

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

## 2017 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



In 2017 the international community continued to make progress on the path towards global sustainability, as Member States and other stakeholders accelerated their efforts to implement the 2030 Agenda and achieve its 17 Sustainable Development Goals (SDGs) by 2030. Throughout the year UNU-IAS made important contributions to advancing this process, and a number of other international policy agendas, including the Paris Agreement on climate change, the Convention on Biological Diversity, and the Sendai Framework for Disaster Risk Reduction (DRR).

UNU-IAS formed a new strategic partnership with the UN Economic and Social Commission for Asia and the Pacific (ESCAP), focused on regional implementation of the 2030 Agenda. Our joint research produced guidelines to support the region's Member States in implementing multi-stakeholder partnerships for the SDGs, which were launched at the Fifth Asia-Pacific Forum on Sustainable Development (APFSD) in March 2018.

We strengthened our partnership with the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) secretariat, signing a new agreement in July for expanded collaboration on capacity building, indigenous and local knowledge systems, and data. In March UNU-IAS and the University of Tokyo organized the International Symposium on Biodiversity and Sustainability — Linking People and Nature, which engaged leading experts to discuss the integration of social and ecological systems.

The institute also played an active role at the UN Climate Change Conference in Bonn (UNFCCC COP 23) and contributed to reports on climate change produced by the IPCC and UNEP. We provided expert inputs to guidelines for national and local implementation of the Sendai Framework, and worked with the Future Earth initiative to launch a new network on climate-related disaster risks.

UNU-IAS continued to develop the next generation of policymakers and researchers through our post-graduate degree programmes. Seven master's students and one doctoral student graduated in July, and in September we welcomed 12 new master's students and four new doctoral students. We also expanded opportunities for students by introducing the new "UNU Rector's Scholarship", and a joint diploma programme with Sophia University.

### **Priorities for 2018**

UNU-IAS research and policy development will continue to focus on implementation of the 2030 Agenda. We will further develop our work with ESCAP in the Asia-Pacific region, supporting Member States in their efforts to localise the SDGs. Our Governance for Sustainable Development (GSD) project will explore interconnections between SDG targets, and draw on analysis and best practice from the national and regional levels to produce substantive inputs for international debates and policy processes.

Through our work on Natural Capital and Biodiversity (NCB) we will play a leading role in developing and promoting sustainable management of landscapes and seascapes. UNU-IAS research and capacity building will support efforts by Member States to achieve the Aichi Biodiversity Targets by 2020, and contribute to national, regional, and global assessments of biodiversity and ecosystem services. In doing so we will advance the CBD and IPBES agendas, and provide expert inputs to the formulation of the global post-2020 biodiversity framework.

UNU-IAS will also be developing research at the intersection of climate change adaptation and DRR, contributing to implementation of the Paris Agreement and the Sendai Framework. A particular focus will be ecosystem-based approaches to DRR and climate change adaptation, known as "eco-DRR".

Our research, policy development, and capacity building in these and other areas will continue to make important contributions to achieving the global goals and advancing global sustainability. I am very much looking forward to leading the further development of UNU-IAS in this direction during 2018.

I would like to take this opportunity to acknowledge and thank the many friends, partners, and donors of UNU-IAS, whose support enables and enhances our work. I also wish to express my deep gratitude to the institute's staff, fellows, and students for their inspiration, commitment, and hard work. With your support I am confident that 2018 will bring further progress and success for UNU-IAS.

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

Director, UNU-IAS

March 2018

# 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 and its social, economic, and environmental dimensions. 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 develops international leaders with the interdisciplinary understanding and technical skills needed to advance creative solutions to problems of 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 organization comprising 13 institutes and programmes, located in 12 different countries.

## Organization

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

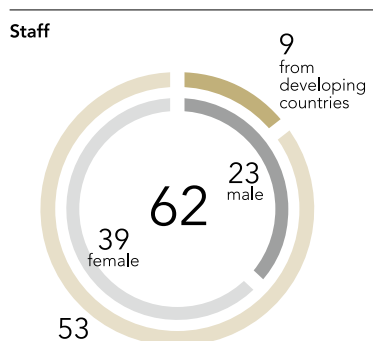
As of December 2017, UNU-IAS had a staff of 62. Of these, 9 were developing country nationals, and by gender the staff comprised 23 men and 39 women.

## Financing

UNU-IAS is financed entirely by voluntary contributions from governments, agencies, international organizations and other sources. A list of major financial contributors is provided on page 26.

## 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 2017 meeting held on 19 October. A list of board members is provided on page 26.





