# GLOBAL INFORMATION SOCIETY WATCH 2020

*Technology, the environment and a sustainable world: Responses from the global South*

Global Information Society Watch 2020
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**Operational team**
Valeria Betancourt (APC)
Alan Finlay (APC)
Maja Romano (APC)

**Project coordination team**
Valeria Betancourt (APC)
Cathy Chen (APC)
Flavia Fascendini (APC)
Alan Finlay (APC)
Leila Nachawati (APC)
Lori Nordstrom (APC)
Maja Romano (APC)

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Joan Carling (Indigenous Peoples Rights International)

**Project coordinator**
Maja Romano (APC)

**Editor**
Alan Finlay (APC)

**Assistant editor and proofreading**
Lori Nordstrom (APC)

**Publication production support**
Cathy Chen (APC)

**Graphic design**
Monocromo

**Cover illustration**
Matías Bervejillo
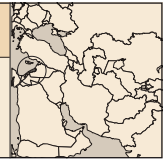
**The American University of Beirut Nature Conservation
Center**
Connor Kanso, Celine Al Nemer, Rahaf Aboul Hassan and
Najat Saliba
www.aub.edu.lb/natureconservation

## Introduction

Public awareness of sustainable development has
been around for decades. However, university educa-
tion, skills training and businesses in Lebanon have
yet to adapt to the enormous challenge of integrating
environmental responsibility into our politics, societies
and economies. Education for sustainable develop-
ment has an important role to play in changing this
discourse. Given this potential, the American Univer-
sity of Beirut Nature Conservation Center (AUB-NCC)
created International Biodiversity Day at AUB (IBDAA),[1]
an annual multidisciplinary national environmental
poster forum and competition, which challenges stu-
dents to address a different Sustainable Development
Goal (SDG)[2] from the perspectives of applied research,
product design, artistic design, business and policy.
While the event is described as a "poster forum", the
posters developed by the students are really the medi-
um for kickstarting debates and discussions about the
issues being raised, encouraging participants to look
at a particular topic from a different angle, in an innova-
tive way, and with fresh eyes. A number of the ideas are
also tested and developed by the students, providing
concrete proof-of-concept models for sustainability.

This highly anticipated event, which holds a
unique opportunity for students across Lebanon,
came under threat of cancellation due to the COVID-19
pandemic. Because of this, the organising committee
moved the event online, using an open-source meet-
ing space that allowed multiple virtual interactions,
including streaming and breakaway rooms. This
report discusses the challenges and benefits of hold-
ing the virtual event, and what it could ultimately
mean for the future of IBDAA. The AUB-NCC is con-
tinuing to expand IBDAA, through the use of informa-
tion and communications technology (ICT) as a means
of building advocacy networks, advancing education

for sustainable development, and reducing barriers
to participation, in the belief that students have a
great capacity and willingness to effect change.

## Background

The AUB-NCC is a transdisciplinary academic re-
search centre addressing the region's most pressing
environmental concerns. Out of this mission AUB-NCC
formed IBDAA, which in Arabic means "to create".
Each year IBDAA highlights one or more of the UN's
SDGs, asking students to interpret the theme from a
multidisciplinary perspective, and to produce a post-
er and, where possible, a proof-of-concept model,
to encourage novel discussions about an SDG. The
student's posters are then adjudicated by a panel of
expert judges from different fields to determine the
winning teams, which receive prizes or mentorships
that encourage them to further develop their concept.

An exceptional factor about IBDAA is its multi-
disciplinary approach in addressing the SDGs. The
participating professors and students come from
schools of liberal arts, business, communication and
public health, among others, and students from var-
ious disciplines make up the organising committee.
The multidisciplinary approach allows students to
see problems and issues from different perspectives,
and to learn outside of their respective majors. For
example, many poster projects from the school of
engineering have used references and sources from
majors such as agriculture and public health.

IBDAA first began in 2006 with one chemistry
class from AUB and steadily grew to encompass
multiple disciplines from 10 universities. Over 400
undergraduate students from across the Greater
Beirut area participate in the event – including in the
organising committee. This success of IBDAA would
not have been possible without the enthusiasm of the
students, who are offered an opportunity to co-create
real-world sustainable solutions that offer on-the-
ground impacts, a space to share their opinions, and
to interact with people from diverse career back-
grounds. The work of the student teams is judged by
a diverse panel of jurors and experts in their fields.

