves incapable or unwilling to take the actions required to address sustainability-related concerns. They are slow to perceive the issues, as climate shifts are gradual, and many fluctuations can be attributed to less threatening factors. Their position is often influenced by those motivated by self-interest, who are generally adept at making convincing arguments to support their own position.
3. Change adverse individuals, regardless of topic/issue. These generally take one of the three following positions listed, with the best response strategy for each:

- a. I don't get it
 - i. Lack of understanding
 - ii. Make communications more relevant
 - b. I don't like it
 - i. Fear of loss
 - ii. Address the fear
 - c. I don't like you
 - i. Wrong messenger
 - ii. Choose a different delivery mechanism
4. Individual or group inertia – These people express support for the status quo, simply because it is what is in place, and what it represents. They are avoiding cognitive dissonance, resisting the notion that the new circumstances may actually be better.
 5. Uniformed and/or misinformed – This group doesn't have or won't take the time to educate themselves on the issues, and depends on others for their perception of the circumstances. They will tend to believe whatever perspectives provide the least short-term disruption in their lives. In the case of sustainability, frequently adopted positions, based on erroneous information include:
 - a. Sustainability is deceptive and is a tool to advance progressive politics and ideology.
 - b. Sustainability is coercive. Advocates assume no one can legitimately disagree with their message.
 - c. Sustainability shrinks freedom. Advocates don't like free markets or personal liberty.
 6. Self-centered/selfish – These may be represented by populations that are late to the game of conspicuous consumption, but envy that lifestyle, and feel it is their turn at the trough. This group includes more prosperous individuals who have adopted the aspirational customer orientation and respond positively to marketing messages that encourage “having and accumulating”.
 7. Fatalistic Attitudes – These people adopt an attitude that if disaster is unavoidable and imminent, they should focus on making the best of the time they have left. This position drives behavior in even more destructive directions, and leads to broad loss of social norms. There is significant research and literature on what has become known as Terror Management Theory or TMT.

Terror management theory (TMT) is a way to understand how the human awareness of death affects materialism, conspicuous consumption, and consumer decisions. The pursuit of wealth and culturally desired commodities are hypothesized to reinforce those beliefs that function to protect people from existential anxieties.

A variety of ethnographic studies have pointed out that a driving force behind human social behavior is the pursuit of symbolic prestige to deny the corporal limitations of biological life. Although the frenetic pursuit of the superfluous is common to all humans, the propensity for consumer-oriented consumption during one's life has reached heretofore-unthinkable dimensions in contemporary Western, and especially, American society. In short, because awareness of death instigates efforts to augment self-esteem, concerns about mortality should often intensify materialistic desires in people for whom such pursuits are a salient barometer of self-worth. There is thus growing evidence that concerns about death can increase the appeal of money and products that imbue their owners with status.

The quest for sustainability has run up against the unwillingness of privileged consumers to relinquish the lifestyles to which they have become accustomed. The maintenance of personal identity has become linked to consumption. Indeed, environmental researcher Alan Durning argues that consumption has today become 'our primary means of self-definition. As a part of the broader effort to rethink established strategies for promoting environmentally friendly behaviors, proponents of sustainable consumption need to begin developing a more carefully theorized notion of consumption's identity value. As sociologist Anthony Giddens has argued – everyday consumption choices in today's world are increasingly 'decisions not only about *how to act* but *who to be*' (Giddens, 1991).

Framing sustainable consumption in relation to the problem of creating and expressing self-identity forces us to confront not only the psycho-cultural factors that maintain and expand demand for material goods and services, but also the contradictions faced by ordinary people as they try to understand and respond ethically to large-scale social and ecological problems within the ambit of an everyday environment that is highly commodified and individualized.

One of the problems with this model of the consumer is that it ignores how everyday consumption choices are enmeshed in a web of non-instrumental motivations,

values, emotions, self-conceptions and cultural associations that complicate the uptake of environmentally friendly 'behavior change'. In light of such factors, any effort to advance the sustainable consumption agenda requires deeper engagement with the social and cultural pressures that wed people to established consumption patterns in ways that are not strictly rational. To be successful, sustainability and being sustainable must appeal, not only to the social identity of the individual consumer, but also to the policy profile of local, state, regional and national government agencies, and the brand identity of corporations, large and small.

Within this framework, it appears that marketers (of goods, services, ideas and/or movements) must develop one or more of the following:

1. Mechanisms for identifying characteristics of the green consumer
2. Methods to determine when that multi-faceted customer is defined by their affinity for sustainability.
3. Strategies and methods to drive consumer thinking towards that component of the self-identity that aligns with their pro-sustainability thinking and feelings

Conclusions

- There is no understanding consumption without understanding culture
- Culture is driven by both emotion and by thought
- Society is trending towards decision-making that places greater weight on emotion, and as a result, consumer identity
- Communications methods and messaging will have to be revised to reach the current "identity" driven consumer
- American colleges of higher education have largely lost their way – recognizing an achievement rate of 30% for undergraduate degrees, they remain elitist institutions, they lack diversity on many spectrums, and have failed to evolve their operating model to be more effective in a constantly evolving social environment. Perhaps worse than the existence of these characteristics, is the failure of the institutions to recognize/admit these conditions.
- Environmental organizations suffer from some of the same concerns, and also appear to be elitist and lacking in diversity.

Recommendations

University Unshackled

Harvard University President Derek Bok, in his book "Universities and the Future of America" (1990), urges academic leaders, government agencies and the corporate sector to help universities realign their priorities so as to aid the nation in addressing the most urgent social problems and its international competitive position. Stephens, et al (2008) present the notion of higher education institutions as change agents: They hold a unique position in society, and are critically important places of knowledge production, perpetuation and dissemination. With regard to a societal transition toward sustainability, the primary role of institutions of higher education can be viewed in two ways: universities can be perceived as an institution that needs to be changed or universities can be perceived as a potential change agent. Many different perspectives and expectations on the role, value and potential of the university in society translate into many different perceptions of opportunities for the university as a change agent in a transition toward sustainability. While these perceptions will vary in different cultures and contexts, there are four general categories of perceptions on how institutions of higher education might contribute to the societal transition toward sustainability:

1. Higher education can model sustainable practices for society
2. Higher education teaches students the skills of integration, synthesis, and systems-thinking and how to cope with complex problems that are required to confront sustainability challenges.
3. Higher education can conduct use-inspired, real-world problem-based research that is targeted at addressing the urgent sustainability challenges facing society.
4. Higher education can promote and enhance engagement between individuals and institutions both within and outside higher education to resituate universities as transdisciplinary agents, highly integrated with and interwoven into other societal institutions.

