

**United Nations University**  
Institute for the Advanced Study of Sustainability

**2018 Annual Report**



UNITED NATIONS  
UNIVERSITY  
UNU-IAS

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UNU is committed to the ideals and practices of environmental sustainability, and is an ISO140001 certified institution.

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## United Nations University

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**THE GLOBAL GOALS**  
For Sustainable Development

## Director's Message



Throughout 2018 UNU-IAS continued to develop interdisciplinary scientific knowledge and inform policy-making for global sustainability. The institute's research, policy development, and capacity building activities advanced implementation of the 2030 Agenda for Sustainable Development, the Paris Agreement on climate change, the Convention on Biological Diversity (CBD), and the Sendai Framework for Disaster Risk Reduction (DRR), among others.

UNU-IAS research on governance for the Sustainable Development Goals (SDGs) contributed to global policy dialogue including the 2018 High-Level Political Forum on Sustainable Development (HLPF) in New York. These policy inputs included guidelines to support Member States in implementing multi-stakeholder partnerships, jointly developed with the UN Economic and Social Commission for Asia and the Pacific (ESCAP). Our platforms for education and knowledge generation informed policy at the national, regional, and local levels, and strengthened capacity for the SDGs.

The institute continued to promote the sustainable use of biodiversity and ecosystems, supporting efforts to achieve the Aichi Biodiversity Targets by 2020 as well as the formulation of the Post-2020 Global Biodiversity Framework. UNU-IAS played an active role at the Fourteenth Conference of the Parties to the CBD in November (CBD COP 14; Sharm El Sheikh) and the Sixth Plenary of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) in March in Medellin.

UNU-IAS contributed to assessments of climate change impacts, including the IPCC Special Report on Global Warming of 1.5°C. Research was completed on low-carbon technology transfer to developing countries, and on food security in sub-Saharan Africa, with project findings disseminated through events and publications in leading journals. Workshops and public events with UNFCCC, UNISDR, and other partners developed linkages between the climate change, DRR, and sustainable development agendas.

The institute developed the next generation of policymakers and researchers through its postgraduate degree programmes. Seven master's students and two doctoral students graduated during the year, and in September we welcomed 12 new master's students and three new doctoral students.

### **Priorities for 2019**

UNU-IAS research and policy development will be focused on advancing the global effort to achieve the SDGs by 2030, considering synergies and trade-offs between the goals. The institute's Governance for Sustainable Development (GSD) project will engage in global policy dialogue on the 2030 Agenda, bringing insights from its work on localisation of the SDGs at the regional, national, and local levels. New research on Water for Sustainable Development (WSD) will inform progress on SDG 6 (clean water & sanitation) and other goals through improved management of water environments.

The institute's NCB programme will be actively engaged in the formulation of the Post-2020 Global Biodiversity Framework, working closely with the CBD Secretariat and other partners. UNU-IAS will continue to play a leading role in developing and promoting approaches for landscape and seascape management, drawing upon its global networks to generate and share knowledge. Our research and expertise will contribute to assessments of biodiversity and ecosystem services by IPBES, and we will further develop the concept of biocultural diversity.

UNU-IAS will formulate strategies for climate change adaptation and mitigation, as well as resilience building and disaster governance, while strengthening synergies with the SDGs. A particular focus will be interactions between social-ecological systems and resilience, developing ecosystem-based approaches to DRR and climate change adaptation (eco-DRR).

Through its work in these areas, UNU-IAS will further contribute to policymaking for the global goals and advance global sustainability. We will also be focused on translating the global agenda into effective action at the regional, national, and local levels.

I would like to take this opportunity to extend my appreciation to all of the friends, partners, and donors of UNU-IAS, as well as our staff, fellows, and students, for their support and commitment. Working together, I am sure that 2019 will be a year of further progress and success for UNU-IAS, as we focus on the exciting opportunities ahead.

### **Kazuhiko (Kazu) Takemoto**

Director, UNU-IAS

March 2019

# About UNU-IAS

The United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) is a leading research and teaching institute based in Tokyo, Japan. Its mission is to advance efforts towards a more sustainable future, through policy-oriented research and capacity development focused on sustainability. UNU-IAS serves the international community through valuable and innovative contributions to high-level policymaking and debates, addressing priority issues for the UN system.

The activities of the institute are in three thematic areas: sustainable societies, natural capital and biodiversity, and global change and resilience. UNU-IAS applies advanced research methodologies and innovative approaches to challenge conventional thinking and develop creative solutions to emerging issues of global concern in these areas. The institute's research, education, and training combine expertise from a wide range of areas related to sustainability, and engage a global network of scholars and partner institutions.

Through postgraduate teaching UNU-IAS produces the policymakers and researchers of tomorrow, who will be at the forefront of global efforts for sustainability. The institute offers master's and doctoral degrees, postdoctoral fellowships, and innovative short courses, in close collaboration with leading universities in Japan and other countries.

## Thematic Areas

### 1 Sustainable Societies

Exploring transformations through which societies can become more environmentally, socially, and economically sustainable

### 2 Natural Capital and Biodiversity

Promoting the sustainable use of biodiversity and ecosystems to secure their benefits for current and future generations

### 3 Global Change and Resilience

Developing approaches to address climate change, build community resilience, and reduce disaster risks

## An Institute of the United Nations University

UNU-IAS is an institute of the United Nations University (UNU) with a specific mandate to address sustainability issues. UNU is a global think tank and postgraduate teaching organisation comprising 14 institutes, located in 12 different countries.

