

United Nations University
Institute for the Advanced Study of Sustainability

2016 Annual Report



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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



Since the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change, the focus of the international community has turned to implementation. As such efforts accelerate across the globe, UNU-IAS plays a more important role than ever, in developing interdisciplinary scientific knowledge and producing science-based inputs to inform policymaking.

Throughout last year UNU-IAS made important contributions to these and other international policy agendas. Our research on governance and the Sustainable Development Goals (SDGs) provided inputs for UN expert discussions including the High-Level Political Forum (HLPF) on sustainable development, and the drafting of the 2016 Global Sustainable Development Report. We launched our own SDG Dialogue event series, which brings together experts to share ideas and insights for achieving the global goals.

In Africa, our research and capacity building has been advancing sustainability through a number of projects and partnerships. At the Sixth Tokyo International Conference on African Development (TICAD VI) held in Nairobi last August, we organized four side events including a forum that brought together 120 young entrepreneurs and researchers from across the continent.

Last October UNU-IAS played an active role at the UN Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, advancing discussion of water and resilience issues in the context of the New Urban Agenda.

The institute also worked with member states, local communities and the Secretariat of the Convention on Biological Diversity (CBD) on efforts to achieve the CBD's Aichi Biodiversity Targets. In October UNU-IAS

organized the first Asian Conference on Biocultural Diversity (Nanao City, Ishikawa Prefecture, Japan), which explored links between biological and cultural diversity, and resulted in the adoption of the Ishikawa Declaration.

Priorities for 2017

UNU-IAS will continue to focus on three international policy areas: (i) the 2030 Agenda, (ii) biodiversity and ecosystem services, and (iii) climate change and disaster risk reduction.

In the first area, a key topic of research will be regional efforts to achieve the SDGs. We will be working with the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) and other partners to explore mechanisms for linking national and global initiatives. Existing country-level case study research in Asia will also be further developed and expanded to other regions. A new phase of our Education for Sustainable Development in Africa (ESDA) project will focus on entrepreneurship for sustainable industrialization, supported by the African Development Bank.

In the second international policy area, UNU-IAS research and capacity development will continue to advance the sustainable use of biodiversity and ecosystems. We will strengthen international collaboration on future scenarios to inform policymaking, contributing to the Future Earth global research initiative and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).

In the third area, UNU-IAS will contribute to implementing the Paris Agreement on climate change through research on the international transfer of low carbon technology, focusing on the needs of developing countries and on city-to-city initiatives. We will further develop research on innovative approaches to resilience building in cities, focusing on flooding and other water-related challenges.

As our postgraduate degree programmes continue to produce graduates uniquely equipped to address sustainability issues, we will be further strengthening partnerships with other leading universities in Japan and beyond, to provide new opportunities for students.

Through these initiatives and activities, UNU-IAS will continue to make important contributions to achieving the global goals and advancing global sustainability.

The work of UNU-IAS depends upon the support and commitment of our valued partners, donors, and friends, to whom I would like to express our sincere gratitude. I also wish to extend my thanks to the institute's staff, fellows, and students for their commitment and hard work.

With your ongoing support, I have no doubt that 2017 will be a year of further progress and success for UNU-IAS. I very much look forward to working with you this year and beyond, as we focus on the exciting opportunities and challenges ahead.

Kazuhiko (Kazu) Takemoto

Director, UNU-IAS

March 2017

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.

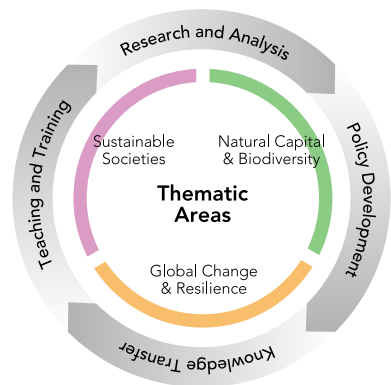
Our Approach

UNU-IAS research, education and training are directed towards issues of high policy relevance for the United Nations and its Member States. Our work is interdisciplinary, forward thinking and strategic, aiming to identify future sustainability challenges for policymakers. Collaborative partnerships are a critical foundation and distinguishing feature of all UNU-IAS work, combining in-house expertise with a global network of partner institutions.

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.

Our Approach



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 13). 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

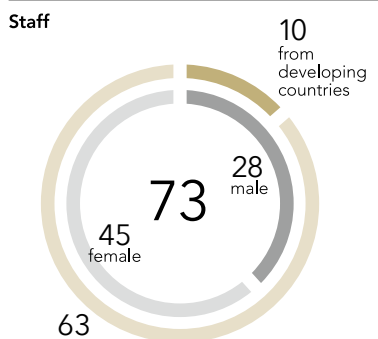
As of December 2016, UNU-IAS had a staff of 73. Of these, 10 were developing country nationals, and by gender the staff comprised 28 men and 45 women.