One of the most challenging characteristics of higher education institutions, and which may mitigate their ability to fulfill the aspirations mentioned above, is their administrative and organizational structure, which tends

to be hierarchical and siloed. This is a current challenge when attempting to make student-centered decisions. It also hinders external engagement. Examples of institutions that have resisted, overcome and/or discarded this structure AND mindset include:

- Arizona State University – created a new school, the School of Sustainability, "to bring together multiple disciplines and leaders....to develop practical solutions to pressing challenges of sustainability"
- Clark University – created the Department of International Development, Community and Environment - three specific, individual but interrelated initiatives that are linked to the University's strategic direction.
- The King Abdullah University of Science and Technology – a new institution committed to an interdisciplinary and potentially transdisciplinary approach.

Each of these examples demonstrates an understanding and commitment to the third leg of traditional faculty effort: service - co-existing, partnering and integrated with teaching and research.

Bridging the Gaps

As Willard Wirtz, former U.S. Secretary of Labor, once said, "There are not two worlds--education and work--there is one world--life."

There is a need to develop a new vision of the interconnectedness of work and learning. The nation needs to stop thinking of schools as buildings, of education as a system, and of the acquisition of knowledge and skills as preparation for life after school. Learning must be thought of as a natural act--as natural as breathing. Societies cannot live without learning. As long as humans live and breathe, they learn. In a parallel way, there is a need to stop thinking of workplaces as factories and offices, and of a job or career as a necessary means of supporting oneself after leaving school and before retirement. Work should be thought of as a natural act--as natural as breathing. As long as humans live and breathe, they work. Learning has been placed inside the system of education, and work inside the system of employment. In the process, they have been disconnected and have been robbed of much of their natural vitality. Though Americans have categorized and effectively separated them, work and learning in their

natural states are interconnected. To work, we need to figure things out. We learn naturally in the course of working. To learn something, we need to try it out, to apply it, to see if it works. If we did not expend so much energy trying to organize things to keep work and learning apart, housing them in separate institutions, they could infuse each other with their purpose and energy.

1 - Bridging Gaps Within Education

When policymakers speak of creating partnerships between education and work, they sometimes speak as if education was a single entity, and it certainly is not. The American secondary school system consists of a series of quite unrelated disciplines taught as separate school subjects. Though there has been much effort in recent years to integrate vocational and academic education, it is a difficult process for many reasons, not the least of which is that there is no unified, organized operational infrastructure, resulting in academic curricula addressing a wide spectrum of issues, some more self-serving than outcome and benefit focused. Thus, vocational educators need to reach out and build individual connections with mathematics, with science, with English, and with social studies faculty, who themselves have not built connections among their separate disciplines. The current debate of liberal arts education vs. vocational education is misguided. The graduates of today, the workers of tomorrow, must be able to both think and do. The pace of development requires educators and students today to address the need to solve future problems that have not yet even been thought of, much less conceptualized.

2 - Bridging Gaps Within the Workplace

When educators speak of creating partnerships between education and work, they sometimes speak as if the workplace was a single entity, and it certainly is not. In the United States, there is a huge number and enormous variety of employers and, due to the constant flux of the marketplace, a different mix of employers each year. Of these employers, less than one percent employs more than 500 persons. Nearly 90 percent employ fewer than twenty persons. There are enormous differences between the needs, interests, and resources of the smallest employers and the largest.

3 - Bridging Gaps Between Education and the Workplace

To engage the participation of employers, both large and small and both public and private, as well as organized labor, representatives of the workplace need to be included in all stages of planning, implementing, and evaluating programs that connect learning and work to prepare persons for the work force. This full involvement of workplace partners in educational programs that connect learning and work needs to begin at the earliest design phase. Workplace representatives need to help to establish learner outcomes and standards that form the basis of the school curriculum.

A Fourth Pillar? – Cultural Sustainability

Considering the perspectives presented here regarding the importance of culture in understanding consumer behavior, it is reasonable to examine the role of culture in, first, understanding sustainability, and following that, promoting sustainable behavior and educating the target audience of sustainable messaging. Scammon (2012), prior to the release of the SDGs, advocates for ‘cultural’ to be added to the framework of the “Triple Bottom Line” of social, economic and environmental considerations for sustainable living. She references the work of Tom Wessels (“The Myth of Progress: Toward a Sustainable Future”), which states that “there are three laws of sustainability: the law of limits to growth, the second law of thermodynamics, and the law of self-organization in complex systems”. He explains that these laws contribute to linear reductionist thinking that does not take into account how all the parts of a complex system interact with each other, interactions that cannot be predicted exactly. Wessels notes that, “What is lost in this paradigmatic view of the world is that the whole may be much more than the sum of its parts”. Sammons continues – “This is an important argument for the inclusion of culture as the fourth pillar of sustainability.

The topic of adding culture to the already widely accepted three pillars of sustainability – social, environmental, and economic – is an important idea for society to address because the addition of a fourth pillar to represent culture creates a holistic approach to sustainability.”

In 2017 The Committee on Culture of the world association of United Cities and Local Governments (UCLG) produced a report recognizing that culture is not a significant

component of the SDGs, but is represented significantly within the Targets included in and tied to each SDG:

“Although none of the 17 SDGs focuses exclusively on culture, the resulting Agenda includes several explicit references to cultural aspects. The following elements are particularly worth noting:

Target 4.7 refers to the aim to ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for global citizenship and the appreciation of cultural diversity and of culture’s contribution to sustainable development.

Target 8.3 addresses the promotion of development-oriented policies that support productive activities as well as, among others, creativity and innovation.

Targets 8.9 and 12.b refer to the need to devise and implement policies to promote sustainable tourism, including through local culture and products, and to the need to develop suitable monitoring tools in this area.

Target 11.4 highlights the need to strengthen efforts to protect and safeguard the world’s cultural and natural heritage.”

It must be understood that much of the target audience, who are largely unaware of the SDGs, are unlikely to explore the detailed levels of the targets and their associated indicators. Scammon later states, “*This is a message (the inclusion of culture) that needs to be expressed through mass communications as well as through education.* Cultural sustainability involves efforts to preserve the tangible and intangible cultural elements of society in ways that promote environmental, economic, and social sustainability.” This position, in the context of the challenge of developing relatable, convincing and motivating messages for current (emotional) consumers, is fully supported here, as a strategy for overcoming obstacles to the SDGs.

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Implementation of the Sustainable Development Goals (SDGs) in Higher Education Institutions: Recommendations Based on the Experience of a Latin American University

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Introduction

Undoubtedly, the great challenge faced by higher education institutions today is to assume real and effective commitment to the Sustainable Development Goals proposed by the United Nations in its 2030 Agenda. This was recognised in June 2018 at the 3rd Regional Conference on Higher Education (CRES), which was massively attended by rectors, directors, faculty and students from universities in a wide variety of countries, mainly in Latin American and the Caribbean. The Declaration approved at this important event highlighted “the strategic role of higher education in the sustainable development of Latin America and the Caribbean,” specifically “for the achievement of the Sustainable Development Goals” in the region (CRES, 2018: 5).

