Gender Summits®
Quality Research and Innovation through Equality

Parallel Session: Starting a career in Exact Sciences:
How to promote the participation of women?

The Women for Science Program of IANAS: Capacity building for women in the scientific work in the Americas

Juan Pedro Laclette

IANAS

Inter American Network of Academies of Science (IANAS) and
Universidad Nacional Autónoma de México (UNAM)

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GENDER BIAS IN MATHEMATICS: Workshop on Numerical Mathematics, Germany.

Only 5 Women out of 43 participants!

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IANAS - Inter-American Network of Academies of Sciences.
We are the Academies of Sciences of the Americas...
We are Scientists, Doctors, Engineers and experts of different fields working together addressing challenges on Water, Energy, Food Security, Science Education and Gender Equity in the Americas.
Read more

Founded in the spirit of IAP in May 2004, the main objectives of the network are:

1. to assist in the building of national scientific capacities by strengthening science and technology relationships among the countries of the Americas, as a tool for societal development;
2. to cooperate in building capacities of the Academies of the region, through exchange of information and experience;
3. to aid in the creation of new Academies in those countries of the Americas desiring assistance in the establishment of a Science Academy; and
4. to influence the scientific decision-making processes in the Americas, with the goal of promoting prosperity and equity in the hemisphere.

Linking and strengthening the scientific community in the hemisphere, IANAS believes it may play a major role in contributing to the promotion of scientific capacity and excellence for sustainable development in the Americas.

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IANAS MEMBERS

North America

The Royal Society of Canada : The Academies of Arts, Humanities and Sciences of Canada

US National Academy of Sciences

Mexican Academy of Sciences

Regional Members

Latin American Academy of Science

Caribbean Academy of Sciences

Caribbean Scientific Union

Central America and the Caribbean

Cuban Academy of Science

Academy of Sciences of the Dominican Republic

Academy of Medical, Physical and Natural Sciences of Guatemala

National Academy of Sciences of Costa Rica

Nicaraguan Academy of Sciences

Panamanian Association for the Advancement of Science

National Academy of Sciences of Honduras

Observer

National Academy of Sciences de Cordoba, Argentina

South America

Academy of Physical, Mathematical and Natural Sciences of Venezuela

Colombian Academy of Exact, Physical and Natural Sciences

Brazilian Academy of Sciences

National Academy of Sciences of Peru

National Academy of Sciences of Bolivia

Chilean Academy of Science

National Academy of Exact, Physical and Natural of Argentina

The National Academy of Sciences of the Oriental Republic of Uruguay

Academy of Sciences of Ecuador

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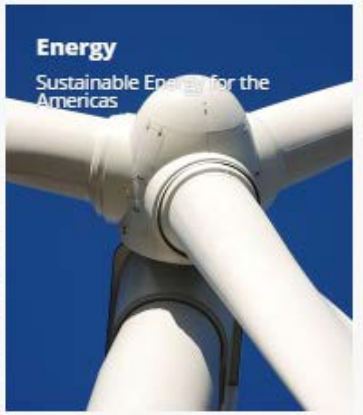
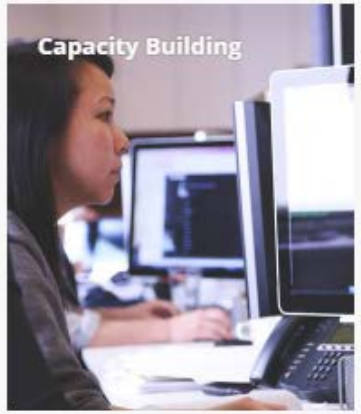
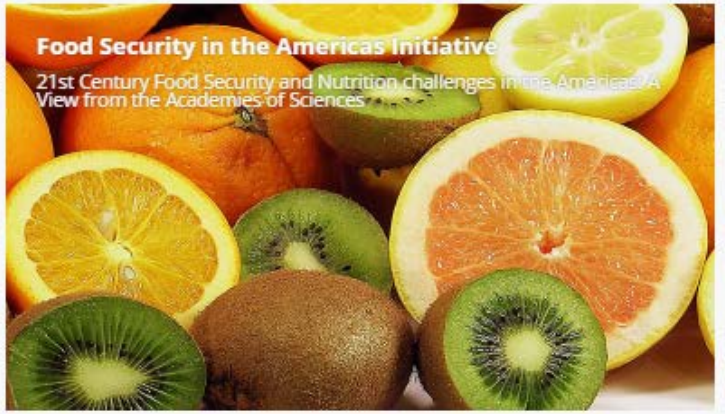
6 PROGRAMS







