



**Draft version for validation by cluster members (22/04/2022)**

# Higher Education Partnerships to accelerate action for the Sustainable Development Goals (SDGs)

Report on the work of the International Association of Universities (IAU) in the  
context of the IAU Global HESD Cluster

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## INTRODUCTION

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This second comprehensive report on the work of the IAU HESD Cluster gives insights to the work of the Members of the *International Association of Universities* (IAU) to address the 2030 Agenda and Sustainable Development Goals (SDGs); and stress the role that Higher Education and partnerships can play to reach the global Goals.

IAU thanks all the individual contributors from its Member institutions and organisations for their invaluable contributions to this report and for the great commitment and work they contribute to the IAU Global HESD Cluster and the implementation of SDGs at their institutions and in the sub cluster network they lead on, locally and internationally.

No goal can be solved in isolation nor in only one part of the work. If there is one thing that the Agenda 2030 and the sustainable development goals have shown it is the interconnectivity of all that is surrounding 'us' all on earth. It is only through true international cooperation that transcends visible and invisible barriers and reconnects knowledge systems around the world that we will ever have a change to attain the global goals as set.

The IAU thanks all Lead institutions (full list available on page 9) and partner institutions and organisations who contribute to the Cluster work and shared reports included in this document.

We look forward to our continued joint work into the future.

**Pam Fredman**

*IAU President*

**Pornchai Mongkhonvanit**

*IAU Chair HESD Working Group*

**Hilligje van 't land**

*IAU Secretary General*

## THE INTERNATIONAL ASSOCIATION OF UNIVERSITIES

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Founded in 1950, under the auspices of UNESCO, the International Association of Universities (IAU) is the leading global association of higher education institutions and organisations from around the world.

IAU brings together its Members from more than 130 countries for reflection and action on common priorities. IAU is an independent, bilingual (English and French), non-governmental organization. It acts as the global voice of higher education to UNESCO and other international higher education organizations, and provides a global forum for leaders of institutions and associations. Its services are available on a priority basis to [Members](#) but also to organisations, institutions and authorities concerned with higher education, as well as to individual policy and decision-makers, specialists, administrators, teachers, researchers and students.

IAU is an official partner of UNESCO (Associate status) and has been given consultative status by the UN Economic and Social Council (ECOSOC). More information on IAU's activities and membership is available on the [IAU website](#).

### **IAU Mission**

To contribute to peace and human development by promoting and enhancing the power of higher education to transform lives, build capacity, connect diverse peoples, generate and disseminate new knowledge, create insights and find sustainable solutions to local and global challenges.

### **IAU Vision**

As the global voice of higher education, IAU will be the most influential and representative global association of diverse higher education institutions and their organizations, advocating and advancing a dynamic leadership role for higher education in society. Articulating the fundamental values and principles that underpin education and the pursuit, dissemination and application of knowledge, the Association will lead and advocate the development of higher education policies and practices that respect diverse perspectives promote social responsibility and contribute to the development of a sustainable future. IAU will be a think tank and forum for the development of new approaches, the sharing of best practice and the undertaking of joint action, encouraging and facilitating innovation, mutual learning and cooperation among higher education institutions around the world.

### **VALUES**

IAU promotes core values among its Members and the wider higher education community including:

- Academic freedom, institutional autonomy and social responsibility locally and globally
- Cooperation and solidarity based on mutuality of interests and shared benefits
- Tolerance of divergent opinions, freedom from political interference
- Equity in access and success in higher education and open access to knowledge
- Scientific integrity and ethical behaviour as cornerstones of conduct for all stakeholders in higher education
- Higher education and research in the public interest
- Quality in learning, research and outreach

## ● Strategy

IAU works to enhance higher education community's role and actions in advancing society worldwide. As a global membership organization, IAU represents and serves the full spectrum of higher education institutions and their associations.

The [Strategic plan 2016-2022](#), adopted during the 15th IAU General Conference, in 2016, confirms IAU's focus on four key higher education priority themes, while improving support and services to members as well as enhancing their visibility and engagement. Due to COVID19, the Strategic Plan is extended until end of 2022 and will be revised at the upcoming 16<sup>th</sup> IAU General Conference (October 2022).

## ● IAU 4 strategic priorities

- Promoting value-based [leadership](#) in higher education
- Remaining a leader for inclusive, fair and ethical [Internationalization](#) of higher education
- Integrating [sustainable development](#) fully into higher education strategies
- Enhancing the role of [technology](#) in higher education

## ● IAU fulfils its goals through

- Expertise development & trends analysis
- Publications & specialized portals
- Advisory services
- Training & peer-to-peer learning
- Knowledge sharing events
- Global advocacy & representation

## IAU PRIORITY HIGHER EDUCATION AND RESEARCH FOR SUSTAINABLE DEVELOPMENT (HESD)

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Sustainable development has been part of the strategic commitment of the International Association of Universities (IAU), the most global university network, to improve higher education for over 25 years. In 1993, the Association adopted the IAU Kyoto Declaration on Sustainable Development (IAU, 1993), reaffirming its commitment to sustainable development in 2014 with the IAU Iquitos Statement on Higher Education for Sustainable Development (IAU, 2014). IAU is one of the strongest advocates promoting the role of higher education in sustainable development globally; it speaks out at UN organisations including UNESCO and the United Nations and at other multilateral organisations around the world, including the Council of Europe.

The Association has been supporting United Nations programmes for sustainable development since the early 1990s. For example, IAU was one of the Key Partners in UNESCO's Global Action Programme on Education for Sustainable Development (GAP ESD), which ran from 2014 until the end of 2019. IAU is fully engaged in the UNESCO ESD for 2030, the UNESCO GAP ESD follow up programme adopted in 2019. It reconciles 'Education for Sustainable Development (ESD)' principles with the United Nations' 2030 Agenda (UNESCO, 2019).

In 2019, IAU started to take an active part in the *UN High Level Political Forum on Sustainable Development* (HLPF).<sup>1</sup> Add 2020, 2021 virtual participation

The HLPF was established and mandated in 2012 by the outcome document of the United Nations Conference on Sustainable Development (Rio+20), "The Future We Want". The format and organizational aspects of the Forum are outlined in General Assembly resolution 67/290.

The Forum meets annually under the auspices of the Economic and Social Council for eight days, including a three-day ministerial segment and every four years at the level of Heads of State and Government under the auspices of the General Assembly for two days. The Forum's first meeting was held on 24 September 2013. It replaced the Commission on Sustainable Development, which had met annually since 1993.

The HLPF is the main United Nations platform on sustainable development and it has a central role in the follow-up and review of the 2030 Agenda for Sustainable Development the Sustainable Development Goals (SDGs) at the global level. General Assembly resolution 70/299 provides further guidance on the follow-up and review of the 2030 Agenda and the SDGs.

As part of its follow-up and review mechanisms, the 2030 Agenda encourages member states to "conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led

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<sup>1</sup> This page was drafted using the official information provided online: <https://sustainabledevelopment.un.org/hlpf>

and country-driven” (paragraph 79 of the Agenda). These national reviews are expected to serve as a basis for the regular reviews by the HLPF. As stipulated in paragraph 84 of the 2030 Agenda, regular reviews by the HLPF are to be voluntary, state-led, undertaken by both developed and developing countries, and shall provide a platform for partnerships, including through the participation of major groups and other relevant stakeholders. IAU adds to these the IAU HESD Cluster Report on progress made on the 17 goals.

In the HLPF 2020, largely virtual due to the global COVID-19 pandemic, IAU took part actively and organize virtual side events and exhibitions jointly with its Members and partners. IAU supports and materialises the contribution of higher education to the debates and review mechanisms as each time affirms the higher education’s sector dynamics as one of the key mechanisms for ensuring on the implementation of the 2030 Agenda for Sustainable Development and achieving the global goals. IAU partners with the *Association of Commonwealth Universities (ACU)*, with the *Agence Universitaire de la Francophonie (AUF)* and with a wide range of other key partners including UNODC, HESI, UN Environment’s HE work to increase the visibility and underline the contributions of the sector to the processes.



## IAU GLOBAL SURVEYS ON HESD

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In support of the UNESCO GAP-ESD programme, IAU conducted the first ever *Global Survey on Higher Education and Research for Sustainable Development (HESD)* in 2016. The aim was to map what universities and other higher education institutions (HEIs) undertake in support of education for sustainable development, and in particular to understand the implementation mechanisms and results of a *Whole Institution Approach for Sustainable Development*, one of the flagship projects of the UNESCO GAP-ESD. IAU advocates for a Whole Institution Approach to SD (WIA-SD) at HEIs, which translates into the inclusion of sustainable development in all dimensions of an institution: education and teaching, research, community engagement, and campus initiatives.

The first survey collected data from 120 universities worldwide. The corresponding report *Higher Education Paving the Way to Sustainable Development: A Global Perspective* (IAU, 2017) was well-received and gained global attention. In preparations for the HLPF 2019, it was decided to conduct a follow-up study, to see how the higher education sector had developed over the last three years and to better understand the way in which the sector engages with the Sustainable Development Goals (SDGs). The second survey questionnaire focused more specifically on HE's response to [Transforming our World: the Agenda 2030 for Sustainable Development](#).

The survey, which was open for six weeks (end of May 2019 until mid-July 2019), received 536 valid responses from 428 universities in 101 distinct countries. All world regions are represented, with 37% coming from Europe, 23% from Latin America and the Caribbean, 18% from Africa, 15% from Asia and the Pacific, 4% from North America and 3% from the Middle East. Thanks to strong cooperation with CRUE (Spanish University Association), 19% (102) respondents are from Spain. 45% of respondents hold leadership positions within their university. Another 45% are academic or administrative staff. The remaining 10% of answers come from students. The [survey report](#) analyses the responses at both global and regional level in depth and overall. The survey findings show that the higher education sector worldwide is increasing its commitment to sustainable development thanks to the adoption of Agenda 2030. Yet, obstacles remain to ensure full engagement and more work needs to be done. It is important in particular to continue to strengthen the science-policy interface and to better document and share about what the higher education sector as a whole has to contribute to achieve the SDGs. Higher education is starting to transform itself to include sustainable development principles and visions; the question is however: do the review mechanisms including HLPF ready to include higher education as a confirmed stakeholder in the process?



## THE IAU GLOBAL CLUSTER ON HESD

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The Cluster brings together 16 universities as leading institutions, each one bringing in expertise for one particular SDG while fostering cross cutting dynamics with all 17 goals. IAU leads the work on *SDG 17 – Partnerships for the Goals*. The lead institutions, which are based in all world regions, are working with subgroups of 2-8 ‘satellite’ institutions to advance a particular SDG and initiate concrete projects, while ensuring synergies among all goals. Furthermore, the Cluster promotes the role and potential that HEIs globally have in order to achieve the SDGs and Agenda 2030. Institutions in higher education engage with the SDGs in multiple ways, including through teaching, research, leadership, and campus operations. The Cluster encourages collaboration and a holistic approach to work with the SDGs, focusing specifically on the whole institution approach.

Within the overarching goal of “*Accelerating the implementation of the 2030 Agenda for Sustainable Development*” (UN SDG Summit 2019), the Cluster has two concrete objectives:

- First, to serve as a **resource and networking hub for HEIs** around the world for institutions already engaged with the SDGs locally and seeking partnerships, and those starting to engage with the SDGs at their institutions to turn to the Cluster for collaboration and guidance on best practices to translate and advance SDGs in local, national and international contexts.
- Second, the IAU Global Cluster serves as a **global voice for higher education in sustainable development**, and the IAU advocated for HESD at the UN High Level Political Forum, at IAU International Conferences, at events organised by the universities involved, at the local/regional and international levels.

The following pages summarize activity reports of the different universities leading the work on specific SDGs within and beyond the context of the IAU Global Cluster on HESD and provide concrete examples of translation of engagement with the SDGs into concrete practice.