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 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 2016 meeting held on 27–28 October. A list of board members is provided on page 25.



Highlights



SUSTAINABLE DEVELOPMENT

The 2030 Agenda on Sustainable Development

During 2016 UNU-IAS continued to advance implementation of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). Research by the institute's Governance for Sustainable Development (GSD) project focused on the science-policy interface for the SDGs and the follow-up and review framework, providing inputs for UN expert discussions and the drafting of the 2016 Global Sustainable Development Report. A GSD side event was held at the High-Level Political Forum on Sustainable Development (HLPF) in New York, and a workshop on national implementation organized in Kuala Lumpur. New GSD research is focusing on regional institutions and multi-stakeholder partnerships, in close collaboration with the UN Economic and Social Commission for Asia and the Pacific (UNESCAP), with a workshop held in March 2017 at the Asia Pacific Forum on Sustainable Development in Bangkok. The UNU-IAS Education for Sustainable Development (ESD) project contributed to the 2030 Agenda as a key member of the UNESCO Global Action Programme on ESD, and through research and capacity building across the globe.

UNU-IAS also launched the SDG Dialogue event series, which brings together UNU-IAS researchers, invited experts and other stakeholders to share ideas and insights for achieving the SDGs. Topics to date have included education, local partnerships, water and resilience, and regional institutions.

Read more:

Governance for Sustainable Development ► pg. 10

Education for Sustainable Development ► pg. 10

SDG Dialogue event series ► pg. 23

BIODIVERSITY AND ECOSYSTEMS

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

Research and capacity development by the UNU-IAS Natural Capital and Biodiversity (NCB) programme promoted the conservation and sustainable use of biodiversity and ecosystems, supporting efforts to achieve the Aichi Biodiversity Targets of CBD. NCB research contributed to scientific assessments, including those of IPBES, and policymaking at the global, regional, and national levels. UNU-IAS played an active role in the 2016 UN Biodiversity Conference (including CBD COP13) in Cancun, presenting the research and activities of the institute's International Satoyama Initiative (ISI), Education for Sustainable Development (ESD), and Biodiplomacy Initiative projects in the plenary session and through a series of side events. These events also showcased the outcomes of the First Asian Conference on Biocultural Diversity, which was organized by the UNU IAS Operating Unit Ishikawa/Kanazawa (OUIK) in Nanao City, Ishikawa Prefecture, Japan. Focusing on links between biological and cultural diversity, this conference resulted in the adoption of the Ishikawa Declaration.

In March 2017, UNU-IAS organized the international symposium Biodiversity and Sustainability: Linking People and Nature, jointly with the University of Tokyo's Integrated Research System for Sustainability Science (IR3S). Experts discussed how to build societies in harmony with nature, protecting natural capital and helping to achieve the SDGs.

Read more:

Ecosystem Service Assessment ▶ pg. 12

International Satoyama Initiative ▶ pg. 12

Operating Unit Ishikawa/Kanazawa ▶ pg. 13



Katinka Weinberger of UNESCAP speaks at an SDG Dialogue event on regional implementation of the 2030 Agenda.

FOCUS ON AFRICA

The Sixth Tokyo International Conference on African Development (TICAD VI)

UNU-IAS played a prominent role in TICAD VI (Nairobi, August), through a series of events and activities. A forum and workshop on youth entrepreneurship for sustainable industrialisation in Africa brought together 120 young entrepreneurs and researchers from across the continent, organised as part of the institute's Education for Sustainable Development in Africa (ESDA) project. A UNU-IAS side event discussed how indigenous and local knowledge could be combined with modern science to build resilience, and showcased the "Ghana Model" developed by the institute's Enhancing Resilience to Climate and Ecosystem Changes in Semi-Arid Africa (CECAR-Africa) project. The new UNU-IAS book *Socio-ecological Production Landscapes and Seascapes (SEPLS) in Africa* was also presented, which explores case studies from six African countries. Other activities in the region included the launch of a new project examining the effects of competition between industrial and food crops on food security in Sub-Saharan Africa (FICESSA), with field surveys conducted in northern Ghana and Ethiopia. UNU-IAS organized an SDG Dialogue event in Tokyo that discussed Africa's pursuit of a more sustainable future, including efforts to implement the 2030 Agenda and the African Union's Agenda 2063.