OTHER INTERNATIONAL SCIENTIFIC ORGANIZATIONS

AAAS iap ICSU Organization of American States twas

IANAS Woman for Science Program: Capacity building for women in the scientific work in the Americas

Co-Chairs:

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Mónica Moraes (Bolivia)

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- WfS-WG Committees

Vision and Mission of the IANAS WfS-Program

- The IANAS WfS-WG has the mandate to advise IANAS and its member academies on fostering a climate in the sciences that is welcoming to women.
- It develops actions that increase the visibility of the contributions of women scientists and engineers in the region and provides these women with opportunities for networking by means of the WfS-Program web site.
- WfS-WG alerts and advises IANAS on gender aspects of its programs and initiatives: those aspects that affect men and women differently. It does this by appointing liaisons to each of the IANAS Programs; and by providing links to gender resources for each program on the WfS web page.
- WfS-WG members are associated with North American, Latin American and worldwide organizations that focus on engaging and empowering women in S&T.

IANAS WfS-Program Working Plan

GOAL
Advise and inform IANAS, its academies and its programs on gender issues

Challenge

- **Objective 1.1** WfS-WG appoints liaisons to all other IANAS programs.
  Objective 1.2 On request, WfS-WG organizes gender-related sessions at meetings of IANAS and its programs.
  Objective 1.3 On its Web page, WfS-WG provides resources on gender issues for IANAS and each of its programs.

Answers

- Two publications of the IANAS Water Program and Energy Program had included special chapters about the relationship between Gender, Water and Energy
- www.ianas.org
  http://www.ianas.org/index.php/programs/women-for-science/88-programs/women-for-science/320-gender-issues-in-ianas-and-its-programmes

Example: Objective 1.1 WfS-WG appoints liaisons to all other IANAS programs.

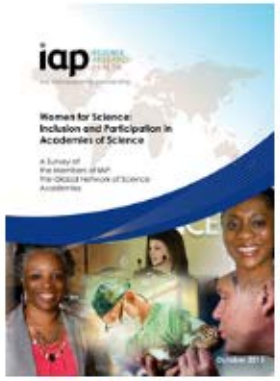
Women: the largest underserved subpopulation*

1.2 billion of people living under 1 USD per day
(70% are women)

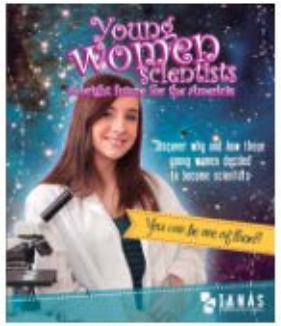
People living in rural areas and urban poverty belts are mostly women, because men move away to follow job opportunities

*Patricia Taboada-Serrano
Liaison of the IANAS WfS-WG
to the IANAS Energy Program

