



IIASA Overview

The International Institute for Applied Systems Analysis (IIASA) is an independent, international research institute with National Member Organizations in Africa, the Americas, Asia, and Europe. Through its research programs and initiatives, the institute conducts policy-oriented research into issues that are too large or complex to be solved by a single country or academic discipline.

This includes pressing concerns that affect the future of all of humanity, such as:

- Climate change
- Energy security
- Sustainable development
- Population
- Food and water security
- Biodiversity
- Landuse

More info:

www.iiasa.ac.at/infokit

National Member Organizations

IIASA was established in 1972 during the Cold War to build scientific bridges between East and West. Today, its members and funders span the globe. Countries are represented by their National Member Organizations which are part of the IIASA governing Council and provide or facilitate the core funding of the institute.



Annual budget

The annual budget in 2019 was **€23,1 million**, of which 49% was from prestigious research funding agencies in member countries spanning Africa, the Americas, Asia, and Europe.

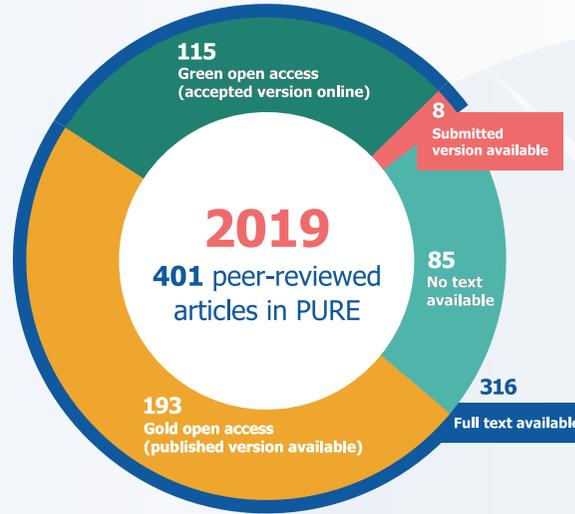
€11,35m

€11,74m

Combined with other member contributions.

Supplemented by additional contracts and grants and other income.

Publications and open access



In 2019 there were **401** peer-reviewed journal articles written in collaboration with **1,062** coauthors from **158** institutions in **64** countries and regions.

The IIASA research themes find solutions to global problems through applied systems analysis

IIASA has strategic research themes. The outer circles show the current nine research programs. The inner circle represents integrated research activities at IIASA. Importantly, the diagram shows how each of the research programs intersect and contribute to these integrated projects, an increasing focus of IIASA research.



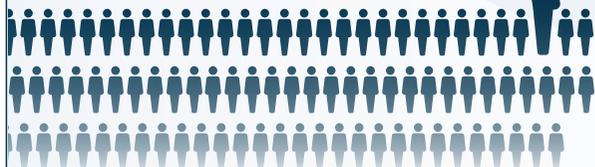
Young Scientists Summer Program (YSSP)

The renowned IIASA YSSP allows students to work alongside distinguished IIASA researchers for three months, gaining new insight into their own field of research as well as those of the institute.



Since 1977
2,020 young scientists from
90 countries

have benefitted from the program.



In 2019 there were
19 postdocs at IIASA



Together, they made up a global network with over **785** partner institutions.

Our people

In 2019, **417** researchers from **52** countries worked at IIASA,



1,589 collaborators visited the institute,



and **4,267** alumni from **100** countries



Postdoctoral program



The IIASA postdoctoral program aims to encourage and promote the development of early-career researchers. The fellowships offer them the opportunity to gain hands-on professional research experience in a highly international scientific environment. In return, they enrich the intellectual environment at IIASA and help achieve research goals.

Selected impacts



IIASA and partners researched the impacts of **land-use change** and related greenhouse gas emissions from biofuel feedstocks consumed in the European Union (EU). This provided inputs into the revisions of the **EU Renewable Energy Directive**, which introduced biofuel sustainability criteria for all biofuels produced or consumed in the EU.