The Alliance of Iberoamerican University Networks for Sustainability and the Environment (ARIUSA) issued a similar statement at the end of the same year in a document entitled “Incorporation of the Sustainable Development Goals in the duties of ARIUSA Higher Education Institutions.” Referring to the 2030 Agenda, it states that higher education institutions are faced with “the challenge of taking this ambitious agenda on board, discussing it and using it as a tool to conduct its activities within the framework of the SDGs.” According to ARIUSA, “these goals should be viewed as tool that each HEI should use when planning its journey towards sustained, inclusive development, in harmony with the environment, helping to make Latin America more inclusive, equal and sustainable” (ARIUSA, 2018; 7).

As guidance with an adequate response to such a challenge, this document presents a series of general recommendations grounded on the theory of a ‘University Environmental System’ (*Sistema Ambiental Universitario - SAU*), as proposed since 2007 by an inter-institutional team of Colombian researchers (Román, 2016). More recently, this concept has been developed by the University Environment and Sustainability Team (UAS), which structures the SAU into five fields of university action in relation to their commitments to the environment and sustainability:

- a. Government and participation;
- b. Teaching and training;
- c. Research and technology;
- d. Extension or projection; and
- e) Management and planning (Sáenz et al, 2017: 6).

More than a theoretical and speculative construct, the proposed University Environmental System has been made possible on the basis of the work done across several decades by certain Colombian universities as part of the institutionalisation of their commitment to the environment and sustainability. These include the University of Applied and Environmental Sciences (UDCA), whose experience shall now be taken as a particular example to illustrate how the Sustainable Development Goals can be implemented in higher education institutions.

The University of Applied and Environmental Sciences is a private and autonomous university that since 1983 has offered higher education programmes in the areas of basic, environmental, agricultural, social, administrative, legal, health, education and engineering sciences. It has several campuses and sites in the cities of Bogota and Cartagena (Colombia), which are used by more than five thousand undergraduate and graduate students (U.D.C.A, 2018a: 26)

As is very clearly stated in its Institutional Mission and Vision, this university is highly committed to social and environmental responsibility “at the service of sustainable human development” (U.D.C.A, 2019a). Consequently, according to the Institutional Educational Project (PEI), the UDCA is a higher education institution that is “committed to the shared building of a society that can achieve sufficient economic development to guarantee a dignified level of wellbeing and quality of living for the people, without surpassing the limits required for the conservation of the natural environment for present and future generations” (U.D.C.A, 201X: 11). Hence the decision to “contribute from our institution to achievement of the Sustainable Development Goals proposed by the United Nations” in the 2030 Agenda (U.D.C.A, 2018a: 18).

Based on this position and 24 years after its implementation, the University of Applied and Environmental Sciences is the renowned leader of several university networks and associations in Latin America and the Caribbean. These include the Colombian Environmental Training Network (RCFA), the Association of Universities of Latin America and the Caribbean for Integration (AUALCPI), the Colombia region of the Inter-American Organization for Higher Education (IOHE), the Alliance of Ibero-American University Networks for Sustainability and the Environment (ARIUSA) and the Observatory of Sustainability in Higher Education in Latin America and the Caribbean (OSSES-ALC). All these networks and associations promote commitment among HEI to the environment, sustainability and the Sustainable Development Goals.

The UDCA having such broad and complex experience of these issues, its description is based on the proposed University Environmental System and its five areas of institutional action. To simplify its presentation, the latter are grouped according to the administrative and academic functions of higher education institutions. The areas of Government and Management correspond to the former; the the areas of Training, Research and Extension to the latter.

Based on these criteria, the first section of this document presents some general recommendations, and the main concrete actions and obstacles encountered in the institutionalisation of the UDCA’s commitment to the environment, sustainability and the Sustainable Development Goals. The second section goes on present suggestions, activities and barriers in the process of incorporating environmental and sustainable development issues into the areas of training, research and extension at universities.

The third section deals with the need to start with diagnoses and conduct permanent follow-up of these processes both at the general level of the university as an institution and within each of their academic and administrative units. The concluding section makes a series of final recommendations.

Institutionalization of Commitment to the Environment, Sustainability and the SDGs

Based on the theoretical proposal of a University Environmental System and the specific experience of the UDCA, the first and foremost recommendation for higher education institutions is that institutional commitment to sustainability and the SDGs must be taken up from the most senior levels of authority, and be publicly expressed in their most important official documents and incorporated into their administrative and academic structures.

This is what the University of Applied and Environmental Sciences has been doing since 1995, when it decided to make commitment to the environment part of its constitution, whose text defines it as part of the notion of “sustainable human development” (Anzola & Cabrera, 2005: 48). In the current version of what is called its institutional ‘Mission’, the UDCA states that “it is committed to the permanent pursuit of academic excellence, through the transmission, generation, transfer and application of knowledge, at the service of sustainable human development on a local, regional, national and international level” (U.D.C.A, 2019), which is also evident in the university’s future vision, which stresses this aspect as an element of its identity and the way it is viewed from outside.

To complement these general guidelines, in 2000 the university’s academic board passed an Environmental Policy, which has been ratified several times since then.

In the current version of this policy, the UDCA describes its commitment to “continuously improving the institution’s environmental efforts” and to establishing “strategic partnerships to work on disaster prevention, sustainable development and the eradication of poverty” (U.D.C.A, 2008).

In order to implement the general guidelines described in all these documents, from 1999, different administrative units specialising in environmental and sustainability issues started to be created and developed. That was the year when the Environmental Planning and Management Unit was created, attached to the Planning Department. In 2003, it was replaced by the Environmental Management and Sustainable Development Unit, responsible for implementing the guidelines of the Institutional Environmental Plan (Anzola & Espinosa, 2007: 130).

Between 2002 and 2003, this policy was specified and developed through the Institutional Environmental Project (PAI) at the University of Applied and Environmental Sciences. The idea of this PAI was “to direct the actions involving environmental sustainability that the university planned to undertake in subsequent years and thus improve environmental performance” (Peraza, 2018: 33). This Institutional Environmental Project was structured into two parts: The Comprehensive Plan for Environmental Management (PIMA) and the Comprehensive Plan for the Incorporation of Environmental Knowledge (PISA). In turn, both of these plans were made up of several more specific programmes (Anzola & Cabrera, 2005: 52).

Following the guidelines of the ISO 14.001 standard, in late 2004 the UDCA replaced the Environmental Management and Sustainable Development Unit with the Environmental Management System (SGA) “with the aim of integrating all levels of the institution that work on environmental issues and to align their management with institutional standards” (Anzola & Espinosa, 2007: 130).