Read more:

Education for Sustainable Development in Africa ► pg. 11

Enhancing Resilience to Climate and Ecosystem Changes in Semi-Arid Africa ► pg. 14

FOCUS ON CITIES

Habitat III and the New Urban Agenda

UNU-IAS contributed to Habitat III (the UN Conference on Housing and Sustainable Urban Development; Quito, Ecuador) and the New Urban Agenda that was adopted at the conference. As part of the institute's Water and Urban Initiative (WUI), an event with UN-Habitat focused on the role and management of water in cities, in the context of implementing the New Urban Agenda. UNU-IAS also organized an SDG Dialogue event at Habitat III, which explored concepts and approaches for strengthening urban water resilience. WUI research on eight Asian cities progressed, forecasting the future state of urban water environments and presenting findings to policymakers and other stakeholders. Other related research includes the Low Carbon Technology Transfer (LCT) project, which during 2016 focused on the role of city-to-city cooperation in facilitating diffusion of low carbon technology to developing countries.

Read more:

Water and Urban Initiative ► pg. 11

Low Carbon Technology Transfer ► pg. 14



Research & Policy Development

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



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). During 2016 its case studies examined renewable energy in Cambodia and Myanmar, food waste in Japan and Malaysia, and housing and eco-cities in Indonesia and Singapore. The GSD project provided inputs for UN expert discussions on issues such as the science–policy interface for the SDGs, the 2030 Agenda’s future follow-up and review framework, and the drafting of the Global Sustainable Development Report (GSDR). A GSD side event at the High-Level Political Forum on Sustainable Development (HLPF) in New York brought together leading scholars on global governance and the UN system to discuss the future science–policy interface for the 2030 Agenda (20 July).

A workshop focusing on national implementation of the SDGs in Asia was organized in Kuala Lumpur with the Sustainable Development Solutions Network (29 February – 1 March). GSD public symposiums in Tokyo addressed issues including the science–policy interface for the SDGs, the challenges and opportunities for national implementation, the SDGs in Japan, public partnerships, and the role of the G7. An SDG Dialogue event (13 October) launched a new phase of GSD research focusing on regional institutions and multi-stakeholder partnerships, in close collaboration with the UN Economic and Social Commission for Asia and the Pacific (UNESCAP). As part of this ongoing collaboration, a workshop was organized as a pre-event to the Asia Pacific Forum on Sustainable Development (28 March 2017).

Education for Sustainable Development (ESD)

The ESD project advances education and learning as a mechanism for engaging with and realizing the SDGs, contributing in particular towards goal 4, quality education. It comprises two flagship initiatives — the global network of 154 Regional Centres of Expertise (RCE) on ESD, and an alliance of 37 higher education institutions in the Asia-Pacific region, the Promotion of Sustainability in Postgraduate Education and Research Network (ProSPER.Net). The project has been working closely with UNESCO as a member of the Global Action Programme on ESD, with UNEP on the 10-Year Framework Programme (10YFP) on Sustainable Consumption and Production, and with the Asian Development Bank on training national policymakers.

During 2016 the project contributed to the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) through capacity building, and worked with the Association of Southeast Asian Nations (ASEAN) on its Environmental Education Action Plan and the 9th ASEAN+3 Leadership Programme. UNU-IAS and UNESCO organized a side event at the UN Biodiversity Conference (CBD COP 13) on educational partnerships for implementing the global biodiversity agenda (Cancun, 4–10 December), and participated in a GAP Partner Network Meeting (Paris, 2–4 July). Regional RCE conferences were held in Africa (Kenya, August), the Americas (Brazil, October), the Asia-Pacific (Thailand, 27 June – 2 July), and Europe (UK, June), as well as the 10th Global RCE Conference (Yogyakarta, November). A ProSPER.Net forum discussed the role of higher education in achieving the SDGs (Tokyo, 10 July) and the ProSPER.Net Leadership Programme trained 34 participants on sustainable development challenges in Malaysia (Sabah, 7–14 August).

Education for Sustainable Development in Africa (ESDA)

The ESDA project promotes capacity building for sustainability in Africa, by leading the development of three collaborative master's degree programmes established by eight leading African universities. By the end of 2016 a total of 14 graduates had completed these programmes. The ESDA project includes a Next-Generation Researcher (NGR) initiative, which supports research collaboration on sustainable development by young scholars in Africa and Asia. On 2 May the African Development Bank (AfDB) approved new funding for the project, which will strengthen field-based research by ESDA students and advance the NGR initiative. Among the new activities initiated with this support is a Sustainable Development Workshop series, to be organized by the eight partner universities over the next 2 years, which will produce textbooks on sustainable development in Africa, particularly for the ESDA master's degree programmes.