## Organisation

UNU-IAS was inaugurated on 1 January 2014. The institute is based at the global headquarters of UNU in Tokyo, and also has an operating unit located in Kanazawa City in Ishikawa Prefecture, Japan (OUIK; see page 14). OUIK engages in research and policy development focusing on the sustainable use of biocultural diversity. It was established in April 2008 with support from the governments of Ishikawa Prefecture and Kanazawa City.

\* UNU-IAS was formed through the consolidation of two previous UNU institutes: the UNU Institute of Advanced Studies (based in Yokohama), and the UNU Institute for Sustainability and Peace (based in Tokyo). UNU-IAS builds on the strong foundations of these two previous institutes, and of more than 40 years of UNU academic work.

## Staffing

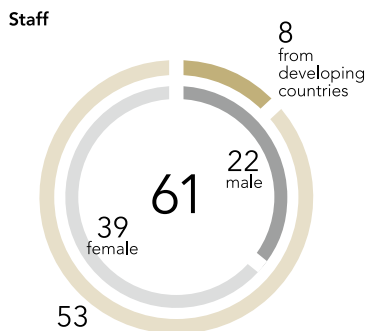
As of December 2018, UNU-IAS had a staff of 61. Of these, 8 were developing country nationals, and by gender the staff comprised 22 men and 39 women.

## Financing

UNU-IAS is financed entirely by voluntary contributions from governments, agencies, international organisations and other sources. A list of major financial contributors is provided on page 25.

## Board

The role of the UNU-IAS Board is to provide guidance on the strategic orientation of the institute and its academic and policy work, and ensure scientific excellence. The Board advises on management issues such as budgeting and staffing, and reviews the institute's activity reports, strategic plans and work programmes. The board meets once a year, with the 2018 meeting held on 11 October. A list of board members is provided on page 25.



# Highlights



## SUSTAINABLE DEVELOPMENT

### **The 2030 Agenda on Sustainable Development**

During 2018 UNU-IAS research and policy development supported implementation of the 2030 Agenda and efforts to achieve the Sustainable Development Goals (SDGs). The institute's Governance for Sustainable Development (GSD) project contributed to global policy dialogue through a side event at the 2018 High-Level Political Forum on Sustainable Development (HLPF) in New York, presenting guidelines for Member States to implement multi-stakeholder partnerships. Developed with the UN Economic and Social Commission for Asia and the Pacific (ESCAP), the guidelines were launched in March at the 5th Asia-Pacific Forum on Sustainable Development in Bangkok. New GSD research at the sub-national level was initiated to develop an integrated implementation methodology for the SDGs.

The institute's Education for Sustainable Development (ESD) project contributed to the development of the next global framework on ESD for the period 2020–2030, and organised conferences of the Regional Centres of Expertise on ESD (RCEs) network across the globe focused on harnessing education for the SDGs. Research on water-related risks and the SDGs was presented at the 8th World Water Forum in Brasilia, completing the UNU-IAS Water and Urban Initiative (WUI). The next phase of this research was launched, with the new project Water for Sustainable Development (WSD) focusing on efforts to achieve SDG 6 (clean water & sanitation) and other goals through improved management of water environments.

Publications included policy briefs on the Voluntary National Review process, engaging the higher education sector (No. 13), and gender mainstreaming in the SDGs (No. 15).

*Read more:*

*Governance for Sustainable Development* ► pg. 11

*Education for Sustainable Development* ► pg. 11

*Water for Sustainable Development* ► pg. 12

## **BIODIVERSITY AND ECOSYSTEMS**

### **The Convention on Biological Diversity (CBD) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)**

Through its Natural Capital and Biodiversity (NCB) programme UNU-IAS continued to promote the sustainable use of biodiversity and ecosystems, advancing the agendas of the Convention on Biological Diversity (CBD) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). The institute supported efforts to achieve the Aichi Biodiversity Targets by 2020 as well as the formulation of the Post-2020 Global Biodiversity Framework. In November UNU-IAS organised two side events at the Fourteenth Conference of the Parties to the CBD (CBD COP 14; Sharm El Sheikh) to showcase the work of its International Satoyama Initiative (ISI) project. This included analysis of National Biodiversity Strategy and Action Plans, which produced a report on integrated landscape management approaches that was presented to the CBD in July. UNU-IAS also participated in the Sixth IPBES Plenary in Medellin (March) and contributed to the platform's global and regional assessments, while further developing collaboration with the IPBES Secretariat on research, technical inputs, and capacity building.

UNU-IAS continued to lead the development of future scenarios for biodiversity in Japan up to the year 2050, with research findings published in a special issue of the journal *Sustainability Science* in January 2019. Other NCB publications included the fourth issue of the Satoyama Initiative Thematic Review, and a policy brief focused on incentive systems for the integrated management of landscapes and seascapes (No. 16).

The institute's Operating Unit Ishikawa/Kanazawa (OUIK) further advanced the concept of biocultural diversity, through its tenth anniversary symposium in October, and a workshop on migration with the University of Tokyo and Stockholm Resilience Centre in April. On 8 June UNU-IAS and UNIC organised a symposium in Tokyo to celebrate World Oceans Day, which featured the Japanese media personality and fish expert Sakana-kun.