A decade later, and in order to deal with certain limitations that were identified regarding the SGA, the university decided to redesign this system from a broader perspective. As a result of this work, and through official agreement of the governing board, the following year the UDCA created its current Comprehensive Environmental Management System (SIGA) that “seeks to prevent and reduce environmental impacts” and “strengthen environmental awareness, not only among the university community, but also among other parts of society.” The

administrative unit in charge of this new system is a specially created technical secretariat, which is directly attached to the rector’s office. It was also established that “SIGA transverses all levels of the university, in order for the environmental component to become part of the university’s core duty” (UDCA, 2014).

Given this extensive background, as soon as the 2030 Agenda was announced, the University of Applied and Environmental Sciences made the SDGs part of its commitment to the environment and sustainable human development, and since 2016 it has made progress with a series of actions in five institutional areas, defined internally as Governance, Training, Research, Extension and Internationalisation.

Within the framework of the first of these institutional areas of action, in May 2019, a seminar was held on “Capacities for Implementing the SDGs in Higher Education”, which featured “29 managers and leaders of SDG processes or with knowledge of or working in progress in the area”, in order to “find ways to connect the goals to the core functions of higher education.” More specifically, it was hoped that this seminar would help to “learn about progress that has been made in particular ways and (...) plan actions focused on making the UDCA a leading player in the fulfilment of the 2030 Agenda” (Phillips & Nieto, 2019: 2-3).

In the Internationalisation area, the university has also been doing important work in relation to sustainability and the Sustainable Development Goals. Since 2017, the Institutional Policy on Internationalisation has established its main priority to be sustainable development as an inspiration for actions in this field. As stated in this document, the UDCA’s internationalisation activities are “based on a commitment to sustainable development” (U.D.C.A, 2017: 2).

As an important component of the first line of action described in this policy, as of 2018, the ‘SDG Awareness’ (*Conciencia ODS*) programme is being run as “a cross-cutting project run by the International Relations Department to encourage the members of the UDCA community to identify with the universal mandate for sustainable development” (U.D.C.A, 2018b: 1). The rationale for this initiative states that the University of Applied and Environmental Sciences is bonded by “responsibility and commitment to sustainable development,” which is the defining factor of its “inexorable relationship with the fulfilment of the SDGs,

established as the purpose and design of humanity, in order to guarantee positive and constructive subsistence on the planet and balanced coexistence among all species" (U.D.C.A, 2018b: 1).

The SDG Awareness programme is based on recognition of the fact that one of the main barriers faced by the UDCA in promoting "appropriation of the SDGs and the implementation of projects and actions that contribute to their fulfilment" is the existence of "disconnection and certain ignorance of the scope and amplitude of the goals and their targets", which "in many cases are perceived as an external phenomenon, and not directly related to the activities of the members of the university community" (U.D.C.A, 2018b: 1).

Faced with this negative situation, the SDG Awareness programme is aiming to "socialise and sensitise the members of the UDCA community with regard to the SDGs, their characteristics, scope and our responsibilities as an institution and as individuals." In general, its objective is "to help connect the university with the SDGs" (U.D.C.A, 2018b: 1).

The project is part of the Home Internationalisation Programme and is being run through a series of activities focused on the SDGs and Agenda 2030, including identification and socialisation of specific initiatives and projects; regular talks and forums; conferences on current international issues; and other actions with students, faculty and graduates (U.D.C.A, 2018b: 2).

Incorporating Sustainability in University Training, Research and Extension

The second recommendation, which derives both from the theoretical proposal of the University Environmental System and from the UDCA's experience, is that environmental, sustainability and SDG issues should be included as broadly and profoundly as possible in the core training, research and social projection functions of higher education institutions.

In the case of the University of Applied and Environmental Sciences, the systematic, permanent effort to train professionals and postgraduates in the social and environmental values, knowledge and skills required to contribute to sustainable human development began in 1994 with "a specialised postgraduate programme on Environmental Education and Management" (Anzola & Cabrera, 2005: 48).

The process of 'environmentalising' the curriculum was taken a large step further in 2002 with the involvement of all of the deans of the time in a Diploma entitled "Bases for the incorporation of the environmental dimension in environmental training programmes", offered by the Colombian Institute for the Promotion of Higher Education (ICFES). As a result of this training, "each dean produced a proposal to modify the course curriculum in order to foster the incorporation of the environmental dimension" (Anzola & Cabrera, 2005: 48-49)

To further develop this process, in 2004, a series of "institutional guidelines aimed at consolidating and specifying the incorporation of the environmental dimension in the curricula of academic programmes" were defined. These guidelines included "the incorporation of a complex view of the environment, the development of the special environmental course, the creation of optional, elective and expansion courses, training activities for teachers in the environmental context, the promotion of research and the extension of environmental issues, among other aspects" (Anzola & Cabrera, 2005: 48-49).

These guidelines were used to construct the Comprehensive Plan for the Incorporation of Environmental Knowledge (PISA), one of the two components of the Institutional Environmental Project (PAI). The PISA was structured into four lines of action, defined as:

- a) Programme for the incorporation of the environmental dimension in the curriculum;
- b) Programme for incorporation of environmental knowledge in course subjects;
- c) Promotion of research on environmental issues; and
- d) Projection to the community of environmental improvement strategies (Anzola & Cabrera, 2005: 48-49).

Additionally, from the mid-nineties, the UDCA began to offer different undergraduate and graduate programs specialised in environmental and sustainability issues. Since 1997, it has offered a degree in Geographical and Environmental Engineering and, since 2008, has trained professionals in Environmental Sciences. For postgraduates, it offers courses on Specialisation in Social and Environmental Management and Specialisation in Climate Risk Management. At a higher level, work began in 2012 on the Master's Degree in Environmental

Sciences. More recently, the Master's Degree in Environmental Education, the Master's Degree in Socio-environmental Management and the Master's Degree in Solid Waste Management have been created.

The most important actions in the area of specific training on the environment and sustainability include the Special Environmental Course (*Cátedra Ambiental*), which was created in 2001 by the Academic Board and regulated by an agreement of the same in 2004, according to which, "the Environmental Course is an academic requirement for all university training programmes that must be fulfilled within the first three academic periods."

The curricula of each degree course must seek to "promote awareness among students of environmental problems" and "encourage intellectual change in an environmental context so as to significantly affect the building of knowledge and skills that enable these students to develop valid solutions for the problems around them"

(U.D.C.A, 2004: 3).