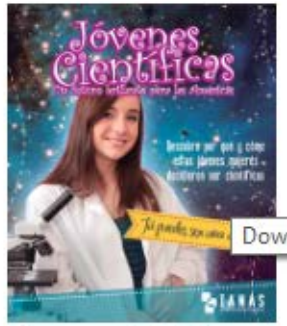
Women for Science Program Books



ASSAF IAP Final Report



Young Women Scientists



Jóvenes Científicas

Download boo

Survey of Women in the Academies of the Americas

Women Scientists of the Americas. Their inspiring stories

Mujeres Científicas en las Américas. Sus historias inspiradoras

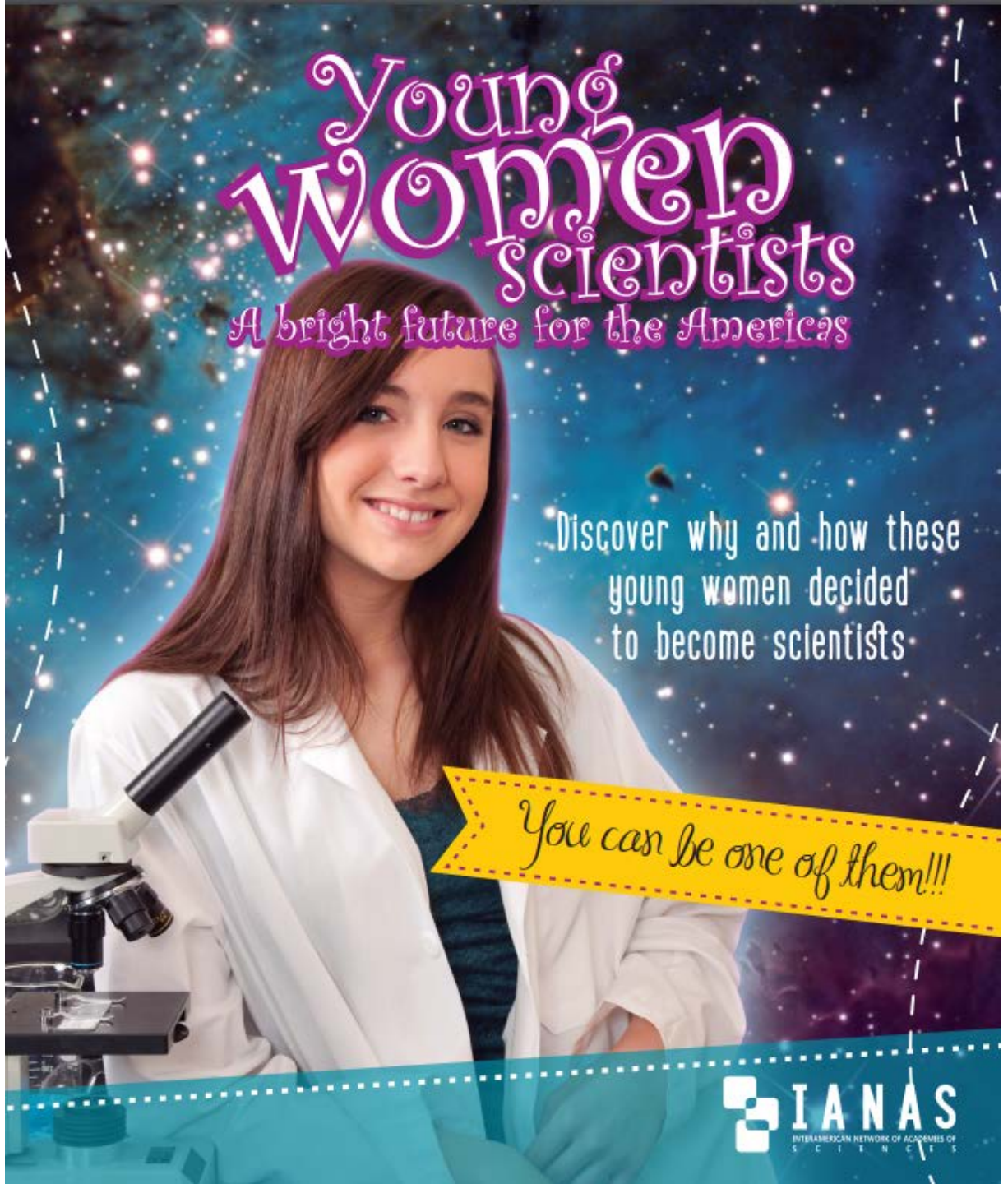
Encouraging stories of women scientists in the Americas

435,000 downloads from the IANAS website: www.ianas.org

Challenge

Highlight achievements of Latin-American and Caribbean women scientists by posting and publishing interviews and biographies.