*Read more:*

*Ecosystem Service Assessment* ► pg. 13

*International Satoyama Initiative* ► pg. 13

*Operating Unit Ishikawa/Kanazawa* ► pg. 14



## CLIMATE CHANGE & DISASTER RISK REDUCTION (DRR)

### **The Paris Agreement on Climate Change and the Sendai Framework for DRR**

Through research and policy dialogue UNU-IAS has developed linkages between the climate change adaptation and DRR agendas. In July the institute hosted an expert meeting of the UNFCCC Adaptation Committee on national adaptation goals and their relationship with the SDGs and the Sendai Framework. UNU-IAS contributed to assessments of climate change impacts, including the IPCC Special Report on Global Warming of 1.5°C, published in October, which was a key scientific input to the 2018 UN Climate Change Conference (UNFCCC COP 24; Katowice).

Research on transferring low-carbon technology to developing countries was completed, with the findings of the project Low Carbon Technology Transfer (LCT) presented through a thematic session at the Tenth International Forum for Sustainable Asia and the Pacific (ISAP 2018) in July. A collaboration with the University of Tokyo, the project distilled best practices for promoting technology transfer, exploring barriers and solutions. UNU-IAS also completed research on food security in sub-Saharan Africa as part of its project Food Security Impacts of Industrial Crop Expansion in Sub-Saharan Africa (FICESSA). Research findings from case studies in Ghana, Ethiopia, and Malawi were published through more than 20 articles in leading journals, and a final workshop was held at the University of Ghana in February.

Other events included the public seminar Climate Change, Globalisation, and the Vulnerability of Cities in July, and a symposium co-organised with UNISDR for the International Day for Disaster Risk Reduction in October that focused on target C of the Sendai Framework — reducing economic losses from disasters.

*Read more:*

*Low Carbon Technology Transfer ▶ pg. 15*

*Assessment of Disaster and Climate Change Impacts ▶ pg. 15*

*Food Security Impacts of Industrial Crop Expansion in Sub-Saharan Africa (FICESSA) ▶ pg. 15*

# Research & Policy Development

UNU-IAS generates interdisciplinary scientific knowledge to inform policymaking, advancing the global effort to achieve the Sustainable Development Goals (SDGs) by 2030. Our research and policy development activities address specific goals as well as the interconnections between them, helping to translate the global agenda into action at the regional, national, and local levels. Combining in-house expertise with a diverse network of partner institutions, UNU-IAS bridges the developing and developed worlds and strengthens the links between science and policy that will be critical for achieving the SDGs.

Adopted by the UN General Assembly in 2015, the 2030 Agenda for Sustainable Development and its 17 SDGs inspire global action to overcome the world's related challenges — from hunger and poverty to equality and peace. Governments, businesses, civil society, and the UN system are working together to achieve the goals by 2030, and improve the lives of people everywhere.



**THE GLOBAL GOALS**  
For Sustainable Development



# 1 Sustainable Societies

## Governance for Sustainable Development (GSD)

This project addresses the policymaking processes and governance structures that are needed for achieving the Sustainable Development Goals (SDGs). It seeks to strengthen governance at the national and sub-national levels, including multi-stakeholder partnerships to mobilise knowledge, expertise, technology, and financial resources for the SDGs. Key research areas include governance challenges for the 2030 Agenda, localisation of the SDGs, and sustainable consumption and production.

The GSD project contributes to global policy dialogue on the SDGs, including the High-Level Political Forum on Sustainable Development (HLPF). A GSD side event at the 2018 HLPF (New York, 17 July) focused on SDG 11 (sustainable cities & communities), and the project produced policy recommendations based on Voluntary National Reviews (VNRs) in the Asia-Pacific region (UNU-IAS Policy Brief No. 14, 2018). The HLPF side event presented technical guidelines, jointly developed with the UN Economic and Social Commission for Asia and the Pacific (ESCAP), which support Member States in implementing multi-stakeholder partnerships. Having launched the guidelines at the 5th Asia-Pacific Forum on Sustainable Development (Bangkok, 29 March), UNU-IAS and ESCAP are now working on their application with the Government of Indonesia and other partners. New GSD research at the sub-national level was launched in partnership with the National Institute for Environmental Studies, Japan (NIES) and Keio University, to develop an integrated implementation methodology for the SDGs. The project also contributed to localisation of the SDGs by the Government of Japan, as well as the selection of 29 cities in Japan as “SDGs Future Cities”.

Other GSD activities included an expert meeting of the UNFCCC Adaptation Committee co-organised in Tokyo (24–25 July), which explored synergies between the 2030 agenda, the Paris Agreement on climate change, and the Sendai Framework for Disaster Risk Reduction.

## Education for Sustainable Development (ESD)

The ESD project seeks to generate, accelerate, and mainstream education on sustainable development. Its capacity development programmes for policymakers, young professionals, youth, and practitioners spur knowledge generation and learning for transformation. The project comprises two flagship initiatives — a global network of 168 Regional Centres of Expertise on ESD (RCEs), and an alliance of 46 higher education institutions in the Asia-Pacific region, the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net).

Regional RCE conferences in Africa (Malawi, August), Europe (France, August), the Asia-Pacific (Australia, September) and the Americas (Argentina, October), as well as the 11th Global RCE Conference (Philippines, December) focused on harnessing education to achieve the SDGs. The project delivered training on sustainable urban development for 20 students from across the Asia-Pacific region through the 2018 ProSPER.Net Young Researchers’ School (Kanagawa, Japan, 4–11 March), and for ten participants through the 2018 ProSPER.Net Leadership Programme (Melbourne, 12–16 November).