As a concrete expression of its commitment to the 2030 Agenda, in 2017 the UDCA governors decided to include the SDGs as one of the central themes of the Environmental Course. In compliance with this directive, since the first semester of that year students on all academic programmes perform a variety of training activities in relation to the Sustainable Development Goals. On average, around 500 students per semester take this compulsory course that is common to all degrees. Through mid-2019, the total number of students who have taken the special course on the SDGs is almost 2,500, representing nearly 50% of the whole student community at this university.

As in the field of teaching, the University of Applied and Environmental Sciences has also begun work on relating its research activities to the Sustainable Development Goals. Since 2016, lines of institutional research have been formulated in direct relation with the National Development Plans and SDGs. Bids for the internal funding

of research projects are now required to indicate the goals and corresponding targets of the 2030 Agenda to which they contribute (Cifuentes, 2019: 1).

As a result of this process, all new research projects carried out at the UDCA have clearly identified how they link to the Sustainable Development Goals. To further strengthen the implementation of this institutional policy, there are plans for an internal call for research projects on economic, social and environmental issues raised in the SDGs that are of particular interest to the university (Cifuentes, 2019: 1).

A similar line of work will be developed with respect to research nurseries, where the university's research professors guide groups of students with their own research training activities. One of the requirements of the next internal call for support for these nurseries will be for every study proposal to clearly indicate the goals and targets of the 2030 Agenda that they expect to contribute to (Cifuentes, 2019: 1).

Of particular note among the research and extension activities that are directly related to the SDGs and are already underway at the UDCA is the design and implementation of the "Observatory of Sustainability in Higher Education in Latin America and the Caribbean."

The OSES-ALC is an "inter-institutional research, extension and continuing education programme on the commitment of higher education institutions in the region to the environment and sustainability." It was created in late 2018 as a cooperation agreement between the University of Applied and Environmental Sciences and the Colombian Environmental Training Network (U.D.C.A & RCFA, 2018: 4).

This agreement is open to the participation of other higher education institutions and university networks. To date, the Association of Latin American and Caribbean Universities for Integration (AUALCPI), the Francisco José de Caldas District University (UDFJC), the Technological University of Pereira (UTP) and the Institute for Research on University and Education (IISUE) at the National

Autonomous University of Mexico (UNAM) have all joined. Other higher education institutions and university networks are currently advancing the process of formal adherence to the observatory.

The OSES-ALC is continuing the shared efforts undertaken since 2012 within the framework of the Alliance of Ibero-American University Networks for Sustainability and the Environment (ARIUSA). The first stage of this process was dedicated to the construction of a system of sustainability indicators for use at higher education institutions in Latin America and the Caribbean. This work was conducted by an international team of researchers from the Network of University Sustainability Indicators (RISU), one of ARIUSA's project networks. As a result of the RISU Project, a total of 114 indicators were defined and tested in the form of a regional survey (Benayas et al, 2014).

The second phase of the process focused on a series of "Diagnostics of the Institutionalisation of Environmental Commitment at Universities in Latin America and the Caribbean," supported by the 19th Forum of Ministers of the Environment in Latin America and the Caribbean (PNUMA, 2014: 3) and involving a survey containing 25 basic questions taken from the system of indicators defined by the RISU project. To date, responses have been received from 328 higher education institutions in 10 countries in Latin America and the Caribbean: Colombia, Peru, Ecuador, Mexico, Argentina, Venezuela, Chile, Nicaragua, Panama and Guatemala.

The goal of the current stage of the process is "the establishment of an information system for permanent monitoring of advances in universities' commitment to sustainability", as decided in 2012 at the First Latin American Forum of Universities and Sustainability (Sáenz, 2015: 127). Work towards this objective has already begun with the design and publication online of the Observatory Platform for Sustainability in Higher Education in Latin America and the Caribbean (OSES-ALC). This was possible thanks to financial support from the RCFA and the Regional Office of the United Nations Environment Program (UN Environment).

This platform now offers the possibility for higher education institutions to respond online to the "Basic Form for the Diagnosis of the Institutionalisation of Environmental Commitment at Universities" and immediately receive a comparison between their answers with the regional averages produced by the OSES-ALC research team. Plans for the Observatory of Sustainability in Higher Education in Latin America and

the Caribbean include the development and provision of other online forms focusing on various aspects of sustainability at higher education institutions. The immediate priority is the design and offer via the platform of a survey to assess the degree of knowledge and commitment among universities with regard to the Sustainable Development Goals.

Diagnosis and Monitoring of Compliance among Universities with the 2030 Agenda

Monitoring of progress in the commitment of higher education institutions to the environment, sustainability and the SDGs cannot be limited to a regional and national level, as the OSES-ALC is showing. It is even more important to assess and monitor the process at every university.

Therefore, a third general recommendation for higher education institutions that decide to contribute to the fulfilment of the SDGs is to start with a thorough assessment of their initial situation and continue with systematic monitoring of all developments in this area. Diagnosis and follow-up must be performed both generally throughout the whole institution and in each of its main administrative and academic units.

This is what has been done at the University of Applied and Environmental Sciences ever since it started to institutionalise its commitment to the environment and sustainability. In 1997, the "first diagnosis of environmental impact on the university campus" was performed in accordance with the prevailing approaches of that time. Similar diagnoses were repeated in the following years. From a broader perspective, and by decision of the Academic Board, work began in 2000 on a series of Environmental Forums dedicated to institutional assessment of the achievements of each academic unit in terms of environment and sustainability. These events are held each year on June 5, to coincide with World Environment Day (Anzola & Cabrera, 2005: 48).

Along with the creation of the Comprehensive Environmental Management System, its Technical Secretariat was assigned the responsibility of "leading annual accountability processes." In compliance with this requirement, since 2015, the former Environmental Forums were replaced by Environmental Accountability events, which continue to be held every June 5, and where a general review is presented of the activities and results in the framework of SIGA during the previous year.

Having assumed its institutional commitment to the 2030 Agenda, the UDCA also sensed the need to begin assessing the current level of knowledge of the SDGs among its governors, administrative staff, faculty and students, as well as the specific ways in which different academic and administrative units contribute to their fulfilment," observing the need "to understand the status of this matter from the perspectives of training, research, innovation and social projection, in consideration of institutional capacities, realities and priorities, in order to define a course of action" (Cardoso, 2019: 2).

This work is starting at the university's management level. In May 2019 the "Institutionalisation of the Sustainable Development Objectives" survey was applied, aimed at evaluating the incorporation of the topic across all academic units and in some administrative units. The purpose of this survey was "to obtain essential information for understanding the contributions made by academic units and administrative areas to the SDGs and to establish strategies to intensify the application of the 2030 Agenda within the university" (U.D.C.A & AUALCPI, 2019: 3).

This in-house survey is based on the Global Survey on Higher Education and Research for Sustainable Development (HESD) that was designed and applied by the International Association of Universities (IAU) in 2016. The following year it was translated into Spanish by the Conference of Rectors of Spanish Universities (CRUE). In 2018, the same survey was adapted and sent to the universities of Colombia by the Ibero-American General Secretariat (SEGIB) and the Colombian Association of Universities (ASCUN).