## THE IAU HESD CLUSTER WORKSHOP IN MARCH 2022

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**To be inserted**

Outcomes:

- Strategy Cluster prepared at the meeting for the next 2 years
- IAU HESD Cluster Statement





# **IAU GLOBAL HESD CLUSTER**

**Summary of Activities  
(2021-2022)**

**Submitted by IAU SDG Lead  
institutions**

## SDG1: NO POVERTY

**Virtual meeting on IAU HESD Cluster collaboration with Qatar University and University of Ghana held on 6th March 2022\***

### \*Members Present\*

Prof George Oduro Nkansah: Director IAST-UG

Mr César Wazen, Director of International Affairs, University of Qatar.

Dr Henry Ofosuhenne Sintim: Senior Research Fellow IAST-UG

Dr Peter Ofori Amoako: Research Fellow IAST-UG

### \*OPENING\*

The meeting started at 9am. Members introduced themselves.

The purpose of the meeting was then laid

### \*DISCUSSION\*

Prof George Oduro Nkansah who is the focal person at UG for the work with the IAU HESD Cluster, for which the University of Ghana leads on SDG 1: No Poverty spoke on \*some examples from the work the University of Ghana has been doing for SDG 1\*

These included:

1. Use of greenhouses to attract the youth into vegetable production
2. Creating jobs using recycling of plastic waste into fuels, and agricultural waste into biochar
- 3) Planting trees as a greenery impact on climate stewardship
- 4) Training students on innovation and entrepreneurship which has led to the UGIEP
- 5) Workshops to improve sanitation and well-being including food safety for street food vendors
- 6) Decent jobs for people living on the streets by adopting the **Education Above All** concept, where parents are given paid jobs in greenhouses and kids are kept in school

On the side of Qatar University, Mr Cesar Wazen, indicated their preparedness to partner UG on the SDGs.

Their interests were to leverage on the Agricultural expertise of Ghana, since Qatar was an arid country with little precipitation. He also indicated that Qatar University also had links to several funding organisations who could be able to sponsor some of the SDG activities of UG. Mr Wazen was passionate to link the UG to such funding organizations in support of proposals on:

- 1) Education Above All,
- 2) Supply of computers, phones etc for IT training and entrepreneurship in primary and secondary schools
- 3) Guest Lecturer exchange between Qatar University and University of Ghana

Mr Wazen shared excerpts of their website which had information on the possibility of the ILO to support sustainable businesses

Prof Nkansah formally invited Qatar University to join the Cluster network of collaborating institutions on the SDGs where they share experiences.

The current institutions in this cluster include: Tokyo University of Agriculture and Technology, Japan, McMaster University, Canada, University of Campinas, Brazil and University of Ghana, Legon, Ghana.

## **DETAILED ACTIVITIES SHARED WITH QATAR UNIVERSITY**

### **SDGs Activities 2019**

#### **1. Collaboration with the Government of Ghana**

1. Collaboration with Dr Eugene Owusu, advisor to the President of the Republic of Ghana on National activities on the SDGs including the launch of the African Capacity Building Foundation's report on the **Capacity Imperatives for the SDGs.: SDG 17**

2. The launch of a National Raffle with the objective to **educate the masses especially the youth on the SDG Goals**, Targets and Indicators. The first prize of the raffle, a sedan car was awarded to the winner during an SDG programme at the University of Ghana.: SDGs 4, 17

3. In collaboration with the Presidents Advisory Unit, a proposal has been written to source funding to initiate **"Education for All"**. A project that will build the capacity of street hawkers into sustainable /decent jobs whilst keeping their children in school.: SDGs 1, 2, 4 & 8

#### **2. Collaboration with the Private Sector**

1. The SDG Advisory Unit of the Office of President of The Republic of Ghana introduced Global Reset People to the University of Ghana. The UG in collaboration with Global Reset organized the **Global Youth Summit** at University of Ghana. The 3 day summit saw a host of high profile speakers and dignitaries including, Her Excellency Dr. Jewel Taylor (Vice-president of Liberia), Prof. Ebenezer Oduru Owusu (Vice-Chancellor, University of Ghana), Prof Gyan Baffour (Minister of Planning-Ghana), Dr. Eugene Owusu (Special Advisor on the SDG's, Office of the President, Ghana), Her Excellency Sabine Nolke (Canada's Acting High Commissioner to Ghana and Togo), Ambassador Giovanni Favilli (Italy's Ambassador to Ghana), Prof. George Oduru Nkansah (Director of Institute of Applied Science and Technology and Host of Summit) and Dr. Henry O. Sintim (Research Fellow, University of Ghana)

Young entrepreneurs across Africa were invited to speak to motivate their peers using their career paths. There were hackathons on youth innovations for the SDGs and a day for women which was chaired by Her Excellency Dr Jewel Taylor (Vice President of Liberia).: 17 SDGs

2. Prior to the 3-day Global Youth Summit, activities such as the promotion of adolescent girls' health through a campaign on sanitary towel usage/ personal hygiene, and environmental stewardship campaigns were organized by Nursing students and the Vice Chancellors Greenery committee in selected urban slums respectively.: SDGs 3, 6, 11, 13

3. The UG in collaboration with the Food and Drugs Authority and International Federation of Women Lawyers (FIDA-Ghana) provided training, mentoring and capacity building including campaigns and seminars at the University of Ghana as a pilot to **promote healthy living and food safety**.: SDGs 3, 8,

4. The UG in collaboration with Nestle Global at a 10-day Impact Week we trained 25 faculty and 200 students on the use of **design thinking methodology in solving business challenges** using the- SDGs 1-2-3-4-6-8-9 11 & 13 with emphasis on Competence and Skillset, Clean Environment, Sustainability, Good Health and Well Being, Housing, Industry, Innovation & Infrastructure and Food/Farm Enterprise Development to Alleviate Poverty

### **3. Academic Activities and Collaboration**

1. In collaboration with several units at University of Ghana including Institute of Applied Science and Technology and Institute of Environment and Sanitation Studies, SDGs that have targets on **access to water, sanitation, security, urban slums and city resilience** were used as subject matter for the SCiLeD-LIRA 2030 grant project.: SDGs 11, 9, 13

2. The University of Ghana has completed the installation of Envirodome greenhouses on campus. This is to help in the **training of the youth in Controlled Environment Agriculture and urban farming**. Other objectives are to improve access to fresh and healthy vegetables and as a source of guaranteed income.: SDGs 1, 2, 8

3. The University of Ghana organized a Hackathon in collaboration with GIZ which targeted a demand of the Market Oriented Agriculture Programme (MOAP) of GIZ. The goal of the challenge was to assemble technology enthusiasts (students and non-students) to display their innovative ideas to create a sustainable **IT solution for Traceability in the Food Value Chain.**: SDGs 1, 3, 12, 16

#### **4. SDG 1 CLUSTER MEETING**

1. The meeting was postponed due to delay in securing visa to Canada. It has been rescheduled to this year April. A date is yet to be fixed. The meeting will include Tokyo University of Agriculture and Technology, Japan, McMaster University, Canada, University of Campinas, Brazil and University of Ghana, Legon, Ghana.



## SDG 2: ZERO HUNGER

**Lead Institution:** Universidad Antonio Nariño (UAN), Colombia

**Satellites in Subcluster:**

- Universidad Federal de Ouro Preto (UFOP), Brazil
- University of Oslo, Norway
- Kaunas University of Technology, Lithuania



**UAN**  
UNIVERSIDAD  
ANTONIO NARIÑO

**GLOBAL  
ENGAGEMENT**  
A global experience for all

### Achievements 2020-2021:

#### 1. At institutional level.

- Inclusion of the 2030 Agenda as a reference in plans, projects, actions and in UAN's academic life.
- The participation in the Cluster motivated the development of the UAN comprehensive model for Agenda 2030, based on the Whole Institution Approach (WIA). The model has 6 pillars of action that complement and intersect: (1) Learning and teaching, (2) Research, Technology, Innovation, Creativity and Entrepreneurship, (3) Partnerships, (4) Internationalization, (5) Social Leadership and (6) Awareness - As a cross-cutting pillar.



- Stimulus to scientific production aimed at contributing to the SDGs, from the instruments of the Science, Technology, and Innovation Policy. Six (6) research projects related to SDG2 (dairy, agricultural and fish farming) involving communities and often the private sector have been funded between 2020-2021: (1) Utilization of nuclear techniques for the study of soil and contaminant redistribution; (2) Exploration of cassava diversity in

the Colombian Amazon as a source of new promising materials in the face of climate change scenarios; (3) Valuation and potential of cassava leaves as an alternative nutritional source for populations in the Colombian Amazon; (4) Characterization of the leaf cheese production process and identification of critical points and logistics management of the product in the province of Gutiérrez in the department of Boyacá; (5) Milk quality indicators in milk collection centres in the Popayán plateau; (6) Identification of pathogens causing diseases of impact on beekeeping in the municipalities of Cajibío and Popayán in the department of Cauca.

- International Cooperation Projects contributing with **Gender Equality (SDG5)** such as: (1) “Implementation and training to empower rural women in the post-conflict context in Colombia”. Led by internationalization leaders in Ibagué campus, with the collaboration of Campus Iberus, Spanish NGO. The project offered a capital investment to five rural women entrepreneurs in the Tolima region; and (2) “Alliance for the incorporation and management of the sexual and gender rights perspective with the Venezuelan migrant population”, a project led by the Law School in Duitama campus, with the support of Mundo Berriak, a Spanish NGO specialist in gender policy and sexual education.

## 2. Publications, visibility, and participation in strategic events:

- [Higher Education and SDG 5: Achieve gender equality and empower all women and girls.](#)
- *Sustainable and Inclusive Internationalization Conference*. Organizers: York University (Canada) and International Association of Universities (IAU). Session International mobility in practice: institutional, national, and regional responses (20.01.2021).
- *Higher Education Leadership Practices and Leaders for a Sustainable Future*. Organizers: [IAU](#) and [Network of Universities from the Capitals of Europe \(UNICA\)](#) (08.06.2021).

## 3. At Subcluster level:

- In 2020, the *Ending Hunger: A Worldwide Challenge Webinar Series* were held with the participation of more than 400 participants from Colombia, Spain, Lithuania, Mexico, Norway, the United Kingdom and Sweden.
- In 2021, teachers and staff from UAN, UFOP and Oslo University will develop a challenge-based learning project called “Environmental Course Challenge” in alliance with the District Social Integration Secretary to implement an environmental classroom with a

gender perspective in a low-income neighbourhood in Bogota. The challenge will take place from October 22 to November 20, with the participation of UAN students and teachers from different backgrounds and disciplines.

### **Upcoming activities 2022**

- By March 2022, the four universities are planning to hold a meeting on universities good practices for SDG2.
- *Knowing together: “North”- “South” cooperation in higher education.* University of Oslo. Date: Spring 2022.
- [Association of Universities \(ASCUN\) Summit on SDGs](#). ASCUN continues to develop the national universities initiative of contributions to the SDGs, which initially took the IAU cluster structure as a model: it is still pending the definition of whether the Summit planned for 2020 will be resumed in 2022.

## SDG 3: GOOD HEALTH AND WELL-BEING

**Lead:** Open University of Catalonia (UOC), Spain

<https://www.uoc.edu/>



### **Satellites:**

- Universidad de Caldas, Colombia
- University College Dublin, Ireland
- University Gadjah Mada, Indonesia
- Makerere University, Uganda
- Karolinska Institutet, Sweden
- Western Sydney University, Australia

### **Change at the head of the secretariat.**

Marc Graells is now in charge of the UOC's IAU SDG3 Cluster Secretariat functions.

In addition, the cluster will have the help and knowledge of Liv Raphael as a Secretariat consultant.