Visibility and Encouragement to young women scientists in the Americas



Challenge

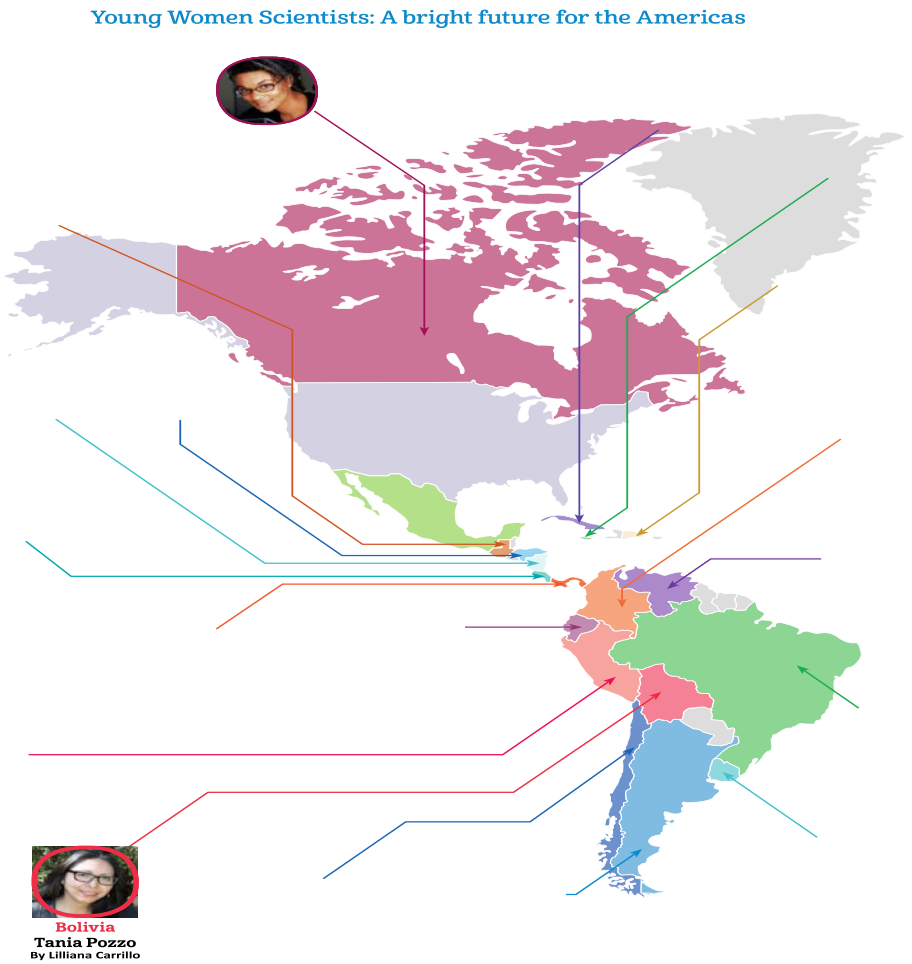
Encourage female advanced science PhD students in developing IANAS countries by an IANAS prize enabling the winner to enrich her PhD work at a research institute in another IANAS country

Multiple scientific backgrounds and scientific achievements.

Young scientists selected by committees or by the Academies.

Biographies written by science journalists and focal points portraying a rich and fulfilled lives

Vibrant histories to inspire young girls



Paula Casati

Interview by Daniel Krupa[1]

Being a successful scientific and simultaneously having a family is difficult but can be accomplished if you feel like... with all effort and desire can be fulfilled

Dr. Paula Casati studies the effects of ultraviolet radiation on plants, a line of research that has made her a leading figure in the Argentinean scientific community. As it had done for her mother, science became a way of life.