The in-house survey at the UDCA was answered by 12 directors of academic units and 2 of administrative units. The results are being used to produce a preliminary SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the initial stages of the incorporation of the SDGs into the five defined areas of institutional action.

One of the noted strengths is that for more than two decades the university has been expressing its commitment to Sustainable Human Development in the texts of its Mission and Vision and this concept has guided several of its Development Plans. In addition, the "commitment from the top management of the UDCA to appropriation and implementation of the SDGs" is well known. Also important is the fact that there is a "multidisciplinary team with knowledge of the SDGs" and with "lines of research that make direct contributions to the achievement of the SDGs" (Phillips & Nieto, 2019: 5).

Acknowledged weaknesses are the "lack of cross-cutting articulations of the issue across all the academic programmes at the UDCA" and the fairly widespread idea among administrative and academic staff that the SDGs are an area exclusive to the Environmental Science Faculty and Program. Likewise, the lack of planning and systematic follow-up of the process of incorporating the goals in core university functions and the "lack of indicator-based evidence of progress in this area" have been highlighted. With regard to connections with society, it is noted that, until now, "few actions have focused on extension" and there is a "lack of socialisation of actions dealing with the matter" (Phillips & Nieto, 2019: 6).

The first of the identified opportunities is the highly favourable "national and international context regarding the fundamental role of universities with respect to the SDGs." For this same reason, major "national and international sources of cooperation and funding in the area" are emerging. Likewise, it is emphasised that the 2030 Agenda offers higher education institutions an excellent opportunity to foster and consolidate their "relations with the private sector and government" in terms of joint ventures to achieve the 17 goals and 169 targets (Phillips & Nieto, 2019: 6).

Finally, the obstacles involved in incorporating the SDGs into the University of Applied and Environmental Sciences include the suggestion that this work may go no further than the "discussion and diagnosis" stage without leading to actual results. The needs to avoid "individualistic work" and internal "competition" are also noted (Phillips & Nieto, 2019: 6), for institutional commitment to the achievement of the Sustainable Development Goals requires shared efforts based on cooperation among all members of the university community.

In order to overcome the identified barriers, work has begun on a process to identify the actions that could be most significant and have the greatest effects from among all those proposed by the directors who answered the survey. The first step is to continue and consolidate the work on appropriating the SDGs and approving the corresponding policies among the university's top management.

Based on the results of the seminar on "Capacities for Implementing the SDGs in Higher Education" and the survey on the "Institutionalisation of the Sustainable Development Goals", a "Strategy for Institutional Readiness for the 2030 Agenda and SDGs at the University of Applied and Environmental Sciences" is

being compiled, which will be included as an appendix to the “Institutional Development Plan 2019-2024” (Phillips & Nieto, 2019: 8).

Final Recommendations

In addition to the central recommendations formulated in the three sections of this document, two other recommendations could be made, based on the particular experience of the University of Applied and Environmental Sciences, but also of many other higher education institutions in Latin America and the Caribbean.

The first is the convenience of developing the process of institutionalising the SDGs on the basis of the progress that each university has most probably already made in terms of social and environmental responsibility. This will enable us to build upon whatever has already been achieved at each university. In the case of the UDCA, the work that is now being done to contribute to the achievement of the Sustainable Development Goals is based on its earlier progress in terms of its institutional commitment to the environment and sustainability, resulting from a collective effort that began in 1995 and is still being developed systematically.

One final recommendation that should always be borne in mind is that the institutionalisation of commitments to the environment, sustainability and the SDGs are always medium and long-term processes. Significant results cannot be achieved in just a few months; it takes years and even decades to achieve them. Consequently, both universities that are only just starting out and those that already have a long background in the area, still have a long way to go.

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Beyond Snakes and Ladders: Overcoming Obstacles to the Implementation of the SDGs in Higher Education Institutions:

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Introduction

In September 2015, country leaders adopted the Sustainable Development Goals (SDGs), which were underpinned by an ambitious 2030 Agenda (UN 2015). These 17 ambitious goals aim to end poverty, protect the planet and ensure prosperity for all. The higher education sector was quick to embrace these responsibilities with university leaders, student bodies and sector networks committing to practical steps to advance the SDGs (SDSN Australia/Pacific 2017; GUNI 2018; HESI 2019; Tilbury et al 2019). This readiness to engage came as no surprise, given that higher education institutions' commitment to sustainable development issues can be mapped back to the early 1990s (Tilbury 2014).

Over the last 25 years, the sector has 'dipped its toes' into the sustainable development waters and ventured into journeys that have caused some seasickness (Ryan and Tilbury 2013). Higher education awards¹ and case studies of good practice² document the diversity of efforts and small steps forward in this agenda whilst research journals³, evaluation reports⁴ and rankings⁵ capture how early pioneers have met substantial obstacles as they seek to mainstream their pilot projects, sustain impacts or embed change into higher education systems. Despite the challenges, and the lack of substantial advances, the reality remains that the sector is one of

the most experienced in seeking to reorient itself toward sustainable development. It has learnt much over the years about the challenges and obstacles that accompany sustainable development initiatives (GUNI 2014)⁶ as well as shown the resilience needed to advance the ambition to another level.

This paper identifies some of the key obstacles to the implementation of the SDGs in universities and tertiary colleges and how the sector is well placed to overcome these. It likens the journey to a game of snakes and ladders and highlights the importance of mapping the grid, anticipating the snakes, creating scaffolds and strategic ladders that can advance the agenda as well as preparing higher education institutions for the random roll of the dice that brings externally imposed obstacles as well as unexpected opportunities that could be game changers.

1. For example: International Green Gown Awards (2019); Times Higher Education Award Outstanding Contribution to Sustainable Development (2014);
2. For example: ISCN (2018); IAU (2019)
3. For example: International Journal of Sustainability in Higher Education; Journal of Sustainability Education: Journal of Education for Sustainable Development or Journal of Cleaner Production.
4. For example: Buckler and Creech (2014); Tilbury (2014); Wals (2014)
5. For example: UI Green Metric, People and Planet University League; Times Higher Sustainable Development Goal rankings.

6. This text identified 14 barriers to change and defined the challenges in some depth pp. 193-207

Change Agendas

It had been argued that change in higher education is difficult to attain and that it is for this reason that sustainable development struggles to make an impact in a fairly conservative sector (Sterling et al 2013). However, more recent contexts suggest that the reverse is true.

As 2020 approaches, the higher education sector finds itself in the midst of a perfect storm with political interferences on academic strategies and agendas; the competition for increasing student numbers driven by rankings and measures; blurred lines around freedom of speech and expression; and, financial uncertainty as student numbers fluctuate and costs increase.