### **Monthly newsletter.**

The secretariat has created a monthly newsletter for internal information sharing about cluster member activities around SDG3 and the IAU activities and news. The aim is to share information and to identify potential areas of collaboration between members related to SDG3 and the clusters' mission.

### **Web page.**

The secretariat is creating a website to increase the visibility of the cluster and to disseminate cluster activities. The website will include information about the SDG3 cluster, its mission and priorities, information about partners, cluster activities, and relevant outputs.

The secretariat has also commissioned the design of a logo, offering several possible logos that cluster members were able to select from.

## **Rethinking Healthcare Workforce Education**

The cluster also collaborated with a paper entitled “*Rethinking healthcare workforce education*”, in the December 2021 issue of IAU Horizons, and circulated a communications piece in video format “*Lessons from the pandemic to educate future healthcare professionals*” emerging from a webinar held and co-hosted with the IAU in October 2020.

## **Webinar 2022.**

The Secretariat is working towards organizing a webinar for 2022 entitled “***Exploring the nexus between health, equity, and gender.***” A concept note has been co-created with speakers identified by cluster members and will combine structured interventions building on speakers' interests and expertise, together with a more general q&a around the topic.

## SDG 4: QUALITY EDUCATION

**Lead Institution:** York University, Canada

**Satellites in Subcluster:**

- Charles University, Czech Republic
- International Islamic University Malaysia
- Leuphana University Lüneburg, Germany
- Rhodes University, South Africa
- University of Peace, Costa Rica



CHARLES  
UNIVERSITY



Benefiting from the longstanding working relationships of its members who as academic colleagues in 2020/21 overlapped on various levels in their engagements with IAU and UNESCO.

In January 2021, the subcluster was instrumental in contributing to a global conference. The [‘Sustainable on the Go’ Sustainable and Inclusive Internationalization Conference](#) that aligned with the SDG 4 Subcluster objectives, was held with more than 700 registered participants from 66 countries (74 % participation rate), organized by York University with IAU, the Canadian Commission for UNESCO, and Okayama University as strategic partners.

While the pandemic prevented a planned subcluster in-person meeting, the subcluster was involved in the planning process as well as all its members through speaking engagements throughout the conference program. As one of the results, the [2021 Toronto Declaration](#) was adopted during the conference as a thematic guidance document and a pledge for higher education institutions to commit to and promote holistic, inclusive, and sustainable ways of internationalization. It is possible to become an individual or institutional signatory of the Declaration. A second edition of the [conference](#) is currently being organized to be held on November 2022, and progress on implementing the commitments from the 2021 Toronto Declaration will be part of the next event.

The subcluster members also actively participated in the [UNESCO World Conference on Education for Sustainable Development \(ESD\)](#) in May 2021 as speakers and panellists as well as some of them with a virtual booth of the UNESCO Chairs for Sustainable Development. They highlighted the importance of ESD for the SDGs as a whole and the potential of higher education for creating change as well as practically modelling embedding sustainability.

A peer-reviewed journal [article](#) on the whole-institution approach towards sustainability, highlighting the history of the global higher education community’s involvement with UN action plans and suggesting the opportunity towards stronger influence in policy-making in the future has been published in the International Journal of Sustainability in Higher Education, titled ‘A whole-institution approach towards

sustainability: a crucial aspect of higher education's individual and collective engagement with the SDGs and beyond'. The article also highlights the individual practices at the subcluster member institution towards the SDGs.

**Leuphana University** in conjunction with the **University of Peace, Rhodes University** and **York University** has successfully applied to be recognized by UNESCO as a [UNITWIN Network](#) on **Education for Sustainable Development (ESD) and Social Transformation** with a focus on teacher education. IAU and the International Islamic University Malaysia have endorsed the application with letters of support. A launch event will be held during the **2022 Sustainable on the Go Conference** in November 2022.

The SDG 4 Subcluster will further pursue a multi-layered approach and collaboration in various networks to optimize existing resources, improve visibility, and seek further opportunities for engagement and funding. Inter alia, its members aim to be involved in the upcoming third World Higher Education Conference 2022 and the next IAU General Conference in 2022, following their strategy towards:

- Working on toolkits and guidance regarding the whole-institution approach towards sustainability in higher education and improving student engagement through a sustainability graduation pledge
- Discussing the opportunity of specific recommendations for higher education towards embedding ESD based on the last report on the 1974 UNESCO *Recommendation concerning Education for International Understanding, Cooperation and Peace and Education relating to Human Rights and Fundamental Freedoms* (used for global reporting on SDG 4.7 ESD and Global Citizenship Education, next edition expected in 2024)
- Creating further visibility through statements, speaking engagements, and sharing perspectives on the role of higher education towards the SDGs where opportunities arise

#### **Additional SDG 4 Subcluster Coordinator Report: York University, Canada**

With the [University-wide Academic Plan \(UAP\) 2020-2025](#) in place, York University has started a holistic approach towards their SDG engagement. Rooted in York University's history, values, and commitment to a more just and sustainable future, six priorities of action will lead the academic engagement of faculty and students. Further measures, such as [provostial fellows](#) focusing on the SDGs and a strong engagement of university-wide focal points, such as the [President's Sustainability Council](#), the [SDG Student Hub](#), and the successful annual participation in the Times Higher Education Impact Ranking (67<sup>th</sup> place worldwide in 2021) underline York's commitment to sustainability and the SDGs.

#### **Additional Satellite Report: International Islamic University Malaysia**

The COVID-19 pandemic has forced the world to revisit the way we normally think and manage our daily operations. Specifically, for education, the pandemic has resulted in a disruption, like never, exposing several deficiencies and weaknesses in the overall ecosystem that have been overlooked for many decades. Realizing the need for a major transformation in higher education specifically, the International

Islamic University Malaysia has embarked on a journey to bring back the role of the university as ‘leveller of society’ against the impact of the pandemic. The university, through its newly established centre, Sejahtera Centre for Sustainability and Humanity is pushing towards the transformation through three focus areas:

1. Reorienting education towards sustainable development, which is translated into action through the introduction of Hybrid Flexible (HyFlex) Transformative Learning for Edu-Action with Soul project. This project is grounded on 5 principles for next generation learning and skills education framework: transdisciplinary and integrated, formative, and summative assessment, research-based, and academically linked, community-engaged, and action- and solution-oriented. For more information, please watch [this video](#).
2. Making IIUM a green and sustainable campus, which is championed by a transdisciplinary team of experts focusing on seven themes: Green Environment & Landscape, Built Environment, Transport, Waste, Water, Energy, IT Go Green. For more information, please visit [this page](#).
3. Creating a sustainable and Sejahtera neighbourhood through RCE Greater Gombak platform. This is a platform for collaboration between academia, government and non-government agencies, industry players, civil society, and community to work together forming the quadruple helix model of collaboration. For more information, please visit [this page](#).

#### **Additional Satellite Report: Leuphana University, Lüneburg, Germany**

The [Institute for Sustainable Development and Learning \(ISDL\)](#) is a central, cross-faculty institute at Leuphana University of Lüneburg in Germany focusing on transdisciplinary and transformative research to foster individual, mutual and societal learning on sustainability. Established in 2019, ISDL has been working on various projects, events, and research studies towards promoting Agenda 2030. This year, the institute organized a series of [dialogues](#) called ‘*In Conversation with*’ with international experts in the field of ESD to discuss the role of ESD in building forward better from COVID-19 and develop better understanding of the new ‘ESD for 2030’ framework in delivering quality learning as a measure of ESD. In the online course and [summer school](#) on ‘Regenerative ESD and Evaluation for the Future We Want’, ISDL reached out to twenty-five participants from nine countries who traced the emergence of evaluative work as ESD and developed approaches to undertake ESD evaluation. ISDL also launched a multi-stakeholder project called ‘[ESD for 2030](#) – Learning for and in resilient and sustainable communities’ in three Baltic cities and Lüneburg in Germany to understand sustainability dilemmas through real-world laboratories bringing together municipalities, youth, and universities. The [Transdisciplinary Learning Academy](#) has emerged as a thriving platform to disseminate transdisciplinary research and provides a platform to academicians, scientists, and policymakers to network and deliberate on key research findings and its implementation. Another project called ‘[Sustainability and Digitalization - A European Perspective](#)’ reached out to experts in six virtual roundtables to explore digitalization for sustainability from social, organizational, and individual learning perspectives. Together with Greenpeace, ISDL is also conducting the ambitious study ‘Sustainability University Barometer’ to map the contribution of the higher education



sector towards Agenda 2030 through the development of indicators to capture progress towards sustainability and identify best practices that allow mutual learning processes. ISDL is also coordinating the tasks of the UNESCO Chair on Higher Education for Sustainable Development and leads the coordination of a new UNITWIN Network on teacher education and quality learning with four UNESCO Chairs. ISDL also joined the second phase of the UNESCO Chair network on Education for Sustainable Lifestyles.

## SDG 5: GENDER EQUALITY

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**Lead:** University of Bologna



### Satellites in Subcluster:

- Assam Don Bosco University (ADBU)
- McMaster University

As leader of the Cluster the University of Bologna has edited with IAU a volume on SDG 5, part of the IAU Global Cluster publication series on HESD. It collects heterogeneous social recommendations and positive actions developed by the Cluster, but also by other Higher Education Institutions and organisations partners in IAU. All the collected measures testify to an engagement and an ever-growing consciousness on the importance of including and implementing politics of gender equality and equity and gender mainstreaming within the community and the governance of higher education institutions to fight and contrast gender discriminations. The volume was launched online on the 8<sup>th</sup> of March 2021, on the occasion of International Women's Day, and it can be accessed [here](#).

UNIBO has kept on publishing its [Gender Equality Annual Report](#) (now in its sixth edition), providing a detailed overview of the progress and the processes set in motion to pursue equal opportunities, gender balance, and fighting stereotypes, but also of the many changes that still are needed for a more inclusive community. In this sense, the 2020 edition has paid also a particular attention to the covid-19 emergency, in compliance with numerous studies and reports tackling how the pandemic is expected to disproportionately interfere with women's careers, due to unequal distribution of domestic workloads and caring responsibilities, as well as unequal career opportunities compared. The report is considered also an instrument to monitor the situation and to prevent it.

UNIBO has also approved its new **Gender Equality Plan**, soon to be published. The areas of intervention will be in particular: work-life balance and occupational well-being; occupational balance in top positions and decision-making bodies; gender equality in recruitment and career advancement and retention; gender mainstreaming in research and teaching programmes; combating gender violence and gender stereotypes.

Furthermore, to promote all women's and girls' empowerment, gender mainstreaming, and inclusion of diversities it has produced an intense programme of actions and events addressing not only the academic community but also the city community. To mention some of them: awareness campaign to promote a more gender balanced enrolment of students in STEM disciplines, with videos and actions presented during the orientation days organized both for high school students and BA students; campaign to encourage paternity care's responsibilities, disseminating flyers and poster that include all information required to obtain a paternal leave; simplification of the procedures to obtain an alias career, providing support to students and staff throughout the administrative procedure for gender transition, involving for example changes to the electronic badge; organization of numerous events, conferences, seminars and campaigns for the elimination of violence against women.

**Assam Don Bosco University (ADBU):**

Assam Don Bosco University (ADBU) commits to building a safe and friendly space for its students and staff. We aim to create a gender-friendly campus for all. The University has an Equity and Meaningful Inclusion Policy Manual with a vision to create a work-life balance and occupational well-being for its students and staff. There is gender equity in the recruitment and admission process of the students and staff members—an equal representation from different gender in the classroom and workspace.

The University ensures a protected space so that everyone is safe from exclusion or marginalization on the ground of gender and sexuality. Gender sensitivity for creating a gender-friendly campus is a core aspect of the Induction programmes in place for all newly admitted students including faculty and staff members who join the University. ADBU's fundamental strength lies in its gender friendly approach in all Social Commitment programs of the University.