# Highlights



## SUSTAINABLE DEVELOPMENT

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

During 2017 UNU-IAS advanced efforts towards achieving the Sustainable Development Goals (SDGs) in the areas of governance, education, and water, among others. A new partnership with the UN Economic and Social Commission for Asia and the Pacific (ESCAP) focused on implementation of the 2030 Agenda in the region, with a Memorandum of Understanding signed in September. As part of the institute's Governance for Sustainable Development (GSD) project, a joint workshop at the Fourth Asia-Pacific Forum on Sustainable Development (APFSD) in March developed guidelines for Member States to implement effective multi-stakeholder partnerships for the SDGs. The guidelines were presented at the Fifth APFSD in March 2018.

A GSD workshop in New York produced a research–action framework for addressing linkages between SDG targets. A series of workshops in Asian cities shared final research results and analysis tools produced by the UNU-IAS Water and Urban Initiative (WUI). Public events included an *SDG Dialogue* on Global Companies and the 2030 Agenda, which featured speakers from Fuji Xerox, Unilever Japan, and Toyota, and a public forum in Kanazawa, Japan addressing LGBT issues in the context of the SDGs. The first thematic conference of the Regional Centres of Expertise (RCE) on Education for Sustainable Development, held in Okayama, Japan, showcased best practices for harnessing education to achieve the SDGs.

Publications included the book *Governing through Goals: SDGs as Governance Innovation* (MIT Press), and policy briefs on urban water resilience (No. 9), the roles of regional institutions (No. 11), and education (No. 13) in achieving the SDGs.

*Read more:*

*Governance for Sustainable Development* ► pg. 11

*Education for Sustainable Development* ► pg. 11

*Water and Urban Initiative* ► pg. 12

## **BIODIVERSITY AND ECOSYSTEMS**

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

The UNU-IAS Natural Capital and Biodiversity (NCB) programme continued to promote the sustainable use of biodiversity and ecosystems, through research, policy development, and capacity building at the global, regional, and national levels. UNU-IAS worked closely with the CBD secretariat to support efforts towards achieving the Aichi Biodiversity Targets, and in July signed a new agreement with the IPBES secretariat to expand collaboration on capacity building, indigenous and local knowledge systems, and data.

In March UNU-IAS and the University of Tokyo organized the International Symposium on Biodiversity and Sustainability: Linking People and Nature, which engaged leading experts to discuss the integration of social and ecological systems. Other events included a thematic session at the 9th International Forum for Sustainable Asia and the Pacific (ISAP 2017) in Yokohama, and a symposium on sustainable oceans featuring keynote speeches by HRH Crown Princess Victoria of Sweden and Johan Rockström of the Stockholm Resilience Centre. In April, UNU-IAS organized a symposium on biodiversity and sustainable tourism that brought together park rangers from Japan and the United States. The institute's Operating Unit Ishikawa/Kanazawa (OUIK) also held public forums on biocultural diversity and trained practitioners from developing countries in community building and agricultural heritage. NCB publications included the third issue of the *Satoyama Initiative Thematic Review*, and policy briefs on mainstreaming sustainable landscape approaches (No. 8), and the sustainable use of ecosystem services in production landscapes (No. 10).

*Read more:*

*Ecosystem Service Assessment* ► pg. 13

*International Satoyama Initiative* ► pg. 13

*Operating Unit Ishikawa/Kanazawa* ► pg. 14



HRH Crown Princess Victoria of Sweden, an SDG Advocate, speaks at a symposium on sustainable oceans.



## CLIMATE CHANGE & DISASTER RISK REDUCTION (DRR)

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

UNU-IAS contributed to these closely-linked agendas through research on building resilience to climate change and disasters, and the diffusion of technology for reducing greenhouse gas emissions. In November UNU-IAS played an active role at the UN Climate Change Conference in Bonn (UNFCCC COP 23), participating in two side events — one on innovation and entrepreneurship, and another on technology transfer. Research findings were presented from the institute’s Low Carbon Technology Transfer (LCT) project, which analyses approaches for transferring low-carbon technology to developing countries, and compiles best practices. During 2017 the LCT project conducted field surveys in India and Indonesia, and organized a thematic session at ISAP 2017, a workshop at the University of Tokyo, and a briefing session for officials of the Ministry of Foreign Affairs of Japan. UNU-IAS provided expert inputs for UN reports on climate change, including the IPCC Special Report on Global Warming of 1.5°C and the sixth edition of the UNEP Global Environment Outlook.