Born in 1971 in Rosario, in the province of Santa Fe, Argentina, married and with a daughter called Lara, Casati explains that her parents, both biochemists, were vital when it came to choosing a profession. His mother, for example, who decided to pursue a scientific career to dedicate herself to research, influenced her profoundly as regards her chosen path. "As a child, I remember visiting her laboratory, which was full of rats. She worked in the Department of Physiology, first, and then in Pharmacology. I also remember spending many weekends with my oldest brother and my dad in cinemas, parks and theaters, as my mother would shut herself away at home to write her doctoral dissertation, which was done on a typewriter at the time. Luckily, my mom got a lot of help from my dad and his mother—my grandmother Lula— so she would leave everything ready in the morning for us (lunch, things for school and other activities) and we wouldn't see her again until the afternoon when she came back from the laboratory."

[1] Person responsible for corporate communication at the National Academy of Exact, Physical and Natural Sciences of Argentina.

Casati se encuentra trabajando en la respuesta a la radiación de plantas como el maíz y el sorgo

Dra. Casati en su laboratorio (arriba a la derecha)

Casati is not sure whether it was because her mother always so busy, but as a child, she always suspected she choose another occupation such as lawyer or physical education teacher until, in the third year of high school, she had a biology teacher who introduced her to the world of genes, heredity, and the basic principles of molecular biology, which made her change her mind and decide to study a degree in biotechnology at the same faculty where her parents had studied.

Once at university, I never doubted that what I really liked was research, and it seems that years of watching my mom and seeing her work so hard had an effect, because she was always my role model, and although unfortunately I never told her so directly, I'm sure she always knew," says Dr. Casati.

With regard to the experience she has had as a woman in the field of scientific research, she believes that since her first inspiration in science was her mother, who, despite always working in a male environment, managed to be successful, have her own independent research group, be the head of a teaching department and dean of the faculty, she always knew that through hard work, anything was possible. Her postdoctoral director is also a very successful woman in the field of science and research.

Dr. Casati admits that today, in the 21st century, there are still obstacles for women who choose to dedicate their lives to science. "As we all know, many of the senior positions are still mainly occupied by men." However, she recommends young women interested in pursuing a career in science to strive to achieve this. "I think trying to be a successful scientist and simultaneously having a family is difficult but it can be done."

If you want to know more about how to be an expert, go to QR code and see what the experts suggest you

Descubre más en:

Goal
Enhance the status of women scientists

- Challenge

- **Objective 2.1** Quantify the underrepresentation of women scientists and engineers in the academies.

- **Objective 2.2** Encourage formation of (mixed gender) Women for Science committees in the academies.

- **Objective 2.3** Remedy the isolation of women scientists by a dedicated interactive web page on the IANAS website.

- Action

SURVEY OF WOMEN IN THE ACADEMIES OF THE AMERICAS

REPORT PREPARED BY FRANCES HENRY
FOR THE IANAS WOMEN FOR SCIENCE PROGRAM

MAY 2015

IANAS
INTERAMERICAN NETWORK OF ACADEMIES OF SCIENCES
Sciences Academies working together to promote science and technology for development, prosperity and equity in the Americas