Furthermore, the University has inserted courses in its curriculum for developing gender sensitivity and creating a gender-friendly community. 'Gender Studies' is a valuable paper for the post graduate students in their first semester to combat gender violence and gender stereotypes in the community. Another core paper, 'Working for Diversity,' in collaboration with the University of Frankfurt and the University of Eastern Finland was introduced in Autumn term, 2021.

**McMaster University:**

McMaster University is a leader in providing a welcoming and inclusive environment and a range of programs focused on non-discrimination for women and transgender people. McMaster's newly updated Discrimination and Harassment Policy communicates the institution's commitment to the prevention of discrimination and harassment, including a comprehensive process and protocol for dealing with any concerns surrounding discrimination and harassment against women and all others. McMaster is also a leader in encouraging young women to enrol in the STEM (Science, Technology, Engineering, Math) and Business fields, areas where women have traditionally been underrepresented.

Recent projects and research collaborations supporting progress toward SDG 5 targets include:

- McMaster's efforts to break down barriers for women in athletics by establishing [two apprenticeship football coaching](#) positions for women as part of a pilot project from September 1 – December 4, 2021.
- On September 21 and October 6, 2021 McMaster's School of Labour Studies hosted [two workshops](#) in collaboration with international researchers, funded by the Liuna Enrico Henry Mancinelli Professor of Global Labour Issues, and the Social Sciences and Humanities Research Council (SSHRC), exploring the relationship between transnational labour mediation and forced labour, paying particular attention to intersecting social relations and statuses that make certain groups such as women vulnerable to labour exploitation and human trafficking.
- McMaster's Gender and Social Justice program, Faculties, departments and International Affairs Office are collaborating on a project with Lifeline Afghanistan to provide education and employment opportunities for highly vulnerable, targeted, graduates of a Women and Gender Studies Diploma program, at Kabul University, Afghanistan.

## SDG 6: CLEAN WATER AND SANITATION (DRAFT)

**Lead: University of Tehran, Iran**

### **Satellites:**

- *University of Granada, Spain*
- *University of Barcelona, Spain*
- *Universidad Antonio Nariño, Colombia*
- *Bahir Dar University, Ethiopia*



Despite there being more than enough freshwater on the surface of the globe, millions of people across the planet are still without access to safe water and basic sanitation. The goals of SDG 6 are to ‘Ensure availability and sustainable management of water and sanitation for all’ and aim for these goals to come to fruition by the year 2030. The safe and affordable drinking water, end open defecation and provide access to sanitation and hygiene, improved water quality, wastewater treatment and safe reuse, implement Integrated Water Resources Management (IWRM) and protecting/restoring water-related ecosystems are very important targets for a healthy human and ecosystem life. University of Tehran(UT) leads SDG 6: Clean Water and Sanitation in IAU and has considered this topic and its targets as the important issues in sustainable management of water resources. Along with its satellite international partners, UT as the leading and pioneering university in the country, hope to bridge the new findings and perspectives with possible solutions to the above mentioned challenges in the hope of turning the SDG 6 goals into reality. To do so, UT has focused on interdisciplinary and multidisciplinary approaches in research, teaching and extension by the organized webinars, workshops and short courses through its related departments and intuitions in the national and international levels to discuss different ideas on Clean Water and Sanitation. It has also worked with the satellite universities for international networking on the related issues and there is also plans to include some other universities to the network. University of Tehran actively participated in the three days’ webinar of IAU HESD Cluster Meeting by sharing its updates on the cluster activities and exchange of ideas with other clusters on the strategic framework for involvement of higher education institutions and reporting its activities and the way forward. Meanwhile, it suggested on the draft working plan for the IAU HESD Cluster 2022-2024. It also suggested more collaborated efforts, joint projects and initiatives for higher education in the regional and international levels and capacity buildings and preparedness for situations such as COVID-19 pandemic in the future.

## SDG 7: CLEAN AND AFFORDABLE ENERGY



**Leader:** Assam Don Bosco University (ADBU)

**Satellites in Subcluster:**

- Qatar University, Qatar
- Strathmore University, Kenya

Assam Don Bosco University (ADBU) was established in the North Eastern part of India by the Salesians of Don Bosco (SDB) in 2008. Don Bosco institutions are in 132 countries, catering to over nine million young people worldwide. ADBU follows the global outlook of Don Bosco's philosophy, to be conscious about the nature and the surrounding while imparting holistic education, at the same time inculcating moral values among the youth. Among the significant global collaborations, ADBU is also acting as the cluster lead in SDG-7 under IAU and is engaged in dialogue with Strathmore University Kenya and Qatar University, for joint programmed relating affordable and clean energy.

Among the recent endeavours in this regard, an ***International Conference on Emerging Renewable and Modern Energy (ICERME-2021)*** on the theme of "Access to Affordable, Reliable, and Modern energy services to all" was organized by ADBU in virtual mode in Collaboration with Sikkim Manipal University, India during 12-13 February 2021. ICERME-2021 brought together researchers, educators, students, and policymakers from various nations including Bhutan, Algeria, Thailand, UK, and different states of India. There was participation from across academia, government, industry, and non-governmental organizations to discuss, share and promote current works and recent accomplishments in various aspects of the green energy sector. ICERME-2021 also featured a panel discussion titled "*Synergies and trade-offs between sustainable development goals and targets, with special reference to SDG-7*" aimed at bringing some pertinent issues to the attention of the policymakers, budding researchers, innovators, industry professionals and the intelligentsia of the global community. (<https://adbu-eee.blogspot.com/2021/02/eee-organizes-icerme-2021-international.html>)

The use of digital technologies and IT in the field of energy and power systems is also popularized by the university through various academic programmes. To emphasize the programming requirements for meeting the computational requirements in different areas of energy engineering and technology, ADBU organized a 5-day international "***Hands-on Online workshop on Computation with Python***", from 30 August to 3 September 2021. A total of 109 participants from different institutions of the world, viz. Strathmore University (Kenya), University of New South Wales (UNSW, Australia), Dhaka University of Engineering & Technology (Bangladesh), University of Nairobi (Kenya), Sri Lanka Standards Institute (SLSI, Sri Lanka), East Delta University (Bangladesh), and from various Institutions and Universities across India participated in the workshop. (<https://adbu-eee.blogspot.com/2021/09/free-international-hands-on-online.html>)

The webinars organized by the department of Electrical and Electronics Engineering of the University focuses primarily on the various themes of clean and renewable energy. Some of those webinars organized during 2020-21 were “**Webinar on Solar Photovoltaic Cell: Properties and Design**” held on 3 August 2021, “**Webinar on Application of Artificial Intelligence for Solving Power System Load Forecasting Problems**” held on 12 September 2021. (<https://adbu-eee.blogspot.com/2021/08/eee-organizes-webinar-on-solar.html>, <http://adbu-eee.blogspot.com/2021/09/eee-organizes-webinar-on-application-of.html>).

Internal audits of energy usage and green campus initiatives are done in the university each year, in all the campuses. The recommendations of the audits are then taken into consideration for retrofitting and renovation of the buildings of the university. The reports are made available for public access in the university website, to set examples for many other institutions and organizations to follow. Assam Don Bosco University is thus actively involved in promoting SDG-7 and its associated agenda, by acting as a global leader among the satellite universities, with a goal for sustainable use of energy and resources at all levels.

([https://drive.google.com/file/d/13bdZos\\_NpCEU5MwgDsB-C4jYMMjHh4T4/view?usp=sharing](https://drive.google.com/file/d/13bdZos_NpCEU5MwgDsB-C4jYMMjHh4T4/view?usp=sharing))

The research areas in the University are focused on optimizing the use of Energy for the conservation of natural resources for future generations. Some of the ongoing research projects in the field of Energy in the university are:

- ***Behaviour of solar cell in different shading conditions and calculation of maximum power point at partial shading condition***

In this work, a detailed description is given explaining the behaviour of Solar Module (SM) at different modes of lighting condition. Along with that, the characteristic behaviour of SM is shown for different partial shading patterns and irradiance conditions.

- ***Estimation of PV module parameters from the manufacturer's datasheet for Maximum Power Point (MPP) estimation***

A study has been performed to extract the unknown parameters of a photovoltaic (PV) module using mathematical model-driven analysis. Neglecting the less significant terms, the number of non-linear exponential terms are reduced to develop a simplified algorithm to estimate five unknown parameters such as diode ideality factor, series resistance, shunt resistance, diode saturation current and photogenerated current of a single diode model PV module accurately with less computational complexities from the manufacturer's datasheet values. Substituting the estimated values of the unknown parameters, the PV module output power is obtained at different irradiance and temperature, which shows close coordination with the datasheet values.

- ***Mathematical modelling for estimating maximum power output of total-cross-tied connected photovoltaic array during partial shading condition***

Estimation of the output power of a solar photovoltaic (PV) system during partial shading condition (PSC) is of interest to PV installers. Owing to the inclusion of a bypass diode, the occurrence of local and global maximum peak creates more difficulty in the calculation of

maximum power output from a PV array. In this study, a mathematical model is designed to estimate the percentage of degradation of a square total-cross-tied (TCT) connected PV array at different PSCs. By employing the proposed algorithm, it will be easier to estimate the maximum power point of a  $m \times n$  ( $m = n$ ) TCT connected PV array during PSC without using any measuring instrument except for the measurement of irradiance and temperature. A better correlation is obtained when the output of the proposed model is compared with MATLAB simulated output.

- ***Design of algorithms to estimate MPP of TCT connected Solar PV system in partial shading condition***

In this research work, it is found that there is no mathematical model available to estimate the performance degradation of a total-cross-tied connected (TCT) photo-voltaic (PV) array due to partial shading condition (PSC). In this work, a set of algorithms is proposed to estimate the performance degradation of TCT connected PV systems at different PSC which will enable PV installers to estimate MPP of the PV system. By employing these algorithms, it will be easier to estimate the performance degradation of a TCT connected PV system due to PSC without using any measuring instrument except the measurement of irradiance and temperature.

- ***An analytical algorithm to generate high current from solar PV module, funded by All India Council of Technical Education (AICTE), Government of India***

This project is investigating ways of generating high current from solar PV module, which is strong enough to operate even a welding machine in partial shading condition without using high-capacity battery.

Some recent publications by the university on sustainable and clean energy are-

- Papul Changmai, Shashank Kumar, Sisir K. Nayak, and Sanjeev K. Metya. "Maximum Power Estimation of Total Cross-Tied Connected PV Cells in different Shading Conditions for High Current Application." IEEE Journal of Emerging and Selected Topics in Power Electronics, DOI: 10.1109/JESTPE.2021.3105808.
- Papul Changmai, Sisir K. Nayak, and Sanjeev K. Metya, "Estimation of PV module parameters from the manufacturer's datasheet for MPP estimation," IET Renewable Power Generation, 14, (11), pp.1988-1996, July 2020. DOI: 10.1049/iet-rpg.2019.1377
- Papul Changmai, Sisir K. Nayak, and Sanjeev K. Metya, "Mathematical model to estimate the maximum power output of a total cross tied connected PV array during partial shading condition," IET Renewable Power Generation, 13, (14), p. 2647-2655, August 2019. DOI: 10.1049/iet-rpg.2019.0279.
- Papul Changmai and Sanjeev K. Metya. "Determination of the best shading pattern to maximize the power of TCT connected solar PV array during partial shading condition." Journal of Optics 48, no. 4 (2019): 499-504.
- Papul Changmai, and Sanjeev Kumar Metya. "Behaviour of solar cell in different shading condition and calculation of maximum power point at partial shading condition." ADBU Journal of Engineering Technology 7, no. 2 (2018).