With completion of the project Enhancing Resilience to Climate and Ecosystem Changes in Semi-Arid Africa (CECAR-Africa), UNU-IAS produced a “Ghana model” for strengthening resilience in semi-arid regions across sub-Saharan Africa. Based on studies in northern Ghana since 2011, the model and related research findings were disseminated through workshops with local stakeholders in Ghana, as well as over 40 academic publications. The institute also worked closely with the Future Earth initiative, co-organising the November launch of a new Knowledge–Action Network (KAN) on Emergent Risks and Extreme Events, which will combine international and local knowledge to reduce climate-related disaster risks. UNU-IAS also contributed to a “Words into Action” implementation guide for the Sendai Framework produced by UNISDR, focusing on national and local platforms for DRR.

*Read more:*

*Low Carbon Technology Transfer ► pg. 15*

*Enhancing Resilience to Climate and Ecosystem Changes in Semi-Arid Africa ► pg. 15*

# Research & Policy Development

UNU-IAS generates interdisciplinary scientific knowledge to inform policy-making, 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 governance issues related to implementing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). It develops multi-stakeholder partnerships to mobilize knowledge, expertise, technology, and financial resources for achieving the SDGs. The project also focuses on science–policy interfaces, sustainable consumption and production, and follow-up and review processes.

A GSD workshop at the Fourth Asia-Pacific Forum on Sustainable Development (APFSD; Bangkok, 28 March) launched new research collaboration with the UN Economic and Social Commission for Asia and the Pacific (ESCAP). The research initiative is producing technical guidelines for countries in the region to develop multi-stakeholder partnerships for achieving the SDGs. Another joint workshop was organized in Bangkok to validate the guidelines (28–29 November), which were launched at the Fifth APFSD in March 2018. The collaboration between UNU-IAS and ESCAP will be further developed, under a Memorandum of Understanding signed in September 2017.

Other GSD activities during 2017 included the *SDG Dialogue* event Global Companies and the 2030 Agenda (Tokyo, 20 April), a policy workshop on interlinkages between SDG targets (New York, 5–7 March), and a symposium on environmental labelling and certification schemes (Tokyo, 5 December). Among the project's publications were the book *Governing through Goals: Sustainable Development Goals as Governance Innovation* (MIT Press) and a UNU-IAS Policy Brief on regional institutions and the SDGs (No. 11, 2017).

### Education for Sustainable Development (ESD)

The ESD project seeks to generate, accelerate, and mainstream education on sustainable development. It manages a series of capacity development and leadership training programmes for policymakers, young professionals, youth, and practitioners designed to spur knowledge generation and learning for transformation. The project comprises two flagship initiatives — the global network of 164 Regional Centres of Expertise (RCE) on ESD, and an alliance of 40 higher education institutions in the Asia-Pacific region, the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net).

The first global RCE Thematic Conference was organized in Okayama, Japan (5–7 December), to showcase best practices for harnessing education to achieve the SDGs. Regional RCE conferences were also held for Africa (Lusaka, August), Europe (Dortmund, September), the Americas (Vancouver, September), and the Asia-Pacific (Delhi, November). Young leaders and policymakers were trained through the ProSPER.Net Young Researchers' School (Ho Chi Minh City, 6–15 March), the ProSPER.Net Leadership Programme (Bangkok, 29 June – 5 July) and the 10th ASEAN+3 Leadership Programme (Yogyakarta, 10–13 October).

The third in a series of ESD books was published in early 2018, *Ensure Healthy Lives and Promote Well-being for All: Experiences of Community Health, Hygiene, Sanitation, and Nutrition*, presenting case studies

and recommendations for achieving SDG 3 (good health and well-being) through education. The project also continued to collaborate with UNESCO as a member of the Partner Networks of the Global Action Programme (GAP) on ESD, and contributed to the mid-term report on the GAP.

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

The ESDA project promotes sustainable development in Africa by leading cooperation between eight African universities in teaching and research. It has developed three collaborative master's degree programmes that have been implemented by the partner universities since 2014, producing a total of 31 graduates to date. The ESDA project includes a Next-Generation Researcher (NGR) initiative, which supports research collaboration on sustainable development by young scholars in Africa and Asia.

During 2017 each of the partner universities organized the first of two workshops, as part of the ESDA Sustainable Development Workshop Series, which is producing teaching materials to enrich the master's programmes. The 3rd ESDA Consortium Meeting was held in Cape Town, South Africa (16–18 October), to review progress and develop plans for further expanding the programmes. A parallel NGR meeting (15–18 October) discussed research findings on rural–urban linkages in Africa and in Asia, and the initiative's long-term research agenda. Other events included an NGR workshop in Kumasi, Ghana focusing on sustainable livelihoods (19 December), and seminars at UNU-IAS on Africa's Industrial Competitiveness and Human Capital (28 July) and Education and Skills for Employability in Africa (7 December).