As a member of UNESCO's Partner Networks of the Global Action Programme (GAP) on ESD, the project provided inputs for the development of the post-GAP framework for the period 2020–2030. ESD collaboration with ASEAN included contributions to the 10th meeting of its Working Group on Environmental Education (18–19 July) and the ASEAN Environmental Education Action Plan. The project also produced a UNU-IAS Policy Brief on engaging the higher education sector in efforts to achieve the SDGs (No. 13, 2018), and the books *Ensure Healthy Lives and Promote Well-being for All: Experiences of Community Health, Hygiene, Sanitation, and Nutrition* and *Academia and Communities: Engaging for Change*.

### Education for Sustainable Development in Africa (ESDA)

Concluded in January 2019, this project promoted sustainable development in Africa by leading cooperation in teaching and research between eight African universities. It developed three collaborative master's degree programmes that have been implemented by the partner universities since 2014, producing over 30 graduates to date. The project also established a Next-Generation Researcher (NGR) initiative, which supports research collaboration on sustainable development by young scholars in Africa and Asia.

A final symposium was held in Tokyo to present the outcomes of the project (29 October), including a series of books on sustainable development in Africa. The event discussed the role of universities in Africa's sustainable development, and how to support young entrepreneurs for sustainable industrialisation in the region. A project meeting brought together representatives from each of the ESDA partner universities to discuss the future of the partnership and new areas for collaboration (30 October – 1 November).

### Water for Sustainable Development (WSD)

This interdisciplinary project investigates the role of water in society, the economy, and the natural environment. It explores the social, economic, and environmental consequences of changes in the quality, quantity, and movement of water. The research aims to advance efforts to achieve SDG 6 (clean water & sanitation) and other goals through improved management of water environments. A preliminary research framework has been developed, and case studies initiated in Bali, Indonesia; Kaski District, Nepal; and Visakhapatnam, India. The research includes analysis of economic interlinkages between key industries, and their environmental impacts.

The project builds on previous research undertaken as part of the UNU-IAS Water and Urban Initiative (WUI), which was completed in March. WUI focused on addressing future water-related risks in the context of the SDGs. Its research findings were presented to policymakers through a side event organised at the 8th World Water Forum, on the topic "Towards Resilient and Sustainable Urban Water Management for Fast-growing Megacities" (Brasilia, 22 March).

### Grant for Global Sustainability (GGS)

Through the GGS project UNU-IAS supports research initiatives contributing to the 2030 Agenda. In July two successful proposals were selected to be awarded grants financed by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), for implementation from 2018 to 2020. The research focuses on inclusive and equitable education, and on women's empowerment and gender, and is implemented by the University of Tokyo's Graduate School of Education and Graduate School of Medicine respectively. In October a monthly online seminar was initiated to facilitate exchange of knowledge between the seven universities that have received GGS grants to date.



## 2 Natural Capital and Biodiversity

### Ecosystem Service Assessment (ESA)

UNU-IAS research on ecosystem services — the benefits provided by biodiversity to human well-being — advances scientific assessment of these services and develops models to support policymaking for their conservation and sustainable use. Since January 2017, research on Predicting and Assessing Natural Capital and Ecosystem Services (PANCES) has been leading development of national-level future scenarios in Japan up to the year 2050. It has produced predictions of demographic and land-use changes under four scenarios as a base dataset for the assessment of natural capital and ecosystem services. A meeting on Sado Island, Japan in May brought together 50 of the project's researchers, and a seminar with the University of Tokyo's Integrated Research System for Sustainability Science (IR3S) reviewed the progress of PANCES (29 September), as well as assessments of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). Project findings were published in a special issue of the journal *Sustainability Science*, featuring 18 articles (January 2019).

The institute has also been actively contributing to the scientific assessment process for IPBES, with several researchers serving as coordinating lead authors and lead authors for global and regional assessments. UNU-IAS participated in the Sixth IPBES Plenary (Medellin, 16–22 March) and continued to develop collaboration with the IPBES Secretariat on research, technical inputs, and capacity building under an agreement signed in 2017.

### International Satoyama Initiative (ISI)

Through research and networking, this project advances the concept of “socio-ecological production landscapes and seascapes” (SEPLS) — areas where humans and the ecosystem exist in a harmonious relationship, each benefitting from the other. It hosts the secretariat of the 240-member International Partnership for the Satoyama Initiative (IPSI), a global network working towards the goal of “society in harmony with nature”. The ISI project advances the agendas of the Convention on Biological Diversity (CBD) and IPBES, including the development of the Post-2020 Global Biodiversity Framework.

The project played an active role at the Fourteenth Conference of the Parties to the CBD (CBD COP 14; Sharm El Sheikh, 17–29 November), organising two side events. Joint research with IR3S analysed the National Biodiversity Strategy and Action Plans submitted by CBD Parties, with a final report presented at the second meeting of the CBD Subsidiary Body on Implementation (SBI-2; Montreal, 9–13 July). At the 2018 High-Level Political Forum on Sustainable Development (HLPF), ISI research on monitoring and evaluation of the SDGs was presented as part of the 2018 Partnership Exchange (New York; 13 July). Other events included the Seventh Global Conference of IPSI (Kanazawa, 29 September–2 October), and a thematic session at the Tenth International Forum for Sustainable Asia and the Pacific (ISAP 2018; Yokohama, 19 July).

The fourth issue of the Satoyama Initiative Thematic Review was published, comprising case studies from IPSI members focusing on area-based conservation of biodiversity. ISI policy recommendations were shared in a UNU-IAS Policy Brief (No. 16, 2018), focused on mainstreaming incentive systems for the integrated management of landscapes and seascapes.