New ESDA research on youth entrepreneurship development for sustainable industrialization was launched through workshops for young African entrepreneurs in Cape Town (March) and Nairobi (August). The initiative was presented and endorsed at the Sixth Tokyo International Conference on International Development (TICAD VI) through the Youth Entrepreneurship Forum (Nairobi, 28 August), a side event organized by UNU-IAS, the Government of Kenya, and AfDB. Follow-up activities include a web-based Africa Youth Entrepreneurship Platform, university-based incubation systems, and a potential fourth ESDA master's degree programme focusing on youth entrepreneurship development — an “African MBA”.

Water and Urban Initiative (WUI)

The WUI project contributes to sustainable urban development by creating scientific tools to forecast the future state of urban water environments. It builds capacities in developing countries in Asia to achieve the SDGs, with a focus on climate change, population growth, urbanization, and low-carbon approaches. Through the WUI project UNU-IAS actively engaged in the Habitat III process (UN Conference on Housing and Sustainable Urban Development, Quito, 17–20 October). Two WUI events at Habitat III, one of which was co-organized with UN-Habitat, considered issues of water and resilience in the context of the New Urban Agenda that was adopted at the conference.

During 2016 case studies of eight Asian cities progressed, with the results of simulations for Jakarta published, and simulations for Hanoi, Manila, and Kathmandu underway. The research scope was expanded to include the economic value of flood damage and improved water quality, as well as the impacts of implementing low-carbon technologies in wastewater management. Project findings were shared and discussed with researchers, policymakers, and other stakeholders through WUI workshops in Jakarta (March), Chennai and Lucknow (October), and Hanoi (November).

Grant for Global Sustainability (GGS)

Through the GGS project UNU-IAS supports research initiatives contributing to the 2030 Agenda. UNU-IAS conducted a competitive selection process and awarded grants financed by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) for two successful proposals. Researchers at Hiroshima University are developing an inclusive education model for countries in Africa and Asia, and researchers at Kyoto University are investigating enhanced urban disaster resilience through local participation. The progress of these initiatives was presented in a reporting event at UNU-IAS (11 October).



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 and future scenarios to support policymaking for their conservation and sustainable use. In March, research was completed on local governance of ecosystems, focusing on *satoyama* (socio-ecological production landscapes) in Japan's Noto peninsula. The research findings were published in international journals and contributed to ecosystem services assessments, including those of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES).

New research was initiated on Predicting and Assessing Natural Capital and Ecosystem Services (PANCES), which aims to apply an integrated social-ecological systems approach. Plenary meetings brought together over 60 experts from 25 universities and research institutes (3 April and 5–6 July), and a dialogue with local governments and stakeholders (3–5 August) focused on future scenarios up to the year 2050 incorporating changes in climate, depopulation and ageing, globalization, and technological innovation. UNU-IAS organized an international conference on biodiversity and ecosystem service scenarios in Montpellier, France (24–26 August) and a workshop in Victoria, Australia (1–5 February), both as part of the Biodiversity and Ecosystem Service Scenarios Network (ScenNet), which strengthens national and international collaboration on future scenarios. UNU-IAS has also been playing an active role in the scientific assessment process for IPBES, with several researchers serving as coordinating lead authors and lead authors for global and regional assessments.

International Satoyama Initiative (ISI)

This project undertakes research and networking for the sustainable management of socio-ecological production landscapes and seascapes (SEPLS), and serves as the secretariat of the 202-member International Partnership for the Satoyama Initiative (IPSI). The project develops policy-relevant information for international processes such as the Convention on Biological Diversity (CBD) and IPBES, and during 2016 it contributed directly to the UN Biodiversity Conference (including CBD COP 13, 4–17 December) held in Cancun, Mexico. The role of UNU-IAS and the Satoyama Initiative was highlighted in plenary discussion at the conference, and two ISI side events focused on biodiversity and human well-being, and funding mechanisms for mainstreaming biodiversity.

ISI publications during 2016 included the second volume of the Satoyama Initiative Thematic Review, the research report *SEPLS in Africa*, and an issue brief on integrated landscape approaches produced in collaboration with the Institute for Global Environmental Strategies (IGES). Events included the Sixth IPSI Global Conference (IPSI-6; Siem Reap, Cambodia, 12–14 January), the Satoyama Initiative Regional Workshop in Peru (Cusco, 27–29 June), a Parallel Session at the 8th International Forum for Sustainable Asia and the Pacific (ISAP2016; Yokohama, 13 July), a side event at TICAD VI (Nairobi, 25 August), and sessions at the IUCN World Conservation Congress (Honolulu, 1–10 September).