### **Water and Urban Initiative (WUI)**

This project contributes to sustainable urban development in Asia, aiming to improve water quality and prevent flooding. It creates scientific tools to forecast the future state of urban water environments, and builds capacities in developing countries. WUI research informs global understanding of urban water environments and contributes to improved policymaking in this critical area.

WUI analysis of eight Asian cities was completed in 2017, focusing on the economic impacts of flood damage and improved water quality. A series of consultation workshops were organized to share final results with local stakeholders, as well as training sessions to introduce the tools developed by the project. These were organized in Hanoi (June), Manila (October), Chennai (December), and Lucknow (December). WUI research was disseminated through academic publications and a UNU-IAS Policy Brief on urban water resilience (No. 9, 2017). The project also contributed to planning and organizing the International Decade for Action: Water for Sustainable Development 2018–2028, through a UN-Water taskforce.

### **Grant for Global Sustainability (GGS)**

Through the GGS project UNU-IAS supports research initiatives contributing to the 2030 Agenda. In August UNU-IAS selected three successful proposals to be awarded grants financed by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT), which will be implemented from 2017 to 2019. Research by Nagoya University is focusing on technical and vocational training in developing countries, Kyoto University is examining synergies between biodiversity conservation and sustainable forest use, and Ibaraki University is developing strategies for adaptation to sea-level rise in urban atolls. Previous grants supported research between August 2015 and March 2018, with Hiroshima University focusing on an inclusive education model for developing countries, and Kyoto University producing a local participation platform to enhance urban disaster resilience in Myanmar and Nepal.



## 2 Natural Capital and Biodiversity

### Ecosystem Service Assessment (ESA)

UNU-IAS research on ecosystem services — the benefits provided by biodiversity to human well-being — has been advancing scientific assessment of these services, and developing models to support policymaking for their conservation and sustainable use. Since January 2017, UNU-IAS has been leading development of national-level future scenarios in Japan up to the year 2050, predicting demographic and land-use changes. The interim findings of this project, Predicting and Assessing Natural Capital and Ecosystem Services (PANCES), were shared with local governments and other stakeholders through public symposiums on Sado Island (June) and in Akkeshi, eastern Hokkaido (August).

The Biodiversity and Ecosystem Service Scenarios Network (ScenNet) project was completed in March. The network increased the utility of scenarios for decision-making at the global level, by identifying key actors and processes, better communicating the potential value of scenarios and models, and promoting adoption of best practices from the national and sub-national levels. ESA policy recommendations for the sustainable use of ecosystem services in production landscapes were presented in a UNU-IAS Policy Brief (No. 10, 2017), based on research conducted in northern Ishikawa Prefecture. The institute has also been actively contributing to the scientific assessment process for the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES), with several researchers serving as coordinating lead authors and lead authors for global and regional assessments.

### 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 serves as the secretariat of the 220-member International Partnership for the Satoyama Initiative (IPSI), a global network working to realise societies in harmony with nature through the revitalization and sustainable management of SEPLS. The ISI project contributes to CBD and IPBES processes, and with the July 2017 agreement between UNU-IAS and the IPBES secretariat (see Highlights) has strengthened its commitment to mobilising IPSI expertise and resources.

The third issue of the *Satoyama Initiative Thematic Review* was published, presenting case studies from IPSI members around the world focusing on challenges and opportunities for sustainable livelihoods and strengthened resilience in landscapes and seascapes. ISI policy recommendations were also shared through a UNU-IAS Policy Brief (No. 8, 2017), which provides guidance for integrating sustainable landscape-management approaches into policies and decision-making.

ISI activities included a thematic session at the 9th International Forum for Sustainable Asia and the Pacific (ISAP 2017; Yokohama, 26 July), the Satoyama Initiative Regional Workshop in Sabah (Malaysia, 18–20 April), and an international forum on biocultural diversity in collaboration with UNU-IAS OUIK (Kanazawa, Japan, 4 October; see pg. 14).

### Agrodiversity and Sustainability

Agrodiversity refers to the ways in which farmers use environmental diversity, integrating biological, technological and institutional components that offer flexibility and resilience in adapting to climate and ecosystem changes. Research on coastal forest management in Japan, Myanmar, and the Philippines was completed with the publication of a final report in March. New research on sustainable mangrove rehabilitation was launched, which will identify best practices from case studies in Myanmar and the Philippines following the typhoons and cyclones of recent years.