### Agricultural Heritage Systems

In January UNU-IAS launched a new 3-year project, Introduction of Technologies on Characteristic Analysis and Conservation Management in Agricultural Heritage Systems, in collaboration with the Rural Development Administration (RDA) of the Republic of Korea. It analyses the characteristics and sustainability of sites designated by the FAO as Globally Important Agricultural Heritage Systems (GIAHS), and develops conservation management indicators. During 2018 a study of 11 GIAHS sites was initiated, a launch symposium was organised in Seoul (15 September), and a workshop was held in Tokyo with RDA researchers (7 June).

### Operating Unit Ishikawa/Kanazawa (OUIK)

This UNU-IAS unit supports policy development for the integrated conservation and sustainable use of biological and cultural resources, working closely with the governments of Ishikawa Prefecture and Kanazawa City in Japan, as well as international partners such as the CBD Secretariat, FAO, and UNESCO. During 2018 this included a series of 14 events launched in June to promote local efforts towards achieving the SDGs. OUIK also established a new SDGs Working Group with the government of Kanazawa City and the Junior Chamber (JC) Kanazawa, and advised Suzu City for its designation as one of 29 “SDGs Future Cities” in Japan.

The tenth anniversary of OUIK was marked with a symposium on 3 October, which explored ways forward for local stakeholders to contribute to the SDGs and preserve biocultural diversity. OUIK collaborated with IR3S and the Stockholm Resilience Centre to organise a workshop on Biocultural Diversity and Human Migration (4–6 April), which included a public symposium on 5 April. OUIK research outcomes were presented at CBD COP14 as part of the Nature and Culture Summit (Sharm El Sheikh, 23 November). Further joint research on sustainable cities was conducted with the government of Kanazawa City, focusing on urban ecosystem services and sustainable management of land use. Other activities included a study tour of the Noto peninsula for 18 international students from UNU-IAS, Kanazawa University, and Ishikawa Prefectural University (17–19 November).

### Biodiplomacy Initiative

This project provides technical inputs to processes of CBD and IPBES, as well as advice for member countries on developing effective policies for access and benefit sharing (ABS). During 2018 the project developed an online course on Basic Concepts of ABS, in collaboration with UNEP and the National Biodiversity Authority of India, which was launched at CBD COP14 (Sharm El Sheikh, 17–29 November). The project’s research outputs and policy recommendations were shared through side events at the conference, focusing on ABS, health and biodiversity, and negotiations related to digital sequence information and synthetic biology.





### 3 Global Change and Resilience

#### Low Carbon Technology Transfer (LCT)

Completed in 2018, this project studied strategies and partnerships for effectively transferring low-carbon technology to developing countries. A collaboration with the University of Tokyo, it distilled best practices for promoting technology transfer, exploring barriers and solutions. The research comprised evaluation of city-to-city cooperation through the Joint Crediting Mechanism (JCM), and analysis of successful low-carbon technology transfer projects implemented by Germany in Indonesia and India. The project findings were shared through a workshop at the University of Tokyo (26 February) and a thematic session at the Tenth International Forum for Sustainable Asia and the Pacific (ISAP 2018; Yokohama, 19 July) focused on “Innovative Approaches to Promote Low Carbon Technologies and Best Practices”. This session, co-organised with the Institute for Global Environmental Strategies (IGES), brought together researchers and policymakers working on industrial development, energy, and finance, to explore barriers and innovative approaches for the promotion of low-carbon technology.

#### Assessment of Disaster and Climate Change Impacts

The research and expertise of UNU-IAS contribute to assessments of climate change impacts at the national, regional, and global levels, providing key scientific inputs for policymaking. The institute’s interdisciplinary approach and global networks bring valuable perspectives and insights to these processes, focusing on topics such as adaptation, vulnerability, and impacts on natural and human systems. During 2018 UNU-IAS contributed to reports of the Intergovernmental Panel on Climate Change (IPCC), including its Special Report on Global Warming of 1.5°C that was published in October and received significant media attention. The report was a key scientific input for the 2018 UN Climate Change Conference (UNFCCC COP 24; Katowice, 2–14 December).

#### Food Security Impacts of Industrial Crop Expansion in Sub-Saharan Africa (FICESSA)

Completed in March, this project examined how food security in sub-Saharan Africa was being affected by the increasing allocation of agricultural land to industrial, non-food crops. It was implemented in partnership with the UNU World Institute for Development Economics Research (UNU-WIDER), the Overseas Development Institute, and the University of Tokyo, among others. Research was conducted in Ghana, Ethiopia, and Malawi, including case studies focusing on cotton, sugarcane, coffee, and khat. The findings were published through more than 20 articles in leading journals including *Sustainability*, *Agriculture*, *Sustainability Science*, and the *International Journal of Agricultural Sustainability*. A final dissemination workshop was held at the University of Ghana, engaging experts in the various crop types addressed by the project (Accra, 14–15 February). The research of three UNU-IAS students — two in the PhD programme and one in the MSc programme — was supported through their engagement in this project.

### Ecosystem-based Disaster Risk Reduction

UNU-IAS is exploring the capacity of ecosystems to mitigate disasters and support local communities in adapting to disaster risks, through research on ecosystem-based disaster risk reduction (eco-DRR). It seeks to develop practical, nature-based solutions for implementation of eco-DRR in local communities based on visualisation of disaster risks, evaluation of multiple ecosystem functionalities, and scenario analysis.

### Monitoring and Management of Persistent Organic Pollutants in Asia (POPs)

This project provides 10 developing countries in Asia with scientific knowledge and technology to monitor persistent organic pollutants (POPs) in the environment, and builds monitoring networks. During 2018 these countries completed sampling for wet and dry seasons, and UNU-IAS held technical training sessions for the national project coordinators from India, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, at Shimadzu Asia Pacific in Singapore (8–12 October and 5–9 November). The project also supported participating countries in their reporting under the Stockholm Convention on Persistent Organic Pollutants.