Part of the students' excitement stems from the
fact that the government has fallen short in address-
ing many basic service and environmental concerns
in Lebanon. The country's citizens experience an

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1    https://www.aub.edu.lb/natureconservation/Pages/ibdaa.aspx

2    https://www.un.org/sustainabledevelopment/
     sustainable-development-goals

under-supply of electricity, poor solid waste management, untreated sewage, and high rates of air pollution, to name a few. In October 2019, the culmination of decades of government mismanagement led to a popular civil uprising, where socioeconomic, political and environmental justice demands were expressed. Many of these demands were calls for sustainable development, which has heightened the students' interest in finding real-world solutions that are relevant and beneficial to the local population.

IBDAA's value lies in the networks it has built since its inception in 2006. Every year, the network of students, professors, jurors and universities grows. This has empowered the student participants to act as agents of change in their communities, and provides them with future networking opportunities needed to apply their studies in the field of sustainable development regionally and globally.

The COVID-19 pandemic has worsened the socioeconomic and environmental situation in Lebanon. Public discussions on the spread of the virus focused on the impact of climate change and the rampant spread of urbanisation into wild areas, and while these were issues directly related to our work, the virus also meant that we could not host a face-to-face event at such a crucial time.

Because of this, the organising committee undertook the challenge of holding the event online. This increased the enthusiasm of participating students and jurors, who were witnessing a new era for IBDAA, and were excited about the many benefits of running a virtual poster forum.

## The challenges and benefits of taking IBDAA online

The sudden switch to a virtual event allowed the organising committee to explore how the internet can improve the planning and facilitation of the event, as well as student participation. We found that the virtual event lowered financial, spatial, personal and practical barriers to participation and facilitation. But challenges remained.

Every year, finding an event space to hold upwards of 400 students, professors, judges and guests proves difficult. We experienced a similar challenge when trying to find a suitable virtual platform for the event. While many of the platforms were proprietary, and expensive, we were able to find a free and open-access platform developed by MIT called "Unhangout".[3] Unhangout provided many of the requirements needed for the dynamic interactive space that IBDAA seeks to create.

The virtual space did come with technical difficulties, including glitches in the live video streaming of our guest speakers, a cap of 10 participants per breakout room, and a limit of 100 users on the event page. The low bandwidth of some participants was also a problem. Nevertheless, operating on a limited budget, we found that virtual events provide a viable and cost-effective solution to the financial barriers of planning.

The architecture of the virtual space can influence learning and interaction.[4] Physical event spaces produce in the participants the "feeling of belonging to a community".[5] However, the platform allowed for an "e-lobby" space where participants were able to ask questions and communicate directly with the entire participant body. Students were also able to present their projects through synchronous video and text exchanges to their judges in the breakout rooms, which were open for others to "visit" if they were interested.

The virtual event allowed more universities that were far from Beirut to participate. This has been a problem in the past, where more than a third of the professors were from universities outside the Greater Beirut area and were not able to participate.[6]

There are also personal and practical barriers that can affect an individual's participation in a physical academic event, including disability, sexual identity, gender, and even race and religion.[7] The use of a virtual space can address these barriers through increasing the event's accessibility for people with disabilities, or others who may feel excluded, while the choice of text over video or in-person exchanges has the potential to offset the prejudices that judges or other participants might have. The time required to travel to and attend a physical event can also discourage participation. We found that this year's virtual event took significantly less time compared to previous years.

It is important to note that despite these benefits, not everyone has the technical literacy or access to technology to participate. At the same time, although the virtual event had its advantages, it limited the access to physical resources like labs and the tools the students needed, and the ability to conduct experimental tests. Many of the projects set for

3   https://unhangout.media.mit.edu

4   Sá, M. J., Ferreira, C. M., & Serpa, S. (2019). Virtual and Face-To-Face Academic Conferences: Comparison and Potentials. *Journal of Educational and Social Research, 9*(2), 35-47. https://dx.doi.org/10.2478/jesr-2019-0011

5   Mair, J., Lockstone-Binney, L., & Whitelaw, P. A. (2018). The motives and barriers of association conference attendance: Evidence from an Australasian tourism and hospitality academic conference. *Journal of Hospitality and Tourism Management, 34*, 58-65. https://doi.org/10.1016/j.jhtm.2017.11.004

6   Globe. (2011, 18 June). List of Universities in Lebanon. *Globe.* https://www.globetoday.net/index.php/universities/universities-in-lebanon?limitstart=0

7   Sá, M. J., Ferreira, C. M., & Serpa, S. (2019). Op. cit.

product development had to be re-categorised as concept development projects, and conveyed through visual representations without their physical implementation and building.