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. As part of research on coastal forest management focusing on case studies in Japan, Myanmar, and the Philippines, a synthesis workshop was held in Bohol island, the Philippines (27 May – 1 June). Further research initiated in August 2015 is leading towards a results-oriented method for periodical monitoring and evaluation of activities aimed at conserving biodiversity and for its sustainable use, through a multi-stakeholder governance approach in SEPLS in Japan. As well as field surveys and meetings in several locations across Japan, workshops on satoyama resilience indicators were organized in Suzu City, Ishikawa Prefecture (2 February) and in Minabe-cho, Wakayama Prefecture (5 October). Stakeholders meetings on conservation and sustainable use of agricultural biodiversity were held in conjunction with these workshops, and also in Yasu City, Shiga Prefecture (7 February). The initial research results were presented at CBD COP 13 (Cancun, 6 December).

Operating Unit Ishikawa/Kanazawa (OUIK)

Since its establishment in 2008, this UNU-IAS unit has been supporting 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. During 2016, OUIK continued to promote a biocultural diversity approach, supporting local implementation of international designation systems such as the FAO's Globally Important Agricultural Heritage Systems (GIAHS), and UNESCO's Man and the Biosphere (MAB) Programme and Creative Cities Network (UCCN).

OUIK organized the 1st Asian Conference on Biocultural Diversity (27–29 October, Nanao City, Japan), together with UNESCO, the CBD secretariat, Ishikawa Prefectural Government, and Nanao City. The conference promoted integrated approaches, partnerships, and mutual learning for the sustainable use of biocultural resources, resulting in the Ishikawa Declaration on Biocultural Diversity. UNU-IAS shared the outcomes of the conference at CBD COP 13, and contributed to a high-level discussion at Summit “Muuchtanba!” on Indigenous Experiences: Traditional Knowledge, Biological and Cultural Diversity” (9–11 December). The unit published two books: *Satoumi Movement — Passing on Wisdom of Living with the Sea*, which compiles a series of lectures on the role of *satoumi* (socio-ecological production seascapes), and *Mount Hakusan Biosphere Reserve — Creating a New Path for Communities and Nature*.

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 working to advance poverty reduction and sustainable development. Key project partners include the UNU-IAS ESD project (see page 10) and the UNU International Institute for Global Health (UNU-IIGH). During 2016 the project participated in expert groups of IPBES, WIPO, CBD, and the UN Global Forum on Oceans, Coasts and Islands. The project contributed to CBD COP 13 through the side event Bridging the Science–Policy Gap for Biodiversity and Human Health: From Science to Practice (7 December), co-organized with the CBD secretariat, WHO, UNU-IIGH, and others.





3 Global Change and Resilience

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

Working with the UNU Institute for Natural Resources in Africa (UNU-INRA) and other leading research institutes in Ghana and Japan, CECAR-Africa aims to combine climate change and ecosystem change research to build an integrated resilience enhancement strategy. On 14–15 March a meeting was held in Tokyo to co-design this strategy, or “Ghana Model”, and its implementation for study areas in Ghana.

The CECAR-Africa project contributed to the Sixth Tokyo International Conference on African Development, organizing a side event on Enhancing Resilience against Climate and Ecosystem Changes in Sub-Saharan Africa through Utilizing Indigenous and Local Knowledge (Nairobi, 25 August), in collaboration with the University of Tokyo, the University of Nairobi, and Kenyatta University. The project’s annual Joint Coordination Committee meeting was also held in Accra, Ghana (22 August), bringing together the funders and partner institutions as well as government ministries. Research by UNU-IAS postgraduate students plays an important role in the project, and during 2016 two PhD students and four MSc students working on CECAR-Africa successfully completed their courses.

Low Carbon Technology Transfer (LCT)

This project advances strategies and builds partnerships for diffusion of low carbon technology to developing countries, focusing on Asia. A collaboration with the Institute for Global Environmental Studies (IGES) and the Asian Institute of Technology, it analyses existing international cooperation on low carbon technology, the strategies of developed countries, and the needs of recipients in developing countries.

A workshop at the International Forum for Sustainable Asia and the Pacific (ISAP 2016; Yokohama, 13 July) considered platforms for technology transfer, with the results to be published in a forthcoming UNU-IAS policy brief. The project also analysed bilateral cooperation through interviews with experts in France, Germany, India, Indonesia, and the United Kingdom, as well as field visits. Research on city-to-city cooperation and its role in facilitating technology transfer at the sub-national level was advanced through a workshop at the 2016 Climate Chance summit (Nantes, 27 September). An international workshop in Tokyo (30 November) brought together experts from Europe, Indonesia, and Japan to synthesise and refine the project’s findings, which were submitted to the Ministry of the Environment, Japan in early 2017. The project supported two UNU-IAS master’s degree students in their studies and thesis research.