# Postgraduate Education & Capacity Development

Through teaching and training UNU-IAS produces the policymakers and researchers of tomorrow, who will be at the forefront of global efforts towards a more sustainable future. The institute offers master's and PhD degree programmes, as well as a range of short courses, in close collaboration with leading universities in Japan and other countries. UNU-IAS postdoctoral fellowships provide recent PhD graduates with opportunities to engage in further research and contribute to the institute's projects.

UNU-IAS students and fellows benefit from the unique learning environment of a global university within the UN system, with access to leading scholars and practitioners, as well as international events. Active engagement in UNU-IAS research projects develops applied skills, while networks and partner institutions provide opportunities for field experience in developing countries.

## Postgraduate Degrees



UNU-IAS offers an MSc in Sustainability and a PhD in Sustainability Science. The courses are taught by a diverse faculty comprising both UNU-IAS academic staff and guest lecturers from other leading academic institutions and international organisations.

Studying at a global university within the UN system brings unique opportunities to interact with leading researchers, policymakers, diplomats, and practitioners, and to participate in high-level international events. At the same time, the global networks of UNU-IAS enable students to engage in collaborative research and gain practical experience. The institute's location in central Tokyo, at the heart of the city's international community, provides access to a wide variety of enriching educational opportunities and cultural experiences.

Exchange agreements allow the transfer of credits with the University of Tokyo, International Christian University (ICU), and Sophia University. UNU-IAS students also have access to the library collections of several Japanese universities, as well as the Japan International Cooperation Agency (JICA), through cooperation agreements.

In 2018 UNU-IAS signed a new credit exchange agreement with the University of Tokyo Graduate School of Engineering, as well as agreements on academic exchange with Tohoku University and the Osaka University Center for the Study of Co\*Design.

Several scholarships have been established to support students from developing countries in their studies at UNU-IAS, provided by the Japan Foundation for UNU (JFUNU), the Asian Development Bank, Japan Educational Exchanges and Services (JEES), and the UNU Rector's Office.

### **MSc in Sustainability**

The UNU-IAS *Master of Science in Sustainability* equips students with the knowledge and skills necessary to contribute to solving challenges of sustainability. Designed for recent graduates, professionals and practitioners, the two-year programme addresses sustainability through an interdisciplinary approach,

engaging the global network of UNU-IAS partner institutions. To date, the programme and its antecedents have produced 89 graduates since September 2010.

Students can take courses at UNU-IAS and partner universities in Japan. Successful completion of the programme requires students to earn at least 30 credits, including compulsory courses, specialised elective courses, research seminars, and a master’s thesis. Students are eligible for a joint diploma in sustainability science offered by UNU-IAS and the University of Tokyo Graduate School of Frontier Sciences (UT-GSFS), and a joint diploma programme with Sophia University.

Seven students successfully completed the Master of Science in Sustainability programme in July. Twelve new students were enrolled in the programme in September, with three receiving the UNU Rector’s Scholarship, two receiving a Japan Foundation for the UNU (JFUNU) scholarship, two receiving an Asian Development Bank scholarship, and one receiving a scholarship of the African Business Education Initiative for Youth (ABE Initiative), supported by Japan International Cooperation Agency (JICA). These scholarships are provided for outstanding students from developing countries with a need for financial assistance.

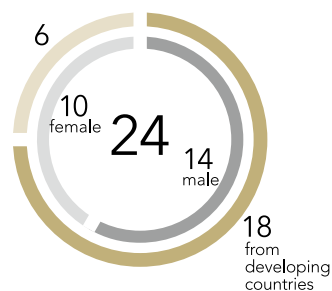
### PhD in Sustainability Science

The UNU-IAS *PhD in Sustainability Science* aims to develop leading researchers in the interdisciplinary field of sustainability science. The three-year programme seeks to promote a better understanding of sustainability challenges by incorporating global change perspectives, specifically those related to climate change and biodiversity. Through coursework and problem-oriented research, students develop critical thinking and problem-solving skills, as well as the technical literacy required to address sustainability challenges. To date, the programme has produced 9 graduates since September 2012.

Students are required to earn 14 credits and complete a PhD dissertation under one of several UNU-IAS research themes focusing on global change and sustainability. A joint diploma in sustainability science, developed by UNU-IAS and the University of Tokyo Graduate School of Frontier Sciences (UT-GSFS), is available to students of the programme, as well as a joint diploma with Sophia University.

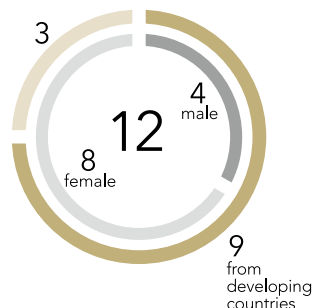
Two students successfully completed the PhD in Sustainability Science programme during 2018. Three new students were enrolled in September, of whom two are receiving the scholarship from JFUNU.

### MSc in Sustainability



Student Enrolment (as of December 2018)

### PhD in Sustainability Science



Student Enrolment (as of December 2018)

## Short-term Courses

These short courses provide innovative stand-alone study opportunities for professionals. Many of them also serve as core components of the UNU-IAS postgraduate degree programmes and provide credits towards degrees at partner universities.