Add to this the increasing social expectations for students to not just be employable but also capable of contributing to the socio-economic development of regions and towns, and a picture begins to emerge of the complex challenges that universities and colleges face at this moment in time. In reality, the sector is overwhelmed with expectations and overdriven by multiple change agendas. It is against this backdrop that champions of sustainable development are seeking to make in-roads.

Whilst higher education leaders appreciate the significance of the sustainable development ambition and the critical role that higher education must play in shaping a better tomorrow, they also find it hard to find the space and time to deepen commitment to the Sustainable Development Goals. The result is an increase in the number of declarations and public statements that reflect genuine commitment and good intention with only limited progress attained at a strategic or practical level. Many initiatives have not moved on from pilot status; or are focused on a particular doorway to sustainable development (be it water, climate or gender); and, most remain on the periphery or outside the core agendas of most tertiary bodies. Given this backdrop, systemic change for sustainable development, at a sector or institutional level, remains a distant goal.

On the other hand, there are a handful of sustainable development champions that have been successful in bringing about a change in higher education institutions (see for example, Green Gown International Awards 2019). The latter are not simply those who have passion and vision for the agenda but have also understood how actions can scale up to result in change. Many champions have learnt to navigate through institutional tensions and agendas and made the case for reorienting practice across campuses and curricula⁷. They can be change-makers and are well placed to take on the much more significant challenge of systems change across the sector needed to make deeper advances. To achieve these, the change-makers must learn to: read the higher education landscape and understand concerns of key actors; anticipate and prepare for the slippery slopes that delay or obstruct progress; create new pathways that can deepen the influence as well as scaffold the changes to sustain the impact. The latter is necessary if they are to hook sustainable development onto the key pillars of the sector, giving sustainable development greater penetration within higher education culture.

Core Pillars: The Example of Quality and Standards

‘Priority should be given to ... quality education, from early childhood through to higher education and adult education.... Moreover, efforts should be stepped up to integrate education on human rights and sustainable development as well as the SDGs in curricula at all levels of education, through existing and new programmes.

*‘Europe moving towards a sustainable future’
EU October 2018*

7. For example, the University of Gloucestershire, UK that has topped the UK Green League again in 2019 and has been the most consistent performer since the league began - also ranking in the top 5.

Educational quality and standards (processes and measures) serve as a core pillar of higher education institutions. They provide a powerful and effective pathway for changing our learning systems. The quest to reorient higher education towards sustainable development necessarily requires a rethink of the national (and international) higher education frameworks and processes for quality assurance and enhancement. This section seeks to exemplify ways in which the higher education community can overcome obstacles, deepen its engagement with the SDGs and widen its impact across the sector.

Higher education has independent national bodies that assess standards and quality in universities and colleges. These conduct quality assessment reviews; develop reference points such as 'subject benchmark statements' (often developed in consultation with the academic community); guidance for providers (including credit frameworks that allow for comparators, transfers and exchanges); and, also commission research on relevant issues. These quality systems also rely on peer review with internal and external quality mechanisms. They are informed by national quality codes that govern programme development, graduate attributes and learning outcomes and relationships with external quality bodies. Independent reviewers check that expectations set out in national quality codes or frameworks and recognised by the relevant higher education authorities are met. The assessments can in some countries be tied to degree-awarding powers or the right to the title 'University'. Quality reports also include recommendations for improvement, citations of good practice, and affirmations of actions taken by a higher education provider.

A UNECE Expert Group⁸ has recognized the need to work with education quality professionals - a group that has yet to engage with Education for Sustainable Development or the SDGs meaningfully. These professionals include: quality assessors; quality agencies; accreditation bodies and curriculum reviewers. The intention is to seek pathways for the embedding of Education for Sustainable Development into quality codes and frameworks. These stakeholders are rarely present in policy dialogues but have significant responsibilities and are key agents in the system with the ability to change education policy and practice nationally and internationally (Tilbury 2019). It has been argued that, in some member states, quality professionals have recently

lost what some believe is a vital connection with the public and are often under criticism from the broader education community for lack of purposefulness (UNECE 2019). Opportunities exist to draw the Sustainability and Quality communities together and in ways that will bring benefit to both.

However, seeking to advance sustainable development by mainstreaming it into a core pillar requires a different approach to that adopted by sustainability champions taking forward initiatives that challenge the status quo in institutions and that exist alongside other efforts that may not align with this agenda. Reorienting the quality pillar to address sustainable development requires change-makers to recognise a number of challenges or obstacles:

3.1 - Learning to read the board - Landscape mapping

The systemic nature of quality agendas means that progress can be achieved if sustainable development champions recognise (and work with) the broader higher education challenges that quality and standards professionals are experiencing. Examples of these relate to employability, accountability and transferability. The case for understanding the demands on the sector and mapping the landscape for change at an early stage has been made earlier in this paper. It is critical for change-makers to locate sustainable development within these concerns. Indeed, it could be argued that the success of the UNECE Education for Sustainable Development Competences (UNECE 2015) lay in the tactic to link the competency discourse, the employability expectations and the sustainability learning agenda in a tangible tool. The ESD competences recognized the challenge that many higher education providers were facing and sought a practical framework that united agendas. Higher education champions must map the landscapes they are seeking to influence and understand what underpins decisions and shapes priorities. A strategic approach to sustainability is now required to take actions to the next level and seek the systemic change required to align the sector with the SDGs.

Landscape mapping should also involve making visible the political threads underpinning current agendas, including those related to sustainability. This will permit careful unpacking of relevant social and geopolitical issues such as those that have historically shaped transactions (Alvares and Faruqi 2012) and portioned responsibility (Amalric and Banuri 1993) or even blame for sustainability (Zein 2019). Mapping should also include defining opportunities for new partnerships that can

8. UNECE Expert Group in Education for Sustainable Development (see UNECE 2019)

shake the traditional power relationships within institutions, across, as well as outside, of the sector.

3.2 - Avoiding the Snakes - Clarity and Capacity Building:

Too often, there is the issue that sustainable development is misunderstood or superficially interpreted as the adding of thematic content to the existing curriculum. In reality, addressing sustainable development in higher education requires revising the 'how' or pedagogical and assessment approaches as well as the 'what' or content and learning outcomes (Tilbury 2013). It challenges universities and colleges to model sustainable development in their management, practice and relationships with the community so that students have a lived experience. It is for this reason that those that have started to engage with this core pillar devote much time to raising awareness and seeking to develop clarity around sustainable development. For example, Mula and Junyent (2017) were commissioned by the Quality Assurance Agency for Higher Education in Andorra (AQUA) to map the territory and help navigate its work towards a deeper approach to sustainable development. They recommended that AQUA engage in participatory processes that raised awareness and built capacity as part of its quest to reorient institutional evaluation towards sustainable development.