Fukushima Global Communication (FGC) Programme

Completed in 2016, this research initiative examined the human and social impacts of the March 2011 triple disasters in Japan, and related issues of disaster recovery and risk communication from an international perspective. The project was actively engaged in the global disaster risk reduction (DRR) policy agenda, and contributed to the development of the global Sendai Framework for Disaster Risk Reduction 2015–2030.



In March 2016, FGC policy recommendations on risk communication related to nuclear accidents were published in the UNU-IAS Policy Brief *Nuclear Disasters and Risk Communication: Learning from Fukushima*. The final report of the project was published in August, in both English and Japanese, presenting findings and policy recommendations from three years of FGC research. Other outputs of the project included several peer-reviewed journal articles, two other UNU-IAS Policy Briefs and a series of 21 working papers. The outcomes of the project were also shared with the local population in Fukushima through a public seminar (Fukushima City, 16 February), which received coverage in the local and national media.

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

This project examines competition between industrial crops and food crops in Africa, and how this competition can affect food security, 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.

During 2016 field surveys were conducted in Ghana, Malawi, and Ethiopia. In January UNU-IAS and the University of Massachusetts Boston (UMass Boston) conducted a joint visit to Ethiopia, resulting in an agreement with Addis Ababa University (AAU) on future teaching collaboration between the three universities. The project's annual workshop was organized (Tokyo, 13–14 October), as well as a FICESSA session on Collective Action for Ecosystem Management and Food Security Sustainance in Africa at the African Ecosystem Partnership Conference 2016 (Nairobi, 21–25 November). A workshop in South Africa explored future scenarios for industrial crops and food security in Africa (Stellenbosch, 1 March), which was also part of the ScenNet project (see page 12).



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 to strengthen governance and policies for sustainable development. Implemented since 1996, the project's seventh phase began in November 2015, with the outcomes of the previous phase then presented at the 25th Symposium on Environmental Chemistry in Niigata, Japan (8–10 June). A training course was held in Kyoto for young scientists from 9 countries in Asia, developing skills for analysis of POPs in surface water, sediment, and biota (12–15 July). Participants then applied these skills to assess contamination levels, and contributed to local, national, regional, and global decision-making processes.



A man with dark hair, wearing a light-colored striped button-down shirt, is sitting at a desk. He is looking directly at the camera with a thoughtful expression. His hands are resting on the desk in front of him. The background is a plain, light-colored wall.

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 strengthen the capacities of academic and scientific communities around the globe, particularly in developing countries. The degrees are taught by a diverse faculty comprising both UNU-IAS academic staff and guest lecturers from other leading academic institutions and international organizations. 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, and Japan International Cooperation Agency (JICA) allow students access to the libraries and online collections of each institution.

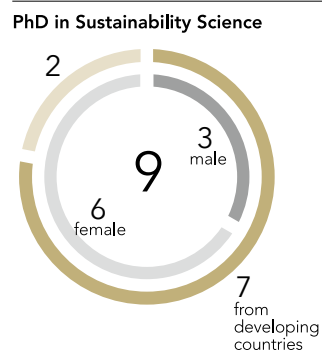
During 2016, new credit exchange agreements were finalized with the University of Tokyo's Graduate School of Arts and Sciences (January), and Graduate School of Public Policy (March). UNU-IAS was also included by JICA in its Pacific Leaders' Educational Assistance for Development of State (Pacific-LEADS) initiative that provides scholarships to students from the Pacific Islands, who will now be eligible to study in the UNU-IAS master's degree programme.

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 75 graduates since September 2010.

Students can take courses at UNU-IAS and partner universities in Japan, and are eligible for a joint diploma offered by UNU-IAS and the University of Tokyo Graduate School of Frontier Sciences (UT-GSFS) on Sustainability. 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.

In September, seven new students were enrolled in the Master of Science in Sustainability programme, with one receiving a scholarship provided by the Japan Foundation for UNU (JFUNU), and two receiving Asian Development Bank scholarships. These scholarships are provided for outstanding students from developing countries with a need for financial assistance. Seven master's degree students successfully completed the programme in 2016, graduating in July.



Student Enrolment (as of December 2016)

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. 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 PhD diploma on Sustainability, developed by UNU-IAS and the University of Tokyo Graduate School of Frontier Sciences (UT-GSFS), is also available to students of the programme.

In September, two new students were enrolled in the PhD in Sustainability Science, both of whom are receiving scholarships from JFUNDU. Two students successfully completed their studies under the pro-

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.