- Nayanjyoti Deka, and Papul Changmai. "A Review On Light Trapping Capacities of Different Photovoltaic Cells." ADBU Journal of Electrical and Electronics Engineering (AJEEE) 1, no. 2 (2017): 18-28.
- Abu Ibrahim Barbhuiya, Shilajeet Bhattacharjee, Akash Mazumdar, Papul Changmai, and Mrinal Krishna Chowdhury. "An approach to enhance the efficiency of the solar PV panel in partial shading condition: A Review." ADBU Journal of Electrical and Electronics Engineering (AJEEE) 2, no. 1 (2018): 5-7.
- Arnaan Ronghangpi, Jyoti Mahanta, Joram Henjum, and Papul Changmai. "Analysis of the Problems Occurred Due To Partial Shading of Solar Photovoltaic Array and Probable Solutions." ADBU Journal of Electrical and Electronics Engineering (AJEEE) 3, no. 1 (2019): 16-19.
- Pronuj Biswas, Monoj Baruah, Papul Changmai, Mrinal Krishna Chaudhury and Nabajit Dev Choudhury; " Partial Shading Analysis on Solar PV Module," Advances in Science and Technology, Vol. 1, ISBN: 978-81-908910-9-7, i-manager Publications, 2018, pp 121-124.

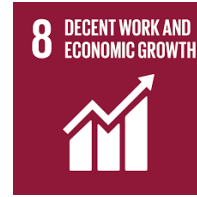
The University's commitment to affordable and clean energy is manifested in the architectural design of campus buildings compliant with ECBC 2017 and is manifested in its policies of Energy Efficiency and Carbon Reduction. The "**Green Pledge**" signed by the University in partnership with the European Union in 2019 curbs the use of single use plastics, reducing water and electricity consumption, segregating waste before disposal and other sustainability measures as agreed.

(<https://drive.google.com/file/d/1ayXIO337naHsk-ZwjNwRdBsuTV9MB7bk/view>)



## SDG 8: PROMOTE INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH

**Lead: University of Gothenburg**



### **Satellites in Subcluster:**

- Makerere University, Uganda
- Addis Ababa University, Ethiopia
- University of Nigeria, Nigeria
- University of Dar es Salaam, Tanzania
- University of Nairobi, Kenya
- University of Concepción, Chile
- Universidad de los Andes, Colombia
- University of Economics Ho Chi Minh City, Vietnam

### **1. The strategic goal of the SDG 8 Initiative**

The SDG 8 Initiative involves the University of Gothenburg together with eight satellite universities in the Global South. The strategic goal of the initiative is to engage and support a global community, with the starting point in academia, to promote inclusive and sustainable economic growth, employment, and decent work for all. This is done by applied action research and policy interaction that focus on solutions to growth and work-related challenges through collaboration among researchers, policymakers, and practitioners in local and global contexts. The work is coordinated by a small secretariat at the University of Gothenburg. Two working groups are formed – one consisting of committed researchers at the University of Gothenburg and one consisting of the focal points at the satellite universities.

### **2. Objectives and implementation**

- Identify and synthesize research in support of the implementation of the SDG 8 targets.** To identify how to apply scholarly work to the SDG 8 discourse, we are initiating literature reviews on SDG 8 themes. SDG 8 spans a wide range of issues, related to economic growth, resource efficiency, working conditions, youth employment, and even tourism. Gothenburg University Library supports systematic reviews.
- Critically scrutinize the goal, targets, and indicators of SDG 8 to reveal inherent biases, contradictions, and links to other SDGs.** In line with the holistic approach of the IAU HESD cluster, the writing teams include a critical analysis of synergies and contradictions between SDG 8 and other SDGs. The magic of academic interaction comes to play in the discussions on drafts of the

papers in seminars both within each university and between universities. This ensures a rich dialogue with multiple perspectives reflected.

- (iii) **Accelerate the implementation of research through research-to-policy interaction, including dialogue and following-up on selected indicators for inclusion in Voluntary National Reviews to the UN High-Level Political Forum** <https://sustainabledevelopment.un.org/vnrs/>. The finalized discussion papers will be used for policy dialogues by the universities to discuss the contribution that research can have on the implementation of SDG 8 in each country. Focus will be given to discussions regarding the proposed indicators. Are they relevant, credible, and used? This will enable each participating university to contribute to their own government's Voluntary National Reviews to the UN High-Level Political Forums (HLPF).
- (iv) **Advance knowledge by identifying key areas for further research.** By academia taking the politically agreed SDGs seriously and devoting time and effort to discuss their implementation with policy makers, it is expected that new and policy relevant research will be an outcome through a co-creative process.
- (v) **Integrate knowledge on SDG 8 in higher education.** To reinforce youth and future leaders, the integration of research-based knowledge on sustainable development in HE is crucial and is therefore naturally a focus area to be further explored in the SDG 8 Initiative.

## 1. Achievements 2020 – 2021

Several activities have been carried out since 2019, including thematic reviews, research networking and collaboration, webinars and workshops, and an international research conference. In 2020 some activities that had been planned, such as seminars, had to be cancelled due to the pandemic. Due to travel restrictions, some physical meetings, such as an SDG 8 research-to-policy workshop in Uganda, have been postponed. Despite this, a large part of the work has continued, with virtual or hybrid meetings.

One of the main achievements during this period is the academic work by researchers at the University of Gothenburg, in co-operation with research colleagues in Sweden and internationally. 20 researchers have gathered in thematic groups around nine of the targets of SDG 8, performing thematic reviews, resulting in discussion papers for use in research-policy dialogues. Academic discussions have played an important part in the process, and a range of webinars and workshops, as well as an international research conference, have been organized to facilitate this.

### Summary of activities

- First meeting of the SDG 8 satellite working group, in-person meeting in Gothenburg with representatives of the satellite universities, resulting in a road map (Jan 2020)
- Initial workshops with the thematic groups at the University of Gothenburg (Oct-Dec 2020)
- Workshop: Thematic reviews on SDG 8 targets – the road from research to policy (Jan 2021)
- SDG 8 webinar for satellite universities (Feb 2021)
- International webinar series on SDG 8 discussion papers (Jun 2021)
- The 2021 Gothenburg International Research Conference on Sustainable Development Goal 8, 26-27 August 2021. A hybrid event, with high-level international keynote speakers from academia, UNEP and UNCTAD

- **Thematic groups**

Target	Theme	Author(s)
8.1	Sustainable Economic Growth	Ola Olsson, professor in economics; Pelle Ahlerup, senior lecturer in economics, University of Gothenburg
8.2	Innovation	Rick Middel, senior lecturer in innovation and entrepreneurship; Henric Rhedin, Deputy Head of Department, School of Public Health and Community Medicine, University of Gothenburg
8.3	Job creation and growing enterprises	Stefan Tengblad; professor in human resource management; Henric Rhedin, deputy head of department, School of Public Health and Community Medicine; Andreas Wallo, associate professor in education, Linköping University; Carl Wänström, Senior Lecturer, technology management and economics, Chalmers University of Technology; Lars Kullman, bibliometrician, University of Gothenburg
8.4	Resource efficiency	Thomas Sterner, professor of environmental economics, University of Gothenburg
8.5	Full employment	Mattias Bengtsson, associate professor in sociology and work science, University of Gothenburg
8.6	Youth employment	Gunnar Gillberg, senior lecturer in work science, University of Gothenburg
8.7	Child labour	Heather Congdon Fors, senior lecturer in economics, University of Gothenburg
8.8	Safe working environments	Lotta Dellve, professor in work science; Helena Stensöta, professor political science; Anna-Carin Olin, professor in occupational medicine; Helena Sandén, associate professor in occupational and environmental medicine, University of Gothenburg
8.9	Sustainable tourism	Chiara Rinaldi, post-doctoral researcher, department of management, Ca' Foscari University of Venice, Italy; Jim Ayorekire, PhD, Department of Forestry, Biodiversity and Tourism, School of Forestry, Environmental and Geographical Sciences, Makerere University, Uganda; Erik Lundberg, PhD, Centre for tourism, School of Business, Economics and Law, University of Gothenburg

## SDG 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE

**Lead:** Beirut Arab University (BAU), Lebanon



BAU has been leading SDG9 and supporting it since 2019 by bringing related strategies to the University, Faculties and Excellence Centers, integrating SDG 9 into courses, stimulating innovation and entrepreneurship, and building local and global SDG 9 collaborations. Moreover, BAU is a member of the Global Compact Network Lebanon aiming to advance the UN Global Compact initiative and the UN Sustainable Development Goals (SDGs).

Despite of the two tough years that the world has witnessed in general and Lebanon in particular, as it faced multiple crisis, BAU managed during the academic year 2020-2021 to turn the challenges into opportunities by fostering innovation on various levels be it community, academic and research-based services and other different aspects. The commitments of Beirut Arab University continue in addressing SDGs in general and in promoting and leading SDG 9 in particular.

**BAU continues its accomplishments on five levels:**

### **1. Addressing SDG 9 through Education**

SDG9 is mapped and integrated within undergraduate and graduate courses. Establishing the entrepreneurial mindset sought by the university within the faculties' curricula builds a bridge between academia and practice/industry by encouraging practice-based research topics through various workshops on (Critical Thinking), (Think Tank) to encourage students to think outside the box.

### **2. Addressing SDG 9 through Research**

In collaboration with Elsevier's Digital Commons Platform, BAU publishes six scholarly journals and books supported by the university. The journals cover a wide range of fields such as Science and Technology, and Creative Sustainable Development. Moreover, BAU developed its own digital platform to map how BAU activities align with SDG9 and its indicators by organizing them into 4 categories: Research Projects & Initiatives, Published Articles, Conferences & Workshops, and Patents to the BAU database. The total number matching with SDG9 over the past four years is 448. <https://www.bau.edu.lb/SDG9/Mapping-Tool>

### **3. Engaging with Community**

a) BAU Response to Beirut Explosion - From the first day after Beirut Port explosion, BAU participated in a series of meetings at the Order of Engineers and Architects in Beirut (OEA) with representatives of the bodies working on sites. Students are currently participating in an international architectural competition for the Port of Beirut reconstruction by proposing unique designs and innovations ideas. Moreover, and within the framework of the Beirut Urban Declaration led by the OEA in Beirut in synergy with Lebanese schools of Architecture and during the organized webinar, we emphasized on the crucial role of the

Lebanese schools of Architecture as a major support and collaborator in the reconstruction of Beirut Port by Building resilient infrastructure, reconstructing physical and human infrastructure and as well as using innovative tools and research stressing by promoting inclusive and sustainable development on the main goal of SDG9. <https://www.bau.edu.lb/Public-Relations/News/BAU-participated-in-Beirut-Urban-Declaration-Conference-after-Beirut-Port-Explosion>  
<https://www.oea.org.lb/arabic/EventDetails.aspx?pageid=6525>

b) BAU – Faculty of Architecture, Design & Built Environment in partnership with UNESCO, UNFPA and UNODC has successfully implemented the project entitled “Developing children’s emotional attachment to the territory of Beirut Blast through activating their participation in the construction of cognitive maps by playing with spatial maps strategically designed in a game environment”. The project ended with an exhibition “Beirut Miniature Model Art Exhibition to introduce Cultural Heritage to Children», where a large number of architectural miniatures of heritage buildings in Beirut – all designed at BAU Urban Lab - were displayed, showing accurate architectural details of the buildings using innovative tools such QR code to spread awareness on the Lebanese Built Heritage.

BAU Response to COVID-19 Pandemic - As a serious contribution to face COVID-19 Pandemic, BAU Health Care Center (BAUHC) has an effective role in serving community, the university’s staff, employees, and students through tele-medicine health service, Call-Center, providing vaccination, and medicine. This medical infrastructure produces all these services for free.

<https://www.bau.edu.lb/health-services/healthcare-center>

c) Strengthening the Regional Networking - Since February 2021, the dean Prof. Ibtihal Y. El-Bastawissi, representing BAU, has been selected to be the Director of the Scientific Chair for Creative Sustainability at the Secretariat of the Executive Council and the General Conference / National Committees Section, Affiliated to the Arab League Educational, Cultural and Scientific Organization - ALECSO. The chair aims to spread the culture of creativity, innovation and sustainability in Arab societies by proposing and implementing development projects that fall into the objectives of the chair.