### UNU Intensive Core Courses

Held at UNU-IAS in Tokyo (3–28 September), these courses have been organised annually by UNU since 2000. The 32 participants included students of the UNU-IAS postgraduate degree programmes, students from partner universities, and individuals from other institutions. The courses are unique in their extensive engagement of invited scholars and practitioners as guest lecturers, many of whom are experienced UN professionals, to provide students with insights into relevant policy issues and practical challenges.

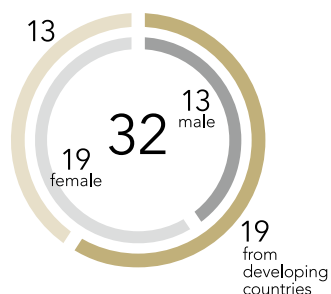
Three courses were offered over the four-week period:

1. The UN System and Sustainable Development
2. Global Change and Planetary Boundaries
3. Natural Capital and Biodiversity

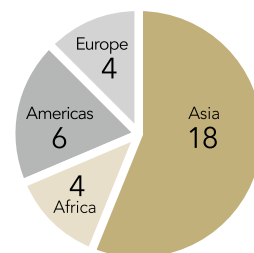
### UNU Global Seminar — Shonan Session

The UNU Global Seminar — Shonan Session has been held annually since 1985 in Shonan, Japan, aiming to enhance awareness among students of global issues and the role of the United Nations in addressing them. The 34th session was held on 27–30 August, on the topic “What Can We Do to Realise a Sustainable Society? A Gender & Sexuality Perspective”. A total of 97 undergraduate and postgraduate students from various universities throughout Japan attended the four-day seminar. Keynote lectures were delivered by Kazuko Tanaka (Advisor, International Christian University Center for Gender Studies) and Anna-Karin Jatfors (Regional Director, UN Women Regional Office for Asia and the Pacific). The session was organised by UNU-IAS and the Kanagawa International Foundation, in cooperation with 10 Japanese universities and with the support of JFUNU.

Intensive Core Courses Students, 2018



Intensive Core Courses Students by Region, 2018

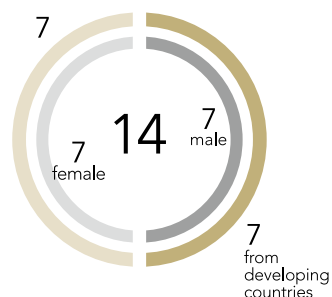


# Fellowships

UNU-IAS offers Postdoctoral Fellowships to provide young scholars and policymakers, especially those from the developing world, with opportunities to pursue advanced research and training that is of direct relevance to the institute's research agenda. Fellows participate in UNU-IAS lectures, seminars, workshops, and conferences, and benefit from the institute's close institutional links with key universities and think tanks in Japan and around the world.

The 24-month JSPS-UNU Postdoctoral Fellowships are jointly organised by UNU and the Japan Society for the Promotion of Science (JSPS). In 2018 JSPS-UNU Postdoctoral Fellows conducted research on diverse policy-relevant topics, such as climate change & disaster risk reduction, gender & the SDGs, sustainable consumption & production, and low-carbon technologies.

JSPS-UNU  
Postdoctoral Fellows, 2018



# Project-based Capacity Development

## Global Leadership Training Programme in Africa (GLTP)

This programme aims to train global leaders who can contribute to solving challenges in Africa, by providing Japanese postgraduate students with fieldwork opportunities at partner universities on the continent. Between 2013 and 2018, a total of 57 students participated in the programme, each in one of 13 African countries. Twelve new students were selected in May 2018, and have begun their studies in Ethiopia, Kenya, Mozambique, Rwanda, Tanzania, Uganda, and Zambia. With research topics spanning a wide range of fields, including agrodiversity, migration, career development, education, and health, the students are trained to develop links to the SDGs and engage with local stakeholders. A reporting session was organised at UNU-IAS (29 June), in which ten participants from the previous year of the programme presented their research findings, and reflected on their field experiences in Botswana, Ghana, Kenya, Senegal, South Africa, Tanzania, Uganda, and Zambia. Their final reports were also published on the UNU-IAS website.



# Communications & Outreach

UNU-IAS disseminates information about its research and activities through public events held in Tokyo and around the globe, as well as through print and electronic media. These efforts seek to inform policymakers, practitioners, and scholars about relevant UNU-IAS research, while also introducing non-specialist audiences to its efforts to address current and emerging issues.

## Public Events

UNU-IAS conferences, symposiums, workshops, and seminars bring together a diverse array of international experts, businesspeople, community leaders, and students to discuss topics related to sustainability. Held at UNU headquarters in Tokyo, and in other locations across the globe, these events advance debate, raise public awareness, and develop networks for research and policy development.

Over 70 public events were organised during 2018, including:

- World Oceans Day: Preserving the Bounty of the Seas: SDG 14 and Japan (8 June)
- Talks at Farmers Market@UNU: *Satoyama* (7 April), *Satoumi* (30 June), Tea and Garden for Peace (11 November)
- Climate Change, Globalisation and the Vulnerability of Cities (6 July)
- International Forum for Sustainable Asia and the Pacific (ISAP 2018; 18–19 July)
- Future Outlook on “The World in 2050” Initiative (TWI2050; 9 October)
- 70th Anniversary of the International Union for Conservation of Nature (IUCN; 2 October)
- The SDGs and Disaster Risk Reduction: Meeting Target C of the Sendai Framework — Reducing the Economic Loss of Disasters (12 October)

## Publications

Publications by UNU-IAS researchers in 2018 included eight books and 22 articles in peer-reviewed scientific journals, as well as numerous policy briefs, working papers, articles in magazines and newspapers, website articles, conference papers, videos, and podcasts. A selection of these is listed below.