### 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. Since organizing the 1st Asian Conference on Biocultural Diversity (ACBD) in 2016, OUIK has been working to implement its outcome document, the Ishikawa Declaration. The unit launched an international cooperation programme focusing on the Globally Important Agricultural Heritage Systems (GIAHS) initiative of FAO, training 19 practitioners from developing countries in sustainable local community building (1 October – 3 November) and implementation of GIAHS (29–30 November). OUIK held the international symposium Living, Nature, and Cultural Landscapes, which engaged experts from Italy and the USA to discuss sustainable landscape management and local livelihoods (27 August). A further series of international forums marked the first anniversary of the ACBD, focusing on Biocultural Diversity and Satoyama (4 October) and Youth Capacity Development (20 October).


OUIK also supports local efforts to implement the 2030 Agenda, and in August signed an agreement with the Japan International Cooperation Agency (JICA), Kanazawa Institute of Technology, and Junior Chamber International Kanazawa to create a local SDGs business model that will be promoted internationally. The unit organized the public forum Education and LGBT: SDGs as a Tool for Learning and Inclusion (23 November). Other events held by OUIK included a workshop on smart cities (7 May), and a public forum on citizen science for local biodiversity monitoring (14 May).

### Biodiplomacy Initiative

This project provides technical inputs to CBD processes and advice for member countries on developing effective policies for access and benefit sharing. It coordinates the Biodiversity and Community Health Initiative (BaCH), a network advancing poverty reduction and sustainable development. Key project partners include the UNU-IAS ESD project (see page 11), the UNU International Institute for Global Health (UNU-IIGH), the UN Environment Programme, the National Biodiversity Authority of India, and the University of Tromsø. During 2017 the project contributed to research and capacity development programs of the CBD secretariat, IPBES, and the World Intellectual Property Organization (WIPO), among others. Through this project UNU-IAS provided technical advice to governments of 14 Pacific island states, as part of a GEF–UNEP workshop in Apia, Samoa (26–30 June).







### 3 Global Change and Resilience

#### Enhancing Resilience to Climate and Ecosystem Changes in Semi-Arid Africa (CECAR-Africa)

Completed in March, this project produced an integrated resilience enhancement strategy — a “Ghana model” — for semi-arid regions across sub-Saharan Africa, by combining research on climate change and ecosystem change. Research was conducted from 2011 within flood- and drought-prone rural communities in northern Ghana, in close collaboration with the UNU Institute for Natural Resources in Africa (UNU-INRA) and other leading research institutes in Ghana and Japan.

The project’s final symposium was held in Accra (2 February), and a workshop organized in Tamale (31 January), sharing findings with policymakers, businesspeople, and other stakeholders. CECAR-Africa research was published in more than 40 peer-reviewed papers, including the book *Strategies for Building Resilience against Climate and Ecosystem Changes in Sub-Saharan Africa* (Springer, 2018), which presents case studies at the local, national, and regional levels. The project’s findings were reflected by the Government of Ghana in national plans for climate change adaptation, biodiversity, and development. Collaboration through CECAR-Africa also led to the establishment of a new research centre at the University for Development Studies in Nyankpala and Wa, focusing on sustainability and resilience enhancement strategies.

#### Low Carbon Technology Transfer (LCT)

This project studies strategies and partnerships for effectively transferring low-carbon technology to developing countries. A collaboration with the University of Tokyo, it distils best practices for promoting technology transfer, exploring barriers and solutions.

Analysis and evaluation of several city-to-city cooperation projects was conducted: Yokohama–Bangkok, Yokohama–Da Nang, and Kitakyushu–Surabaya. Field surveys of successful German low-carbon technology transfer initiatives were also conducted in India (Delhi) and Indonesia (Bandung and Jakarta). The project contributed to the UN Climate Change Conference in Bonn (UNFCCC COP 23), including an official side event organized by UNIDO and WFP on the topic “Innovation and Entrepreneurship for Transformative Climate Solutions” (14 November), as well as the Japan-led side event “Achieving the SDGs through Technology, Innovation, Deployment, and Transfer” (9 November). UNU-IAS and IGES held a thematic session at the 9th International Forum for Sustainable Asia and the Pacific (ISAP) on the topic “Innovative Approaches to Stimulate Low-carbon Technology Transfer” (25 July). LCT research findings were shared at a workshop hosted by the University of Tokyo (26 February) and presented to officials of the Ministry of Foreign Affairs of Japan through a briefing session focused on the Paris Agreement on climate change (12 January 2018).