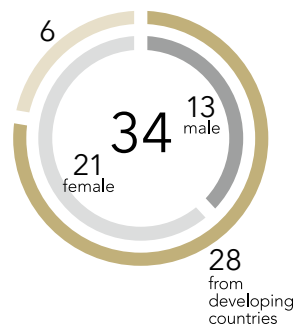
UNU Intensive Core Courses

A total of 34 students participated in these courses at UNU-IAS in Tokyo (5–30 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 relevant fields. 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.

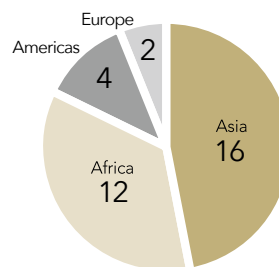
Three courses were offered over the four-week period:

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

Intensive Core Courses Students, 2016



Intensive Core Courses Students by Region, 2016



UNU Global Seminar — Shonan Session

The UNU Global Seminar — Shonan Session has been held annually since 1985 in Shonan, Japan, aiming to enhance awareness about global issues and the role of the United Nations in addressing them. The 32nd session was held from 30 August to 2 September, on the topic “Global Society and the Rule of Law”. A total of 81 undergraduate and postgraduate students from Japanese universities participated, with keynote lectures delivered by Hisashi Owada (Judge and Former President of the International Court of Justice) and Vesselin Popovski (Vice Dean of the Law School at Jindal Global University, India). The session is organized by UNU-IAS and the Kanagawa International Foundation, in cooperation with 10 universities within Japan and with the support of the Japan Foundation for UNU (JFUNU).

UNU–Kirin Fellowship Programme

Each year the UNU–Kirin Fellowship Programme provides fellows from countries in Asia with training at the National Food Research Institute (NFRI) in Tsukuba, Japan over 12 months. During 2016 five students from Bangladesh, Cambodia, Indonesia, Thailand, and Viet Nam successfully completed their training, and presented their research results at the Research Study Presentation and Award Ceremony (8 April). Four new students from Bangladesh, Sri Lanka, Thailand, and Viet Nam commenced their training in April.



Fellowships

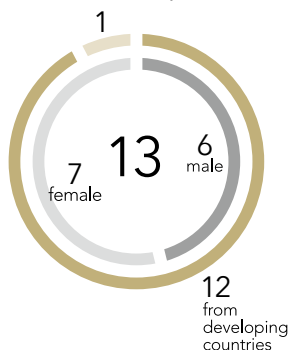
UNU-IAS offers Postdoctoral Fellowships to provide young scholars and policymakers, especially those from the developing world, with opportunities to pursue advanced research and training that is of direct relevance to the institute's research agenda. Fellows participate in UNU-IAS lectures, seminars,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



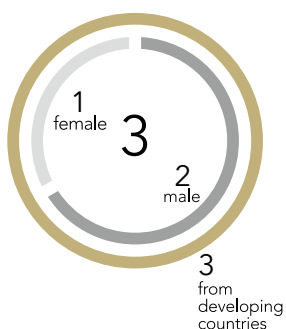
The 24-month JSPS-UNU Postdoctoral Fellowships are jointly organized by UNU and the Japan Society for the Promotion of Science (JSPS). JSPS-UNU Postdoctoral Fellows in 2016 conducted research on diverse policy-relevant topics, such as sustainable development governance, sustainable landscape management, urban water environments, and low carbon technology.

UNU-IAS Postdoctoral Fellowships are also awarded each year for a period of 12 months. During 2016 research by these fellows contributed to several UNU-IAS projects, on topics including urban health co-benefits, urban flood analysis, and river pollution monitoring.

**JSPS-UNU
Postdoctoral Fellows, 2016**



**UNU-IAS
Postdoctoral Fellows, 2016**



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 2015, a total of 24 students participated in the programme, each in one of nine African countries. These outcomes were presented through a symposium at UNU-IAS (16–18 February), jointly organized with the Japan-Africa Academic Network (JAAN). A reporting workshop was organized in Tokyo for students who participated in the 2016 programme to share their research and experiences (8 June). Eleven new students were selected in June–July, and have begun their studies 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)

This initiative supports capacity building projects by leading 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 aims to increase agricultural productivity through innovation, strengthen research capacity, and build networks for cooperation between researchers — ultimately contributing towards food security and environmental conservation in developing countries. In August, 8 new projects were selected for implementation, involving 28 young researchers, to be completed by 31 May 2017. The achievements of the initiative were presented at the Sixth Tokyo International Conference on African Development (TICAD VI) in Nairobi through a side event co-organized with Masinde Muliro University of Science and Technology and MAFF (26 August).