### *UNU-IAS Policy Briefs*

Launched in 2015, the UNU-IAS Policy Brief series presents analysis and policy recommendations for addressing sustainability challenges, in an accessible format. UNU-IAS Policy Briefs inform high-level policymaking and debates, enhance research uptake, and provide actionable recommendations for decision makers at the global, national, and local levels.

Five UNU-IAS Policy Briefs were published during 2018:

- “Beacons, not Towers: How Higher Education Can Help Achieve the SDGs”
- “Implementing the 2030 Agenda in Asia and the Pacific: Insights from Voluntary National Reviews”

- “Mainstreaming Incentive Systems for Integrated Landscape Management: Lessons from Asia”
- “Gender Mainstreaming in the 2030 Agenda: A Focus on Education and Responsible Consumption & Production”
- “Sustainable Smart Cities: Applying Complexity Science to Achieve Urban Sustainability” (translations in Mandarin and Portuguese)

### **Books**

Books produced by UNU-IAS researchers included:

- Biofuels and Sustainability: Holistic Perspectives for Policy-making (Springer Japan)
- Academia and Communities: Engaging for Change (UNU-IAS)
- Resilient Asia: Fusion of Traditional and Modern Systems for a Sustainable Future (Springer Japan)
- Rural–Urban Linkages and Sustainable Development in Africa (Spears Media Press)
- Youth Entrepreneurship and Africa’s Sustainable Industrialisation (Spears Media Press)

### **Sustainability Science Journal**

The scientific journal *Sustainability Science* is a collaborative initiative of UNU-IAS and the Integrated Research System for Sustainability Science (IR3S) of the University of Tokyo, published by Springer. It promotes science-based predictions and impact assessments of global change, and seeks ways to ensure that these can be understood and accepted by society. *Sustainability Science* creates a transdisciplinary academic structure and discovery process that fuses the natural sciences, social sciences, and humanities. Special features in 2018 focused on cultural evolution, integrated climate assessment, ecological distribution conflicts, technology and governance, and integrated knowledge generation. UNU-IAS co-organised the seminar Implementing Solutions for the SDGs: The Role of Sustainability Research (20 September), which considered the sustainability research landscape and presented insights from both *Sustainability Science* and *Nature Sustainability*.

### **Online Outreach**

During 2018 the UNU-IAS website ([ias.unu.edu](http://ias.unu.edu)) received 0.47 million pageviews, with the top countries for visitors including India, Japan, Nigeria, and the United States. UNU-IAS also increased its social media presence, with over 7,000 “likes” on Facebook and 230,000 impressions on Twitter in 2018.

### **Media Coverage**

UNU-IAS activities were featured by media outlets in Japan, such as the Yomiuri Shimbun, Mainichi Shimbun, Nikkei Shimbun, Kankyo Shimbun, and The Japan Times, among others. A researcher was also interviewed for an NHK special report on protection of coral reefs.

### **Global Environment Outreach Centre (GEOC)**

This joint initiative of UNU-IAS and the Ministry of the Environment of Japan (MOEJ) aims to support activities in various social sectors towards sustainability within and beyond Japan, through the establishment and maintenance of multi-stakeholder partnerships. It plays an important role in the communications and outreach efforts of UNU-IAS

GEOC events during 2018 included the following:

- World Wetlands Day Symposium 2018 (2 February)
- Workshop on Best Practices of Local Community Projects (17 February)
- International Day for Biological Diversity: Celebrating 25 Years of Action for Biodiversity (24 May)
- SDGs Panel Exhibition at Sophia University (1–11 June)
- Seminar on Sustainable Coexistence with Coral Reefs (20 June)
- Advancing Partnerships for SDGs Localisation (17 December)



# UNU-IAS Board Members, 2018

**Dr. Tanya Abrahamse** (South Africa) VICE-CHAIR

Chair, Global Biodiversity Information Facility (GBIF) Governing Board

**Prof. Carl Folke** (Sweden)

Science Director of the Stockholm Resilience Centre at Stockholm University and Director of the Beijer Institute of the Royal Swedish Academy of Sciences

**Prof. Maria Ivanova** (Bulgaria)

Associate Professor of Global Governance and Director of the Center for Governance and Sustainability at the University of Massachusetts Boston

**Prof. Takashi Onishi** (Japan) CHAIR

President of Toyohashi University of Technology

Members of the UNU-IAS Board serve in their individual capacity, and are appointed by the Rector of UNU, in consultation with the UNU Council. The Rector of UNU and the Director of UNU-IAS are *ex-officio* members of the Board.

The 2018 meeting of the UNU-IAS Board was held on 11 October in Tokyo.

## Financial Support

Contributions over USD 20,000

- African Development Bank Group (AfDB)
- Asia-Pacific Network for Global Change Research (APN)
- Asian Development Bank (ADB)
- Cabinet Secretariat, Government of Japan
- Ministry of Agriculture, Forestry and Fisheries (MAFF), Government of Japan
- Ministry of Education, Culture, Sports, Science and Technology (MEXT), Government of Japan
- Ministry of the Environment (MOEJ), Government of Japan
- Ishikawa Prefectural Government
- Japan Foundation for the United Nations University (JFUNU)
- Kanagawa International Foundation (KIF)
- Kanazawa City
- Keio University
- Rural Development Administration (RDA), Government of the Republic of Korea
- University of Tokyo

**End of Report**