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

With countries in sub-Saharan Africa increasingly allocating agricultural land to industrial, non-food crops, this research examines how food security in the region is being affected — both positively and negatively. Project partners include the UNU World Institute for Development Economics Research (UNU-WIDER), the Overseas Development Institute, and the University of Tokyo.

Six surveys were conducted in Ethiopia, Ghana, and Malawi, focusing on cotton, sugarcane, coffee and khat — through household questionnaires, focus groups, and stakeholder interviews at the local, regional, and national levels. The research was published in the scientific journals *Sustainability*, *Sustainability Science*, *Agriculture*, and the *International Journal of Agricultural Sustainability*, including a special feature of *Sustainability Science* on the topic “Sustainability Science for Meeting Africa’s Challenges”, which compiled 13 articles based on FICESSA research (Vol. 12, Issue 5). A final dissemination workshop was held at the University of Ghana in Accra, engaging experts in the various crop types addressed by the project (14–15 February 2018).



### 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. As part of the project, two technical sessions were organized at the Pure and Applied Chemistry International Conference 2017 (PACCON 2017) in Bangkok (2–3 February). The project supported participating countries in their reporting under the Stockholm Convention on Persistent Organic Pollutants, and updating their National Implementation Plans. POPs research was also presented at the Japan Society for Environmental Chemistry Symposium (7–8 June). A training session for researchers from Indonesia and Singapore was held in Singapore, focusing on analysis of water, sediment, and fish samples (9–11 November).





# Postgraduate Education & Capacity Development

UNU-IAS education and capacity development aim to produce international leaders with the interdisciplinary understanding and technical skills needed to advance creative solutions to problems of sustainability. 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 postgraduate degree programmes aim to produce the policymakers and researchers of tomorrow, who will be at the forefront of global efforts towards a more sustainable future. The courses are taught by a diverse faculty comprising both UNU-IAS academic staff and guest lecturers from other leading academic institutions and international organizations.

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), Sophia University and Yokohama National University. Agreements with ICU, Sophia University, the National Graduate Institute for Policy Studies (GRIPS), Aoyama Gakuin University, Ochanomizu University, Bunkyo University Shonan Campus, Temple University Japan, and Japan International Cooperation Agency (JICA) allow students to visit and borrow books from their libraries. UNU-IAS students have access to the online collections at Temple University Japan and GRIPS.

A new scholarship was also established, provided by the UNU Rector's Office. Each year the "UNU Rector's Scholarship" supports three new students from developing countries. The first recipients of the scholarship are two MSc students and one PhD student, all of whom joined the programmes in September 2017.

UNU-IAS was also accepted as one of the recommended universities for the African Business Education Initiative for Youth (ABE Initiative), supported by the Japan International Cooperation Agency (JICA). This initiative will provide opportunities for students from Africa to receive two-year scholarships to study at UNU-IAS from September 2018.



### 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 82 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, specialized 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 new joint diploma programme with Sophia University that was launched in April.

Seven students successfully completed the Master of Science in Sustainability programme in July. Twelve new students were enrolled in the programme in September, with two receiving the UNU Rector's Scholarship, three receiving a scholarship provided by the Japan Foundation for the UNU (JfUNU), and two receiving an Asian Development Bank scholarship. These scholarships are provided for outstanding students from developing countries with a need for financial assistance.

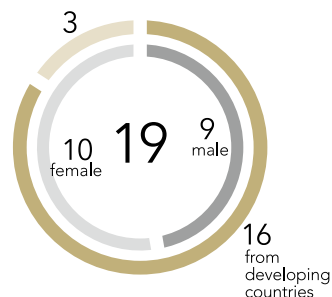
### PhD in Sustainability Science

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 problems. To date, the programme has produced six 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 new joint diploma with Sophia University.

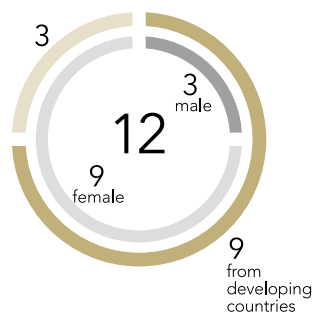
In July, one student successfully completed the PhD in Sustainability Science programme. Four new students were enrolled in September, of whom one is receiving the UNU Rector's Scholarship, and another a scholarship from JfUNU.