<https://www.bau.edu.lb/Public-Relations/News/Dean-of-the-Faculty-of-Architecture-Design-and-Built-Environment-representing-BAU>

d) Innovative Pedestrian Infrastructure - BAU has provided street furniture and outdoor shelter to the local community, which was made and collected at the university’s digital fabrication lab.

e) Heritage Digital Documentation - BAU is considered one of the first universities that had digitally documented historical sites using innovative tools, such as 3D Scanner and VR technology. Tripoli Nawfal Palace had been 3D scanned through a specialized team from Faculty of Architecture, BAU. This project was funded by Tripoli Municipality and can be a methodical approach towards digitizing the national built heritage of Lebanon.

<https://www.bau.edu.lb/Public-Relations/News/The-Three-Dimensional-Survey-of-the-Nawfal-Palace-in-Tripoli>

#### **4. Addressing SDG9 by activating the BAU Incubator**

BAU continues to create entrepreneurial environments, and participating in international competitions and programs. The BAU incubator aims to create job opportunities by finding solutions to social, and economic problems, producing income generating activities in remote areas and redistributing profit to marginalized citizens.

<https://www.bau.edu.lb/SDG9/Innovation-hub>

## **5. Addressing and Mapping SDG9 through Operations & Governance**

BAU Strategy (2020-2030) has addressed UN SDGs in general and SDG 9 in particular through disseminating SDG 9 to BAU community, integrating the related SDG 9 to the University activities, and providing opportunities to students to participate in SDG 9 related activities and community projects. BAU Governance structures and operational policies have been aligned with flow of actions related to SDGs including Employment, Finance, Campus Services, Facilities, Procurement, HR, and Student Administration.

The SDG 9 includes participation from Assam Don Bosco University (ADBU) satellite university.

Assam Don Bosco University is also actively promoting SDG-9 - Industry, Innovation, and Infrastructure. Currently, for 2021-2022 ADBU has focused on promoting Target 9.2: Promote inclusive and sustainable industrialization and Target 9.3: Increase access to financial services and markets. With the help of financial assistance from the Government of India, ADBU is working on establishing six rural clusters to generate employment and increase the GDP. In these six rural clusters we have focused on the establishment of small-scale industries to generate employment, so that GDP can increase.

This initiative has been carried out under a government scheme known as the Scheme of Fund for Regeneration of Traditional Industries (SFURTI). Among the six clusters, three are related to Tea, since this region of India produces the highest quantity of Tea. The other three clusters are related to Handloom, Food Processing & Handicraft, respectively. More than 4000 underprivileged persons are being benefited from this initiative.

Among these six projects, two have been completed before time, and the other four are going on. To make the activities sustainable in these clusters, lean manufacturing techniques and blockchain technology have been incorporated. ADBU has established one Bio Mechanical Engineering Research Lab to carryout research work on Engineering & orthopedics-related issues, and later on, we will try to blend other areas like Nephrology, Hepatology, etc. with engineering.

In response to the COVID pandemic, ADBU has developed one low-cost ventilator with an in-situ oxygen generation facility. Currently, it is in Manufacturing Readiness Levels (MRL) – 4, and further research is going on.

## SDG 10: REDUCED INEQUALITIES



**Lead:** University of Tsukuba, Japan (<https://www.tsukuba.ac.jp/>)

**Satellites in Subcluster:**

- City University of Hong Kong
- The University of Carthage, Tunisia
- University Putra Malaysia
- Universiteit Utrecht, The Netherlands

2020-2022 has been a challenging period for those engaging with SDG10, as the COVID-19 pandemic resulted in continued havoc in accentuating inequality, especially among the weakest members of our societies locally and globally. Perhaps indirect elements may have contributed, the University of Tsukuba had trouble with maintaining its satellite network for its cluster and contacts. Therefore, Tsukuba has had to reconstruct the satellite network in 2020-2021 with the departures of some universities.

Amid this difficult period, the University of Tsukuba has successfully started reconstructing relations with satellites and are very happy to announce to be inviting members from the University Putra Malaysia Malaysian Research Institute on Ageing. Their focus on inequality is on the rural areas of Malaysia and effects of aging in the context of digital inequality. The ability to use digital and information technology is greatly affected by the disparities caused by demographics and socioeconomic backgrounds and is a worthy topic to be investigated by this cluster.

The University of Tsukuba is also delighted to invite Universiteit Utrecht of the Netherlands to also join this cluster. The satellite contact at Utrecht is interested in this topic from her research vantage point of cosmopolitanism and the worsening of inequalities globally due to the lockdowns. This perspective will greatly improve our scope of tackling inequalities from a global view.

Despite the difficulties and pandemic related barriers with meeting face to face, the University of Tsukuba has been allowed to participate in several international occasions through the kind invitations from IAU in relation to the SDGs. On July 13 2020, Prof. Muneo Kaigo was given the opportunity to speak at HLPF 2020 UN DESA/UNITAR SDGs Learning, Training and Practice Workshops – Session 9: Teaching, Learning and Integrating the SDGs at universities and beyond - Linking to the Decade of Action. The session was co-organized by the International Council for Adult Education (ICAE), The SDG Academy and The International Association of Universities (IAU), L'Agence universitaire de la Francophonie (AUF) & The Association of Commonwealth Universities (ACU). Discussions were on ways to 'translate' the SDGs efficiently into universities and learning institutions' teaching, learning and research practices and strategies and, how and what to teach about the SDGs and undertake international research to engage with the SDGs to have a (long-term) positive effect on sustainability and society. Again, through the courtesy of IAU, the University of Tsukuba was also represented by Prof. Muneo Kaigo at a workshop on March 11, 2021, as

part of Horizons Europe Programme organized with Israeli National Council of Higher Education (CHE) to further spread the ideas in having higher education participate in engaging with Agenda 2030.

Regarding domestic activities, the University of Tsukuba has remained active and proceeded with having a virtual Tsukuba Global Science Week in 2020. Profs. Hidehiro Yamamoto and Muneo Kaigo organized a digital poster session titled “The Opportunities and Challenges for ICR in Building a Sustainable Society” with participants from Tsukuba and also other universities such as Ochanomizu University, where Prof. Naoko Oki presented her research titled “How Women are Represented in Local Assemblies in Japan: After the Enactment of the Law Aiming for Gender Equality in Politics.” From the University of Tsukuba, Prof. Sae Okura presented “Changes in the Representation of People with Disabilities in the Japanese Diet: Democracy with(out) People with Disabilities.” Ms. Yuka Omoya presented her research “Ethnic Diversity Tolerance within Japanese Social Media” and Ms. Yuka Sasaki presented “Heritage Language Education in Germany: New Learning Objectives for the Second-Generation Migrants.” Prof. Hidehiro Yamamoto also continued forward with a successful online SDG seminar. As in the previous report, the SDG seminar series was initiated in 2019 and the 2<sup>nd</sup> report of the ICR SDGs Seminar Series in Japanese was published in March 2021.

The University of Tsukuba wishes to continue with its current activities and with the blessing from IAU, work with its new satellites in engaging with SDG10 and Agenda 2030.



## SDG 11: SUSTAINABLE CITIES AND COMMUNITIES

**Leading:** Siam University, Bangkok, Thailand (10 Million population)

<https://siam.edu>



### Satellites in Subcluster:

- J.F. Oberlin University, Tokyo, Japan (14 Million)
- Tokai University, Tokyo, Japan (14 Million)
- University of Surabaya (UBAYA), Indonesia (2.87 Million)
- Durban University of Technology (DUT), Durban, South Africa (3 Million)
- American International University Bangladesh (AIUB), Dhaka, Bangladesh (21 Million)
- Mykolas Romeris University, Vilnius and Kansas, Lithuania (2.7 Million)
- Asian Institute of Technology (AIT), Pathumthani, Thailand (1.164 Million)

### 1. Summary of the activities

We had the third meeting and the first online meeting on September 17, 2021, having one new member of the cluster: “Asian Institute of Technology” in Pathumthani, Thailand

All the members agree on the following future activities:

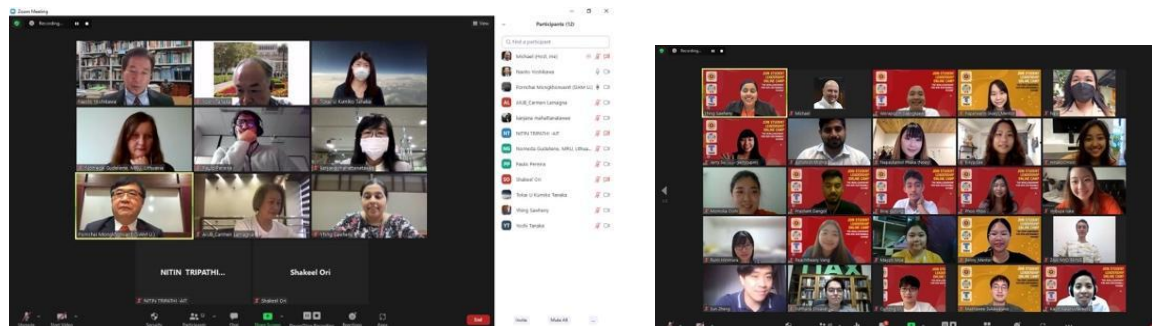
- Create “LINE” chat group of the members to facilitate the communication
- Followed the success of Siam-Tokai-SEAMEO Student leadership for sustainability, it has been agreed that we will encourage to organized future students’ leadership virtual camp in the form of bilateral and multilateral institutions to foster relationship within the student and staff of the institutions within the cluster.
- The cluster will have joint activities focusing on the post-COVID activities which may include Digital Transformation of the institution and promotion of less emission vehicles.
- The Cluster agree to promote the ideas of universities as the Living Lab for the sustainable Cities and Communities Developing new projects and activities to solve the pain points of the stakeholders related to SDG11 with the collaboration of the communities and authority.

The following theme will be implemented by each institution as the following:

- **Siam University “Using the Campus as the Living Lab for Sustainable Cities and Communities”** with the following activities:
  1. Digitalization of the local Traditional Market (Talad Latmayom)

2. Promoting the use of Canal Transport by low or zero emission boat toward Venice of the Orient.
  3. Transform Aging House into exciting small sustainable town of various activities for the elderly.
  4. Design and Develop the Automatic Waste Sorting Bin using solar power.
  5. Running vaccination Center with BMA network and with over 100,000 vaccinations to date and various relive measures for COVID-19.
  6. Using Living Lab for Sustainability and Design Thinking to transform Learning teaching and innovating ecosystem of the campus, communities, cities, and region.
- **Tokai University “Development of Sustainable City for New Demographic Generation”** – Kanagawa Wellness Corridor
  - **AIT and AIUB “Integration of SDGs into Teaching, Learning and Research”** with existing programs and develop some new Graduate Programs
  - **J.F. Oberlin University “Promoting Safety and Clean Energy in the Campus and neighbouring environment in the city centre”** Also develop and promote Disaster Prevention Volunteer.
  - **Durban University of Technology “Breaking the Implicit and Explicit City Walls for Sustainable Happiness and Well-being”** Blending the Community commitment, governmental attention, and infrastructural support.
  - **Mykolas Romeris University “Digitalization and Mobile Application promoting Sustainability in the City”** Promoting environmental behaviour by developing, implementing, and testing innovative intervention program for young people along with economic as an element to promote Sustainability behaviour.
  - **University of Surabaya “Promoting Community Wellbeing through Social Entrepreneurship”** Several Program to generate income from Eco-tourism and eco-food product using social entrepreneurship and micro-finance to provide job opportunities.

The details activities of each institution appear in the attached documents.