Despite this, in 2020, jurors came from various backgrounds ranging from academia to business to media. Prominent public personalities also participated, such as one of our guest speakers, Omar Itani, creator of FabricAID, a socially and environmentally conscious clothing brand, and the 2019 winner of "UN Young Champion of the Earth".[8] They were able to join despite their physical and demographic distance from AUB thanks to the use of the internet. In fact, five experts were able to judge the participants by joining IBDAA from abroad – from France, Switzerland, the United Kingdom, Hungary and the United Arab Emirates. This was not possible in previous years.

The committee connected with three sponsors this year: Global Youth Biodiversity Network[9] (a civil society organisation), Antwork[10] and the Darwazah Center.[11] These entities were key players in helping to shape the students' ideas about sustainable development. For instance, Antwork provided free online co-working spaces to work in and access to the resources in their offices such as computers, software, three-dimensional printers and a social network of young entrepreneurs for the selected teams to develop their ideas further.

Importantly, the virtual event has been the start of the event's international outreach. Besides the attendance of international guests and students, the University of Paris has expressed an interest in collaborating in future virtual events.

## Conclusion

Education for sustainable development is integral to achieving many of the UN's SDGs. However, education alone cannot support this development. As stated by UNESCO's Global Education Monitoring (GEM) Report 2017-2018, today's level of education for sustainable development is insufficient for meeting the 2030 Agenda for a sustainable future.[12]

Higher education academic conferences can be a privileged space of knowledge exchange and learning. However, through IBDAA's mission of advancing sustainable development goals, the committee is growing the event in an increasingly democratic way,

making it accessible to more people and reaching outside of the confines of academia. This year's virtual event has shown that the internet can play an integral role in this mission. It can improve sustainable development through advancing education for sustainable development, building stronger networks, and reducing barriers to participation and facilitation.

IBDAA's aim is to give all individuals the right to free and meaningful participation. This year's virtual transition proved that with the use of the internet, this goal can be achieved nationally and regionally. Moving forward, the organising committee has decided to take a hybrid approach to planning future IBDAA events. The 2021 event will aim to include both a physical and virtual component to ensure the participation of international universities, students, jurors and visitors.

The internet will define our immediate and long-term future due to the surge of worldwide COVID-19 cases, and the power it has for changing economic and social modes of behaviour and mobilising climate change action. But while it has been an important tool during the pandemic, and in our case opened the door for wider interaction with local and international peers, it also increases the gap between advantaged and disadvantaged people who may not have access to technology or know how to use it, or may be excluded from ICT infrastructure entirely. In line with the UN goal of "leave no one behind", internet accessibility must be addressed by those with decision-making power, including state actors and major broadband providers.

## Action steps

The following action is necessary in Lebanon:

- Extend ICT infrastructure to all areas of the country. State actors in Lebanon must ensure that all urban and rural areas have access to affordable internet.

- Build advocacy networks, by connecting civil society organisations with others working towards achieving the same sustainable development goals.

- Encourage students to connect with private businesses, startups and incubation centres to find solutions that address both the economic and environmental crises.

- Institutionalise and incorporate education for sustainable development into the philosophy of all educational institutions and encourage professors and students to participate in growing the education for sustainable development agenda.

- Encourage innovation in the development of free virtual platforms for education and collaborative learning.

8    https://www.youtube.com/watch?v=GXIID8iLt6o&feature=emb_title

9    https://www.gybn.org

10   https://www.antwork.com

11   https://www.aub.edu.lb/osb/research/Darwazah

12   Colas-Bravo, P. (Ed.) (2018). *ICT in Education and Sustainable Futures.* MDPI. https://www.mdpi.com/journal/sustainability/special_issues/ICTESF?view=default&listby=date

# *Technology, the environment and a sustainable world: Responses from the global South*

The world is facing an unprecedented climate and environmental emergency. Scientists have identified human activity as primarily responsible for the climate crisis, which together with rampant environmental pollution, and the unbridled activities of the extractive and agricultural industries, pose a direct threat to the sustainability of life on this planet.

This edition of Global Information Society Watch (GISWatch) seeks to understand the constructive role that technology can play in confronting the crises. It disrupts the normative understanding of technology being an easy panacea to the planet's environmental challenges and suggests that a nuanced and contextual use of technology is necessary for real sustainability to be achieved. A series of thematic reports frame different aspects of the relationship between digital technology and environmental sustainability from a human rights and social justice perspective, while 46 country and regional reports explore the diverse frontiers where technology meets the needs of both the environment and communities, and where technology itself becomes a challenge to a sustainable future.

APC

Sida