#### MSc in Sustainability



Student Enrolment (as of December 2017)

#### PhD in Sustainability Science



Student Enrolment (as of December 2017)



## 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

A total of 24 students participated in these courses at UNU-IAS in Tokyo (4–29 September). Organized annually by UNU since 2000, the courses are designed to be accessible to students and professionals who are not necessarily specialists in the fields covered. 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. UN System and Sustainable Development
2. Global Change and Planetary Boundaries
3. Natural Capital and Biodiversity

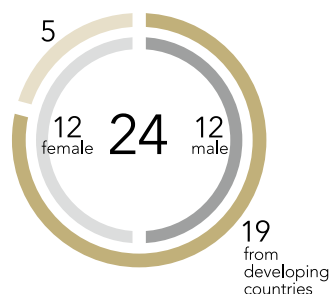
### UNU Global Seminar — Shonan Session

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 33rd session was held from 29 August to 1 September, on the topic “The Role of International Organizations in the Global Economy: Movement of People beyond Borders”. A total of 86 undergraduate and postgraduate students from Japanese universities participated, with keynote lectures delivered by Yukio Takasu (Special Advisor to the UN Secretary-General on Human Security) and Mio Sato (Chief of Mission, IOM Tokyo). The session is organized by UNU-IAS and the Kanagawa International Foundation, in cooperation with 10 Japanese universities and with the support of the Japan Foundation for the UNU (JfUNU).

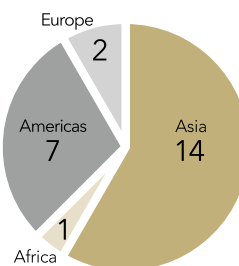
### UNU–Kirin Fellowship Programme

2017 was the final year of this programme, which provided fellows from countries in Asia with training at the National Food Research Institute (NFRI) in Tsukuba, Japan. In April four students from Bangladesh, Sri Lanka, Thailand, and Viet Nam successfully completed their training, and presented their research results at the Research Study Presentation and Award Ceremony (4 April).

Intensive Core Courses Students, 2017



Intensive Core Courses Students by Region, 2017

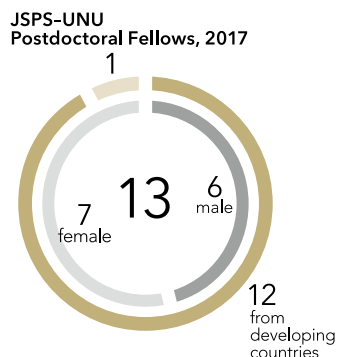


## Fellowships

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 organized by UNU and the Japan Society for the Promotion of Science (JSPS). JSPS-UNU Postdoctoral Fellows in 2017 conducted research on diverse policy-relevant topics, such as sustainable development governance, food security, low carbon technology transfer, bio-economy, education for sustainable development, assessment of flood damage, and urban sustainability assessment.

UNU-IAS Postdoctoral Fellowships are also awarded each year for a period of 12 months. During 2017 UNU-IAS hosted one fellow, whose research focused on urban water environments.



# 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 institutions on the continent. Between 2013 and 2017, a total of 45 students participated in the programme, each in one of 12 African countries. Nine new students were selected in May 2017, and have begun their studies in Botswana, Ghana, Kenya, Senegal, South Africa, Tanzania, Uganda, and Zambia. Their research topics span a wide range of fields including agriculture, education, history, physiotherapy, social medicine, and sociology. A reporting session was organized at UNU-IAS (26 May), in which 11 participants from the previous year of the programme presented their research findings, and reflected on their field experiences in Ethiopia, Ghana, Kenya, South Africa, Uganda, and Zambia.

## On-the-Job Research Capacity Building for Food Security and Environmental Conservation in Developing Countries (OJCB)

Completed in June, this initiative supported small capacity-building projects by scientists in developing countries, providing on-the-job training for young researchers. Funded by the Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF), and coordinated by UNU-IAS, it focused on increasing agricultural productivity through innovation, strengthening research capacity and building networks for cooperation between researchers — ultimately contributing towards food security and environmental conservation in developing countries.

Implementation of the final eight projects, involving 28 young researchers, was completed in May. The achievements of the six-year initiative were presented through the International Workshop on Capacity Building of Young Agricultural Researchers in Developing Countries, co-organized with MAFF (Tokyo, 8 June). Scientists from Benin, Kenya, and the Philippines shared the results of their OJCB research, and participants discussed the need for universities to combine education and on-the-job training.