1. (2)



(3)



(4)



(5)

**Fig. 1** IAU HESD Satellite Universities SDG 11 cluster meeting with total all 8 Universities joining this meeting hosted by Siam University to follow up the projects from 2020-2021; **Fig. 2** Successful Virtual Student Leadership camp to promote SDG co-hosted by Siam, Tokai and SEAMEO ; **Fig. 3,4,5** Experimenting the bio-degradable food container equipment at Latmayom market; Promoting the use of canal transportation by Zero Emission boat in Bangkok.

## SDG 12: RESPONSIBLE CONSUMPTION AND PRODUCTION



**Leading:** University of Regina and Luther College, Canada

**Satellites in Subcluster:**

- **University Sains Malaysia**
- **Moi University**
- **University of Vechta**
- **Pontifical Catholic**
- **University of Peru El Bosque University**

In this report we highlight how SDG12 along with related SDGs are being integrated into our universities through institutional strategy, projects implemented and collaborations.

### 1. University of Regina and Luther College (SDG12 Co-Lead Institutions)

The Cluster meets regularly to share what each campus is doing on SDG12 along with resources and opportunities. We have expanded our consumption and production discussions to include COVID-19 impacts including issues of medical waste, food insecurity (with disruption of trade) and the need for greater campus self-sufficiency in production and consumption. We intend to build these into our next SDG12 conference. We are now examining how we might link specific offices at our universities (e.g., offices dealing with procurement policies) as we see tremendous possibility in linking our universities as whole institutions to each other at various levels around SDG12.

This year's UN *High Level Political Forum* focused on SDG12 (among other SDGs). Our Cluster worked with the IAU as part of the "Future of Higher Education Webinar Series" to have a side event to the HLPF entitled: "Transformative Innovation and Collaboration for SDG12: Responsible Consumption and Production at Universities" in July 2021, and included presentations from the satellite universities. The event was well attended and was also recorded (<https://www.youtube.com/watch?v=fyj81ISREx0>). It included discussion of innovations being made within each of our universities around SDG12, the implementation of the SDGs in institutional strategy especially from a whole-institution perspective, and how each university was taking advantage of opportunities and transcending barriers they encountered.

In September 2021, the Cluster Co-Leads, Roger Petry and Jocelyn Crivea, submitted an article for *IAU Horizons* entitled "Leadership for Uncertain Times: Using the UN SDGs to Mobilize Shared Resources Across Universities". The article focuses on how the SDGs as shared causes across higher education institutions can be used to mobilize volunteers and implement sustainable development actions on campuses, especially under conditions of uncertainty that challenge traditional forms of planning. It then discusses the kind of supportive leadership that gradually builds the trust needed to mobilize volunteer contributions. Examples are drawn from the SDG12 Cluster and our experience in Canada. For example,

the University of Regina recently mobilized nine cross-cutting teams using the SDGs to develop key project ideas to be built into the newest *Sustainability Action Plan* that will be released in 2022.

## **2. University Sains Malaysia:**

University Sains Malaysia (USM) has conducted several SDG12 initiatives. These include an awareness campaign to increase understanding on SDG12 about waste management and recycling such as posters and a webinar series. As well, a Waste Carbonize Machine & Waste Composting Machine were developed as part of the sustainable waste management project. This project was a collaboration between the Centre for Global Sustainability Studies and the School of Mechanical Engineering. This machine will be used as a pilot project to monitor food waste on campus. Waste is a focus area for the Low Carbon Campus 2030 Challenge. The targets will be submitted to the Challenge in October 2021. As part of this initiative, USM has set targets and activities for waste management for the period 2015-2025. The full five-year plan is expected to be ready by November 2021. The plan will also include a waste management framework for USM. Additionally, since 2020, USM has started to track campus food waste from cafeterias and food outlets. This initiative expanded from the main campus to all campuses in 2021. USM collaborated with *Penang Green Council* (PGC) to develop instruments for the food waste. Together with PGC, we have also developed instruments to measure the type of waste produced by each department in USM. This serves as basic information for USM's waste management framework.

## **3. Moi University:**

Moi University has embedded aspects of SDG12 in its institutional strategic plan which has guided the working of the Centre of Excellence in Phytochemicals, Textile and Renewable Energy. In the last two years, the Centre developed a new curriculum in MSc in sustainable energy & energy access that focuses on a multidisciplinary approach to teaching and learning, strong industry networks and partnerships, entrepreneurial competencies, and community outreach and engagement which are key for sustainability. Ideally, the Centre is working in circularity and promoting eco-innovative processes, products, and organization. The Centre set up a large biogas digester at the University kitchen which is fed using kitchen waste. The bio slurry from the digester is used as manure to raise crops in the farm which is harvested and used in the kitchen. This biogas model has been disseminated to the community with the purpose of piloting it in high schools. The training of youth on biogas use will ensure that the future generation is aware of this sustainability option.

Moi has a textile factory for research, training, and business. The Centre has undertaken in-depth training on production of natural dyes from non-economic plants and crop wastes making it a more sustainable approach (since many chemicals used in the textile sector are petrochemical based and harmful). Other initiatives include natural soap making skill transfer to community members (especially important with COVID-19). Also, the University has started commercial apple fruit farming which is a sustainable environmental management strategy for climate change mitigation in the long run through carbon sequestering. This creates campus-wide awareness of how much carbon a green space can sequester to

offset other activities as well as valuing its green spaces.

#### **4. University of Vechta:**

Sustainable development (SD) is anchored in the structure of the university. Vectra has set up an ESD working group and appointed a sustainability officer. We have also established organizational units and partnerships (a science shop, a Centre Regional Learning; a member of RCE Oldenburger Münsterland etc.) that deal with the transfer of SD to the region.

First Sustainability report: All university fields of action are included in the sustainability report (teaching, research, knowledge transfer, campus operations); various campus actors from science, technology, administration and the student body are taken into account along with various sustainability dimensions - ecological, social, economic, cultural and political; all are considered in an integrated manner. The sustainability report will be published regularly.

- Numerous special activities have been carried out in the past year. These include:
  - (i) In the summer semester of 2021, a series of advanced training courses on education for sustainable development was offered to university employees for the fourth year in a row.
  - (ii) An ESD action week on nutrition and SDG12 was carried out. Teachers from various subjects specifically addressed the topic of (education for) SD in their regular courses and bringing them closer to their students. During *German Sustainability Action Days*, the University announced a theme week on sustainable nutrition on its new Instagram account. Part of the campaign was the daily posting of a self-tested recipe for dishes with seasonal, regional, and vegetarian/vegan ingredients.
  - (iii) Scientists for Future is a voluntary commitment to refrain from official short-haul flights of up to 1,000 km if the trip when alternative means of transport can be carried out in a maximum of 12 hours. The campaign is intended to put additional pressure on the state governments to adapt legal regulations for scientific business trips to climate-related issues.
  - (iv) The University is also one of the most recycled paper-friendly universities in Germany this year. By using recycled paper, Vechta makes an important contribution to protecting the climate and resources -- compared to fresh fiber paper, the production saves at least 60 percent water and energy and causes significantly fewer CO2 emissions. Last year the University was able to save more than 362,000 liters of water and over 74,000 kilowatt hours of energy.

#### **5. Pontifical Catholic University of Peru:**

Pontifical Catholic University of Peru (PUCP) is ranked 1<sup>st</sup> among Peruvian universities in terms of promoting and complying with the UN SDGs, especially SDGs 6, 7 and 13. SDG12 is promoted through the

elimination of single-use plastic in campus meal courts and waste separation stations throughout its premises. PUCP supports the government, through policy support in the inclusion of sustainable indicators in green public procurement. Other SDG activities at PUCP include an increased use of Agenda 2030 and the SDGs in institutional strategies, especially in terms of supporting the needs of the nation.

Some recent actions include:

- (i) SDG12 – Support for single-use plastics legislation and trying to apply small scale sustainable consumption and production policies for the university and to generate hubs at the district and city levels.
- (ii) SDG4 – Support for virtualization of public higher education and primary/secondary schools in the context of COVID-19. SDG6 – Clean water and sanitation and affordable and clean energy are highly linked to the social responsibility actions that have been promoted by the University in the last decade through research and innovation projects. SDG7 - Ensuring access to affordable, reliable, sustainable and modern energy for all is being promoted especially by GRUPO, a research group that has been carrying out development projects in favor of peasant communities, related to applied scientific research, technology transfer and innovation, dissemination and promotion of appropriate technologies and environmental conservation activities. SDG13 Climate Action - Influencing governance and policy support.

## **6. El Bosque University:**

El Bosque University (EBU) is working on different SDG12 processes related to (1) courses; (2) research; and (3) networking.

- (i) EBU has advanced elective courses on the circular economy offered by the Faculty of Engineering. Also, an open course on SDGs was generated in which more than 2,000 people participated in the last year. Finally, we are currently conducting a virtual course with UI Greenmetrics on the SDGs, with the participation of 7 universities globally, 15 professors and 70 students, which will end in December 2021.
- (ii) EBU has advanced undergraduate and postgraduate research on carbon footprints and water footprints, in association with the Pulp, Paper and Cardboard sector of Colombia. Regarding communication, we have advanced, in association with different organizations, a series of webinars on Life Cycle Analysis and Circular Economy (Autumn 2021). We also participate in the UN Environment Green Nudges campaign, and, together with our project “En Modo Acción”, a series of campaigns through social networks to promote sustainable lifestyles and education, focused on the care and use of water.
- (iii) EBU continues to support different networks on SCP, such as RCE Bogota, Colombian Environmental Training Network and the UNESCO Chair on ESL, as well as the Colombian Association for Life Cycle Analysis and the Ibero-American Life Cycle Network.

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About the SDG12 Cluster:

The SDG #12 Cluster is composed of six satellite partner universities and two informal and theme-based affiliated institutions. The Cluster meets virtually approximately every two months with the University of Regina and Luther College acting as secretariat. The Cluster has helped organize two international conferences including one panel as well as one webinar since the Cluster was established in 2018.

**Informal and Theme-based Affiliated Institutions:**

Nalanda University (India): Sapna Narula



## SDG 13: CLIMATE ACTION

Lead: **The University of West Indies (UWI), Caribbean**

<http://www.uwi.edu/>



### Satellites in Subcluster:

- SUNY, USA
- University of Bergen, Norway
- TERI School of Advances Studies, India
- University of the South Pacific, Fiji
- University of Waterloo, Canada
- Universidad de los Andes, Colombia
- University of Witwatersrand, South Africa
- University of Aruba, Aruba
- University of Bristol, UK
- University of Ghana, Ghana



Within the framework of the *International Association of Universities' (IAU) Global Cluster on Higher Education and Research for Sustainable Development*, The University of the West Indies (UWI) was nominated in 2018 to lead the Global University Consortium on SDG-13 (GUC) and has brought together 10 universities from across 5 geographic regions, committed to deepening the role of academia in the 2030 Sustainable Development Agenda.

Focused on Climate Action and its interlinkages across the SDGs, the GUC in its second year (2020-2021) has worked to continue advancing knowledge exchange, research collaborations, advocacy, South-South and triangular cooperation.

2020 was however a year of unprecedented challenges and unpredictability in higher education management and delivery, as a result of the covid-19 pandemic. Despite the setbacks, discussions recommenced with periodic updates and virtual collaborations among GUC Members.