Earlier, Tilbury and Ryan (2015) developed a guide for leading institutional change for sustainable development from a quality education perspective, which combines lessons from the five institutional pilot projects with a sector-wide view of how ESD connects with quality assurance and enhancement in higher education⁹. The project was funded by the Higher Education Funding Council for England (HEFCE) and the Quality Assurance Agency (QAA) of the UK and led to the inclusion of education for sustainable development within the UK's Quality Code. The authors of these research studies persistently report how they found it difficult to achieve traction with university colleagues who interpret sustainable development simply as concern about environmental issues. At one level, they call for capacity building opportunities and for a more complex understanding to advance sustainable development amongst educational professionals (EAUC 2014) and at another level they recognize the dialectical relationship that exists between resistance and reorientation of higher education and the 'nausea' that can come from riding the waves of change (Ryan and Tilbury 2013). The fresh impetus and broader platform provided by the Sustainable

Development Goals brings opportunities - although the need to adopt a Critical perspective to change (and not simply a managerial approach) is highlighted.

Also of relevance is the 2019 initiative funded by the International Quality Assurance Agency for Higher Education (INQAAHE) that sought to embed the SDGs into national and regional quality systems¹⁰. The project leaders, AQUA (Andorran Agency for Higher Education Quality) and ACPUA (Aragonese Agency for Quality and Future Prospects), facilitated a 12-month process of stakeholder and expert engagement that helped to identify doorways and challenges to the embedding of sustainable development in higher education quality systems. The process was necessarily accompanied by capacity building sessions where stakeholders clarified, agreed upon and deepened their understanding of sustainable development and the opportunities that they offered to those involved in higher education. Following this initial phase, stakeholders developed socially critical perspectives of sustainability, worked on their visions for the sector and more importantly, defined quality criteria for sustainable development in higher education (Tilbury et al 2019).

Engaging in clarifying concepts and capacity building is a necessary step in the reorientation of higher education towards sustainable development. The aforementioned initiatives have embedded these elements into the design of their efforts in an attempt to avoid the slippery slopes that can threaten the success of the projects. However, these added elements can be resource intensive, requiring dedicated personnel or external expertise. This can be an obstacle for some universities where investment in Education for Sustainable Development (ESD) can be hard to come by.

3.3 - Creating Ladders: Tools and Territories

The Australian authorities also commissioned a process that led to the clarification of standards as well as well capacity-building in higher education for sustainable development. The National Learning and Teaching Standards for Environment and Sustainability' (2015) project was funded by the Australian Learning and Teaching Commission and led by the University of Newcastle Australia and Association of Deans of Business Schools in Australia. The project led to the identification of standards for the environment and sustainability field and defined what students need to know and be able to

9. www.efsandquality.glos.ac.uk

10. <https://www.aqua.ad/contingut/making-connections-between-institutional-evaluation-and-sustainable-development-goals>

do upon graduation, often referred to as student sustainability competencies. The project team consulted a wide range of stakeholders, including tertiary educators and researchers, employers and practitioners, students, other environmental educators and indigenous people. The key recommendations resulting from the consultation included the inclusion of sustainability in base disciplinary knowledge and subject benchmarks; ensuring institutions offered students opportunities to gain practical experience and skills and the embedding or alignment of sustainability with the Australian Qualification Framework (Phelan et al 2015). This project created a ladder to help those who seek to make sense of the sustainability agenda in practical educational terms.

If we consider the other quality education projects mentioned above, they too provide scaffolding in the form of tools or platforms that can support and, in some cases, shortcut the change process for those who are navigating change for sustainability. The AQUA and ACPUA project resulted in a set of quality indicators that can be used for planning institutional development and not just for assessment or performance purposes. The HEFCE and QAA project cited above also resulted in an online platform that provides orientation, helps to map the territory and offers case studies and sample materials that can be used to support and scale up the processes of change for sustainability in higher education.

Beyond Snakes and Ladders

“All games have morals; and the game of Snakes and Ladders captures, as no other activity can hope to do, the eternal truth that for every ladder you climb, a snake is waiting just around the corner; and for every snake, a ladder will compensate. But it's more than that; no mere carrot-and-stick affair; because implicit in the game is the unchanging twoness of things, the duality of up against down, good against evil; the solid rationality of ladders balances the occult sinuosities of the serpent;..... but I found, very early in my life, that the game lacked one crucial dimension, that of ambiguity - because, as events are about to show, it is also possible to slither down a ladder and climb to triumph on the venom of a snake ...”

Salman Rushdie (1981: 141)

This paper has drawn parallels with the ancient Indian board game known as Snakes and Ladders that is regarded as a worldwide classic where players attempt to advance to the end of the of a board composed of a grid of squares. A number of "ladders" and "snakes" are pictured on the board, each connecting two specific board squares. If your counter lands at the bottom of a ladder, you can move up to the top of the ladder. If your counter lands on the head of a snake, you must slide down to the bottom of the snake.

Those that have sought to advance sustainability in higher education have experienced many snakes or obstacles in their path. They have also learnt to create ladders and tools that scaffold and support their change processes, giving them greater longevity. Mapping the Board (or territories) has also helped to navigate and take stock of progress and possibilities. The sector has come to recognize that an inability to scope the landscape, or work across disciplines or sectors can result in obstacles that restrict progress and take us back rather than forward in the same way that snakes can regress progress across board.

Until this point, the paper has been silent on what is perhaps the dominant variable – the random roll of the dice. Parallels could be drawn, for example, with the way unexpected events or decisions, external to the sector, can be disruptive and in some cases, game changers. The paper, however, has argued that the sector is resilient and well experienced at seeking change for sustainable development. It is well placed to go beyond the trials and tribulations presented by a snakes and ladders landscape. Sustainability champions are becoming skillful ‘surfers’ riding the waves generated externally by social tremors and in the hope of effecting a sea-change across the sector.

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The Report *Implementing the 2030 Agenda at Higher Education Institutions: Challenges and Responses*, edited by the Global University Network for Innovation (GUNi), is the second exercise by the GUNi Group of Experts in SDGs and Higher Education and it is devoted to the barriers and challenges that higher education institutions face when trying to embed sustainable development and the SDGs in their missions.

The Report offers some examples of how higher education institutions around the world are tackling the issue and shows some initiatives being carried out in order to overcome challenges such as lack of leadership, lack of awareness, or lack of a favourable policy environment, among others. GUNi is well aware that context is key and that there is no-size-fits-all in these matters, but also believes that sharing experiences and expertise among cultures, regions and institutions is a helpful way of helping and supporting other institutions in their efforts to implement the Agenda 230.

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