# 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 80 public events were organized during 2017, including:

- International Symposium on Biodiversity and Sustainability: Linking People and Nature (12 March)
- International Symposium on Public Engagement for the Global Goals with a Special Focus on Sustainable Oceans (featuring HRH Crown Princess Victoria of Sweden, 19 April)
- SDG Dialogue: Global Companies & the 2030 Agenda (featuring speakers from Fuji Xerox, Unilever, and Toyota, among others, 20 April)
- Kanazawa Forum on Education and LGBT: SDGs as a tool for learning and inclusion (23 November)

## Publications

Publications by UNU-IAS researchers in 2017 included seven books and 31 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 2017:

- "Mainstreaming Socio-Ecological Production Landscape Management Approaches"
- "Enhancing Urban Water Resilience: Science-based Approaches and Strategies for Asian Megacities"
- "Local Governance of Production Landscapes: Learning from Japan's Noto Peninsula"
- "The Sustainable Development Goals and Regional Institutions: Exploring their Role in Asia and the Pacific"
- "Sustainable Smart Cities: Applying Complexity Science to Achieve Urban Sustainability"

## **Books**

Books produced by UNU-IAS researchers included:

- *Governing through Goals: Sustainable Development Goals as Governance Innovation* (MIT Press)
- *Socially Responsible Business: A Model for a Sustainable Future* (UNESCAP)
- *Strategies for Building Resilience against Climate and Ecosystem Changes in Sub-Saharan Africa* (Springer Singapore)
- *Sustainable Livelihoods in Socio-ecological Production Landscapes and Seascapes* (UNU-IAS & IGES)

## **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. The journal 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. In March, UNU-IAS organized an international symposium to mark the 10<sup>th</sup> anniversary of the journal, discussing the evolution of the journal and future research directions. Special features published during the year explored the role of sustainability science in achieving the SDGs, meeting Africa's challenges, and digitalization.

## **Online Outreach**

During 2017 the UNU-IAS website ([ias.unu.edu](http://ias.unu.edu)) received 0.45 million pageviews, with the top countries for visitors including India, Japan, Nigeria, the Philippines, and the United States. UNU-IAS also increased its social media presence, with over 6,100 "likes" on Facebook and 300,000 impressions on Twitter.

## **Media Coverage**

UNU-IAS work was featured by media outlets in Japan, Malaysia, and Sweden, among others. An op-ed article in *The Japan Times* on the importance of agrodiversity received considerable attention, and a public forum in Kanazawa on LGBT issues was widely covered by Japanese television and print media (23 November).

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

This joint initiative of UNU-IAS and the Ministry of the Environment of Japan (MOEJ) aims to engage with civil society organizations and foster multi-stakeholder partnerships for the realization of a sustainable society. It plays an important role in the communications and outreach efforts of UNU-IAS.

GEOC events during 2017 included the following:

- World Wetlands Day Symposium 2017 (4 February)
- The Second National Youth Environmental Activity Presentation Contest (5 February)
- A Conversation with Monique Barbut, UN Convention to Combat Desertification (UNCCD) Executive Secretary (8 February)
- International Year of Sustainable Tourism for Development — Talk and Poster Exhibition (21 February)
- International Symposium on Coral Reefs in Crisis (21 March)
- Symposium on Biodiversity and Sustainable Tourism: Discussing Interpretation in National Parks (13 May)
- "Wastecooking" film screening to mark World Food Day — with Mbuli Charles Boliko, Director of the Food and Agriculture Organization (FAO) Liaison Office in Japan (5 October)
- Achieving SDG 13: Climate Change & the Republic of Kiribati (20 October)
- Reporting Session of the CDP 2017 Japan Report on Climate Change, Water, Forests, & Commodities (24 October)
- SDG Panel Exhibition at Sophia University's UN Week (16–27 October)

# UNU-IAS Board Members, 2017

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

Chief Executive Officer of the South African National Biodiversity Institute

**Prof. Carl Folke** (Sweden)

Founder and 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 2017 meeting of the UNU-IAS Board was held on 19 October in Tokyo.

## Financial Support

Contributions over USD 20,000

- African Development Bank Group (AfDB)
- Asian Development Bank (ADB)
- Institute for Global Environmental Strategies (IGES)
- Ishikawa Prefectural Government
- Japan Educational Exchanges and Services (JEES)
- Japan Foundation for the United Nations University (JfUNU)
- Japan Science and Technology Agency (JST)
- Japan Society for the Promotion of Science (JSPS)
- Kanagawa International Foundation (KIF)
- Kanazawa City
- Keio University
- Kirin Holdings Company, Ltd.
- Ministry of Agriculture, Forestry and Fisheries, Government of Japan (MAFF)
- Ministry of Education, Culture, Sports, Science and Technology, Government of Japan (MEXT)
- Ministry of the Environment, Government of Japan (MOEJ)
- United Nations Environment Programme (UNEP)
- University of Tokyo
- University of Tromsø — The Arctic University of Norway

**End of Report**