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.

SDG Dialogue Event Series

Launched in 2016, this event series provides a public platform for advancing discussion and partnerships on the Sustainable Development Goals (SDGs), while showcasing UNU-IAS research and policy recommendations. *SDG Dialogue* events bring together UNU-IAS researchers, invited experts, and other participants to share ideas and insights for achieving the global goals, through interactive dialogue and networking.

Seven SDG Dialogue events were organized during 2016, including:

- Regional Institutions and the SDGs: Science, Policy, and Capacity Building (Tokyo, 13 October)
- Resilience within Water Systems: The Quest for Strategies and Innovations in the Anthropocene (Quito, 17 October)
- A Sustainable Future for Africa (Tokyo, 28 October)

Publications

Publications by UNU-IAS researchers in 2016 included seven books and 19 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.

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.



Four UNU-IAS Policy Briefs were published during 2016:

- "Climate Change Education: From Critical Thinking to Critical Action"
- "Nuclear Disasters and Risk Communication: Learning from Fukushima"
- "Unmaking Disasters: Education as a Tool for Disaster Response and Disaster Risk Reduction"
- "Sustainable Urban Water Environments in Southeast Asia: Addressing the Pollution of Urban Waterbodies in Indonesia, the Philippines, and Viet Nam"

Books

Books published by UNU-IAS researchers included:

- *Governing Cambodia's Forests: The International Politics of Policy Reform* (NIAS Press)
- *Low Carbon Urban Infrastructure Investment in Asian Cities* (Palgrave Macmillan)
- *Monitoring and Governance of Persistent Organic Pollutants in Asia* (UN Publications)
- *Urbanization and Climate Co-Benefits: Implementation of Win-Win Interventions in Cities* (Routledge)

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 trans-disciplinary academic structure and discovery process that fuses the natural sciences, social sciences, and humanities. In 2016 the journal marked its 10th anniversary, by looking back on its achievements and discussing future research directions for the next decade.

Online Outreach

During 2016 the UNU-IAS website (ias.unu.edu) received 0.46 million pageviews, with the top countries for visitors including Japan, India, the United States, Pakistan, and Nigeria. During the year UNU-IAS also increased its social media presence, with over 5,500 “likes” on Facebook.

Media Coverage

UNU-IAS work was featured by media outlets in Bhutan, India, Ghana, Japan, and Nepal, among others. Japanese media coverage included articles in the *Mainichi Shimbun*, as well as television news programmes.

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. A symposium in October marked 20 years of GEOC activities, focusing on local partnerships for the SDGs. GEOC also organized poster exhibitions at UNU-IAS events throughout the year, to raise awareness of the SDGs and biodiversity issues.

Other GEOC events during 2016 included the following:

- 2nd National Youth Environmental Activity Presentation Contest (13–14 February)
- Sixth World Parks Congress Report Back Seminar (24 February)
- Economics for People and the Planet — Saviour or Problem? (16 March)
- Conserving Biocultural Diversity; Case Study of UNESCO Biosphere Reserves (11 May)
- Symposium on International Day for Biological Diversity: Mainstreaming Biodiversity (21 May)
- Challenges to Achieving the SDGs — Biodiversity, Agriculture, and Technology (15 July)
- Act for 1.5°C: Entry into Force of the Paris Agreement (4 November)
- Japan UNEP Forum 2016: The Future of Forests and Water (22 November)
- Water Style Summit with CDP's Japan Water Forum 2016 (5 December)
- Achieving Sustainable Local Communities through Partnerships with the Private Sector & Local Governments (15 December)

UNU-IAS Board Members, 2016

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 Co-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 and President of the Science Council of Japan

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 2016 meeting of the UNU-IAS Board was held on 27–28 October in Tokyo.

Financial Support

- African Development Bank
- Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet)
- Asia-Pacific Network for Global Change Research (APN)
- City of Kanazawa
- Department of the Environment, Government of Australia
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
- Ink Cartridge “Satogaeri” Project
- Institute for Global Environmental Strategies (IGES)
- Ishikawa Prefectural Government
- Japan Educational Exchanges and Services
- Japan Foundation for UNU
- Japan Science and Technology Agency
- Japan Society for the Promotion of Science
- Kanagawa International Foundation
- Kirin Holdings Company, Ltd.
- Ministry of Agriculture, Forestry and Fisheries, Government of Japan
- Ministry of Education, Culture, Sports, Science & Technology, Government of Japan
- Ministry of the Environment, Government of Japan
- Nippon Koei Co., Ltd.
- The Christensen Fund
- The University of Tokyo
- United Nations Environment Programme (UNEP)

End of Report