IIASA published the **Global Energy Assessment (GEA)**, the first ever fully integrated assessment of policy measures on energy security, air pollution, and climate change.



IIASA contributed 12 of the lead authors from a total of 91 authors and 133 contributing authors from 40 countries for the **Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5°C**, which highlights the strong benefits to humanity and ecosystems of keeping global warming to 1.5°C above pre-industrial levels.



IIASA researchers provided the analysis behind the **European Clean Air policy**, which became law in 2016 and aims to reduce health impacts of pollution by 50% compared to 1990 levels in 2030. The research is based on the **GAINS** model which is being applied in other parts of the world including China, India, and Vietnam.



IIASA codeveloped and hosts the database for the **Representative Concentration Pathways (RCPs)**, equipping the climate change research community with common greenhouse gas emissions data.



Analysis from the **IIASA Catastrophe Simulation (CATSIM)** model is being used as part of the rationale for the Loss and Damage Mechanism of the **UN Framework Convention on Climate Change (UNFCCC)**.



IIASA developed new measures for understanding population aging that were incorporated by the UN Population Division into UN data and used in the **UN World Population Ageing report 2017**.

Selected publications

IIASA produces world class science, which is regularly published in high-impact publications. A selection of articles (co)authored by IIASA researchers and published in *Nature* and selected other Nature Publishing Group (NPG) journals, *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), and *Science* is presented here. Publication statistics are also included to show the number of IIASA publications in recent years.



Nature

A new scenario logic for the Paris Agreement long-term temperature goal

Rogelj J, Huppmann D, Krey V, Riahi K, Clarke L, Gidden M, Nicholls Z, & Meinshausen Malte (2019). *Nature* 573 (7774): 357-363. DOI:10.1038/s41586-019-1541-4. [pure.iiasa.ac.at/16075]

Nature Climate Change

Changing risks of simultaneous global breadbasket failure

Gaupp F, Hall J, Hochrainer-Stigler S, & Dadson S (2019). *Nature Climate Change* 10: 54-57. DOI:10.1038/s41558-019-0600-z. [pure.iiasa.ac.at/16205]

Nature Communications

Global resource potential of seasonal pumped hydropower storage for energy and water storage

Hunt J, Byers E, Wada Y, Parkinson S, Gernaat DEHJ, Langan S, van Vuuren DP, & Riahi K (2020). *Nature Communications* 11 (1): e947. DOI:10.1038/s41467-020-14555-y. [pure.iiasa.ac.at/16301]

Nature Energy

Energy requirements for decent living in India, Brazil and South Africa.

Rao N, Min J, & Mastrucci A (2019). *Nature Energy* 4: 1025-1032. DOI:10.1038/s41560-019-0497-9. [pure.iiasa.ac.at/16174]

Nature Geoscience

Field-experiment constraints on the enhancement of the terrestrial carbon sink by CO₂ fertilization

Liu Y, Piao S, Gasser T, Ciais P, Yang H, Wang H, Keenan TF, Huang M, et al. (2019). *Nature Geoscience* DOI:10.1038/s41561-019-0436-1. [pure.iiasa.ac.at/16069]

Proceedings of the National Academy of Sciences of the United States of America (PNAS)

Population aging, migration, and productivity in Europe

Marois G, Bélanger A, & Lutz W (2020). *Proceedings of the National Academy of Sciences*: e201918988. DOI:10.1073/pnas.1918988117. [pure.iiasa.ac.at/16389]

Science

Granular technologies to accelerate decarbonization

Wilson C, Grubler A, Bento N, Healey S, De Stercke S, & Zimm C (2020). *Science* 368 (6486): 36-39. DOI:10.1126/science.aaz8060. [pure.iiasa.ac.at/16400]

● Peer-reviewed articles in PURE ● IIASA publications in PURE
○ Citations of IIASA publications according to SCOPUS