For 2020 – 2021, outputs of the GUC have thus far included:

- Maintenance of an online platform **universitiesforclimateaction.org** to facilitate collaboration, knowledge sharing and public awareness of SDG 13 with members of the Global University Consortium.
- Organizing periodic meetings with members of the Global University Consortium (GUC).
- Assigning a dedicated staff member to provide support for cluster management and updates to the portal.
- UWI participation in Solve Climate by 2030 Global Webinar focusing on Climate Change in collaboration with Universidad de los Andes, highlighting the challenges faced by Caribbean SIDS. Conceptualized by Bard College, this initiative was led by Universidad de Los Andes (**GUC member**) representing the Latin America and Caribbean Region.
- UWI participation in an HLPF panel discussion on July 6, 2021 entitled ***Partnering to educate the ocean science leaders of the future*** in collaboration with the University of Bergen.
- Participation in the Sanord Conference panel organized by IAU and Bergen with a presentation on the topic of '***Global Partnerships for the SDGs: The UWI Perspective***'.
- Collaborations with University of Bergen to plan the visit of the **One Ocean Expedition** to Kingston Jamaica (Nov 13-17, 2021) with tours of the Statsraad Lehmkuhl, student presentations, public education activities, joint teaching for the One Ocean online training course and a Knowledge Exchange Forum organized by the UWI Mona Campus.
- The UWI was invited by University of New South Wales to become a member of the International Universities Climate Alliance, which includes 48 climate research universities across 21 countries. This will allow for increased access to information on the work programme of other consortia, greater synergies, networking and research collaborations on climate action, which will be shared with GUC members via the knowledge management portal.

Looking ahead to 2021-2022, the Global University Consortium will continue to expand its workplan activities, to communicate the very interesting and important initiatives being executed by GUC members and to explore new collaboration opportunities between GUC members. Despite the setbacks being experienced as a result of the pandemic, the Global University Consortium remains committed to working with member universities, multilateral development agencies, civil society as well as the public and private sector to promote and strengthen the role of academia in advancing the 2030 sustainable development agenda.

For more info, visit [the page](#)

## SDG 14: LIFE BELOW WATER

**Lead:** University of Bergen, Norway <https://www.uib.no/>



### Satellites in Subcluster:

- The University of the South Pacific, Fiji
- University of Cape Town, South Africa
- The University of Tokyo, Japan
- Christian-Albrechts-Universität zu Kiel, Germany
- The University of the West Indies, Jamaica

### SDG14 activities 2021 from University of Bergen

The University of Bergen (UiB) has [signed a Memorandum of Understanding \(MoU\)](#) with its long-term partners at the University of the West Indies (UWI). The signing coincided with the tall ship Statsraad Lehmkuhl's visit to Kingston, Jamaica. The tall ship is currently on a circumnavigation of Earth – the [One Ocean Expedition](#), which is part of the United Nations Decade of Ocean Science for Sustainable Development.

In fall 2021 the 5 ECTS course named 'Climate Action field course: causes, consequences and solutions to the climate challenge' ([SDG313](#)) took place on board [sailing vessel Statsraad Lehmkuhl](#) during the [One Ocean Expedition](#). The course recruited a highly interdisciplinary student group with individual differences of opinions and actions, cultural and social backgrounds and aims to train negotiating across these differences. All students were sailing trainees and enrolled in the daily routines of the crew and played an active role on board. The students were on duty 2 x 4 hours per day, also during the night under supervision of the crew (in addition to time spent on the course activities). When on duty, the tasks included e.g. trimming sails, manning the helm, look out, fire watch - see video [here](#). An important research activity was to recreate the measures of ocean temperature made by the Challenger expedition in 1870ies with the same old equipment used at that time.

The third Ocean Sustainability Bergen Conference took place Thursday 21 October: **Climate change, the ocean and its people: Unprecedented challenges, workable solutions and a sustainable future.** This conference offers a platform for students, researchers, and practitioners from around the world to come together and discuss threats facing our ocean and explore innovative and practical solutions to combat these threats. The conference also serves to promote knowledge and activities related to the Sustainable Development Goals (SDGs), in particular the work of the University of Bergen and other universities in Norway and around the world. This year, the OSB Conference highlighted one of the largest, and most complex, threats facing our ocean today: climate change.

Also, UiB organized the fourth SDG Conference Bergen *The SDGs after the crisis* in February. Due to the pandemic situation, the conference was virtual with more than 2,600 participants from 105 countries, turning this former national conference into a global experience. Norway's Minister of Foreign Affairs Ine Eriksen Søreide opened the conference, followed by several keynotes and greetings from the UN. [The program](#) lasted over three days, with a series of parallel sessions on Day Zero, followed by two days filled with keynotes, contributed talks and discussions on a wide range of SDG-relevant themes.

UiB also contributed to a Norwegian translation of the Blue Paper #2– The Expected Impacts of Climate Change on the Ocean Economy from the High Level Panel for a sustainable ocean economy, which is published [here](#).

As part of its global leadership role on Sustainable Development Goal 14 (SDG14), the University of Bergen (UiB) also hosted [one of the Intergovernmental Oceanographic Commission \(IOC\) courses](#) in the OceanTeacher Global Academy (OTGA). UiB's OTGA contribution took place as part of the [Bergen Summer Research School](#) (BSRS), where a group of educators led by Associate Professor [Katja Enberg](#) provided an SDG14 course **Sustainable development of life below water** within the overall theme *Science and Society towards the SDGs*.

Western Norway University of Applied Sciences (HVL) and University of Bergen (UiB) hosted [the 13th annual SANORD conference](#), 7-10 September 2021, fully digitally from Bergen. The conference focused on how we as SANORD partners can use and strengthen our partnerships to meet the needs of the UN 2030 agenda. This was a meeting place for trans-disciplinary exchange of ideas and research for scholars and institutions in our respective regions - [with an extensive program over three days](#). As part of IAU and HESD's engagement of higher education for Agenda 2030 and the ocean decade, UiB has contributed a collection of papers in the report **HIGHER EDUCATION AND SDG 14: Integrating Ocean Research for the Global Goals**. The 11 papers in the publication highlight research and higher education examples of activities and best practices of how universities contribute to SDG14. In this publication we cover a broad range of topics ranging from successful ship-based education programmes in South Africa, the status of implementing SDG 14 in the Netherlands, understanding the SDGs through social-ecological lenses, moving from policy to action on the SDGs, and advancing marine education to prepare future ocean leaders. It is our wish that this publication will motivate other universities and researchers to take action to transform the world for the better through research and higher education.

Professor Lise Øvreås from SDG Bergen was [one of five panellists in a COP26 side event](#) discussing how marine ecosystem-based systems and technology can contribute to ocean health - [Carbon conservation and sequestration in ocean: nature-based and technology solutions](#). Here she gave a talk on the topic *Education and research: "Higher education and integrated ocean research for sustainable nature based solutions"*.

Finally, UiB is now recruiting the first batch with [18 postdoctoral research fellows](#) in the project

[Shaping European Research Leaders for Marine Sustainability \(SEAS\)](#). SEAS is a career and mobility fellowship programme for 37 postdoctoral research fellows within marine sustainability. This project has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement. Marine and coastal areas face multifaceted challenges, threatening biodiversity and humanity on a global scale. To have an impact on marine sustainability, there is an urgent need to integrate perspectives and insights from a diverse range of fields and sectors. The University of Bergen's SEAS program brings together a variety of aspects of marine sustainability, involving all 7 UiB faculties, and many academic and non-academic partners. The SEAS project is a large contribution from UiB to SDG14 and Agenda 2030.

## SDG 15: LIFE ON LAND (TO BE ADDED)

**Lead:** University of Costa Rica



## SDG 16: PEACE, JUSTICE & STRONG INSTITUTIONS

**LEAD:** University of Nairobi, Kenya

**Satellites in Subcluster:**

- *University of Copenhagen, Denmark*
- *James Madison University, USA*
- *University of Tokyo, Japan*



SDG 16: The University of Nairobi, through Wangari Maathai Institute of Peace and Environmental Studies (WMI) the SDG 16 on peace, Justice and strong institution is working on different initiatives to enhance the work of SDG 16 within the SDG three broad categories of Peace, Just and Inclusive societies, which covers among others reducing violence, effective and transparent institutions, ensure responsive, participatory decision making, strengthen institutions through cooperation, promote non- discriminatory laws and policies for sustainable communities and conflict prevention.

WMI also organized and hosted a 5-day workshop with the University of Copenhagen (February 10-14th 2020) on peace building through mediation between Kenya forest service and forest adjacent community (community forest associations) at University of Nairobi, Wangari Maathai Institute Peace labs (<https://wmi.uonbi.ac.ke/index.php/latest-news/mediation-training-workshop-wangari-maathai-institute>). To advance the legacy and works of Nobel Laureate Prof Wangari Maathai WMI together with Green Belt movement organized two events to celebrate Wangari Maathai Day on 3rd March 2020. One in capital city of Nairobi as public event and one with a primary school. <https://wmi.uonbi.ac.ke/index.php/news>). Africa Environment Day, celebrated annually on 3 March, was established by the Organization of African Unity in 2002 as a way of raising awareness of the pressing environmental challenges facing the continent. Since 2012, the Africa Environment Day has been celebrated in conjunction with Wangari Maathai Day, in order to pay tribute to the late Nobel Laureate's green legacy. WMI also works with schools, to support teaching for finding peaceful ways to resolve conflict, an event has been planned for 20th March but this has put on hold cancelled due to COVID-19 and will be reviewed in the course of the year. On cooperation and promotion of global citizenship

WMI participated in building events to Earth day celebration on 16th April 2020 as way of promoting sustainable and peaceful co-existence, which was done as webinar together with Earth Africa, Earth USA and Greenbelt. This is in addition to participating in Earth day online activities, which was occasioned by COVID-19 lockdown development that restricted field activities. The cluster continues to work closely with Green Belt movement in promoting cultures of peace and good governance including advocating for citizen participation in decision making. WMI as way of promoting cultures of peace, cultivate positive

ethics and promote holistic sustainable development trains change agent through masters and doctoral programme on environmental governance.

In 1-4 December 2020, I participated in Education for Justice (E4J) Global Dialogue Series [Higher Education's Role in Preventing Environmental Crime by Promoting SDG 16]. <https://www.unodc.org/e4j/en/about-e4j/global-dialogue-series-2020/day-4/univ--of-kenya---higher-educations-role-in-preventing-environmental-crime.html>

In 20th April, 2021 I facilitated a session and gave lecture on sustainable Agriculture and In 17th- 20th February 2021 I participated and gave talk during Session 6e. Environmental Movement, Peace Building and Society Justice [Anthropo-centrism to Eco-centrism, A necessary journey in Kenya], 11th Annual African, African American, and Diaspora Studies (AAAD) Interdisciplinary Conference 2021 Schedule of Events, James Madison University, Harrisonburg, VAUSA. <http://sites.lib.jmu.edu/aaadjmu/portals>

Circular Economy. Nexus of unexploited agricultural system and potential of sustainable environment management. A way of peaceful co-existence. An on-line co-lecture given by the University of Nairobi and the University of Milan.

In 2nd April, 2021. Earth Optimism Nairobi 2021, Tropical Biology Association <https://earthoptimismnairobi.org/programme> .: Research and Capacity Building; [Stories of Hope: Talks: Creating change agents] - 2nd April 2021- YouTube, <https://www.youtube.com/watch?v=I3q9mRKiqQ>

In 29 September to 1st October 2021 as way of strengthening institution in Forests and Climate Change Adaptation for Professional, Technical Training and Short Courses in African Forestry - Forests and Climate Change Mitigation, was part of Pan-African team in preparing training material organized by ICRAF

In 5-9 October, 2021. Grassroot Actions and Transdisciplinary Necessitate to Sustainable Agriculture and Rural Development. Workshop theme : Improving the Productivity and Resilience of Smallholder Farming in East Africa". Gave a lecture on GBM work in strengthening grassroot institutions in management of natural resources

In 29th August to 11th September 2021, I participated and facilitated a session in Nairobi Summer School On Climate Justice Programme Theme: Sustaining Momentum On Climate Action In The Era Pandemic. Session The history of international environmental policy (Stockholm, Johannesburg and Rio Summits) and lessons from the summits and negotiations under UNFCCC.

January and March 2021 working as member of technical committee on strengthening Kenya Forests Working group position on working with stakeholders to lobby and advocate towards improve forest governance that would poster peace