IANAS

TABLE 1: ACADEMY MEMBERSHIP

Academy	Number of Women Members	Total Number of Members	Percentage of Women Members	Type of Membership[2]	Has Gender Policy
Argentina	4	34	11.76	Capped	
Bolivia	4	47	8.51	Open	
Brazil	64	506	12.65	Open	
Canada	346	2108	16.41	Capped	
Caribbean	57	223	25.56	Open	✓
Chile	9	75	12.00	Capped	✓
Colombia	26	190	13.68	Open	
Costa Rica	10	53	18.87	-	
Cuba	85	313	27.16	Open	✓
Dominican Republic	22	168	13.10	Capped	
Guatemala	8	68	11.76	Open	
Honduras	5	29	17.24	Open	
Mexico	587	2499	23.49	Open	✓
Nicaragua	7	30	23.33	Open	
Panama[3]	50	124	40.32	Open	
Peru	23	114	20.18	-	-
United States (NAS)	294	2252	13.06	Open	
Uruguay	5	26	19.23	Capped	
Venezuela	7	50	14.00	Capped	
TOTAL	**1613**	**8909**			
AVERAGE TOTAL	**18.11%**				
MEDIAN[4]	**22**				

2. Costa Rica and Peru did not provide information on whether their membership is capped or open.
3. It should be noted that Panama's entry process into the Scientific Association is by application rather than election which accounts for their higher number of women members.
4. The median denotes the middle value in a distribution. In this particular case the median was chosen over the mean due to the wildly varying sample of women members in the 19 Academies (Range from 4-587). The mean is sensitive to outliers in a way that the median is not. In order to get the median, the number of women members were arranged from lowest to highest and the middle number was selected using the formula $\frac{n+1}{2}$.

TABLE 2: GOVERNING COUNCIL[6]

Academy	Men on Governing Council	Men on Governing Council (%)	Women on Governing Council	Women on Governing Council (%)	Total Number on Governing Council	Actively Promoting Women and Gender Issues[7]
Argentina	5	71.43	2	28.57	7	
Bolivia	8	88.89	1	11.11	9	✓
Brazil	12	92.31	1	7.69	13	✓
Canada	10	62.50	6	37.50	16	✓
Caribbean	5	71.43	2	28.57	7	-
Chile	5	83.33	1	16.67	6	-
Colombia	5	71.43	2	28.57	7	
Costa Rica	7	87.50	1	12.50	8	✓
Cuba	6	60.00	4	40.00	10	✓
Dominican Republic	12	70.59	5	29.41	17	✓
Guatemala	5	83.33	1	16.67	6	✓
Honduras	2	66.67	1	33.33	3	
Mexico	7	70.00	3	30.00	10	✓
Nicaragua	23	76.67	7	23.33	30	✓
Panama	5	62.50	3	37.50	8	
United States (NAS)	9	52.94	8	47.06	17	-
Uruguay	4	80.00	1	20.00	5	-
Venezuela	5	83.33	1	16.67	6	✓
TOTAL	135		50		185	
AVERAGE TOTAL	72.97%		27.03%			
MEDIAN	5.5		2.0			
MEAN	7.5		2.78			

6. Peru did not provide information on its governing council.

7. The Caribbean, Chile, Uruguay and the NAS in the United States did not answer this particular question.

8. Although this appears to be anomalous, there may be a particular reason for this or it may simply be the result of an error in answering the question.

TABLE 5: WHERE WOMEN WORK

Academy	Do Women Members Work in the Following Institutions:				
	Universities	Research Centers	Private Laboratories	Government Agencies	Other
Argentina	✓			✓	
Bolivia	✓	✓		✓	
Brazil	✓	✓			
Canada	✓	✓	✓	✓	✓
Caribbean	✓	✓	✓	✓	
Chile	✓				
Colombia	✓	✓			✓
Costa Rica	✓	✓	✓		
Cuba	✓	✓		✓	✓
Dominican Republic	✓	✓	✓	✓	
Guatemala	✓				
Honduras	✓		✓		
Mexico	✓	✓		✓	
Nicaragua	✓	✓			✓
Panama	✓	✓	✓	✓	✓
United States	✓	✓	✓	✓	
Uruguay	✓				
Venezuela	✓	✓			

13. The US data for disciplinary differences was organized differently and so it was made into a separate table.

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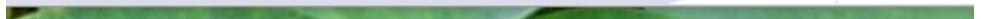
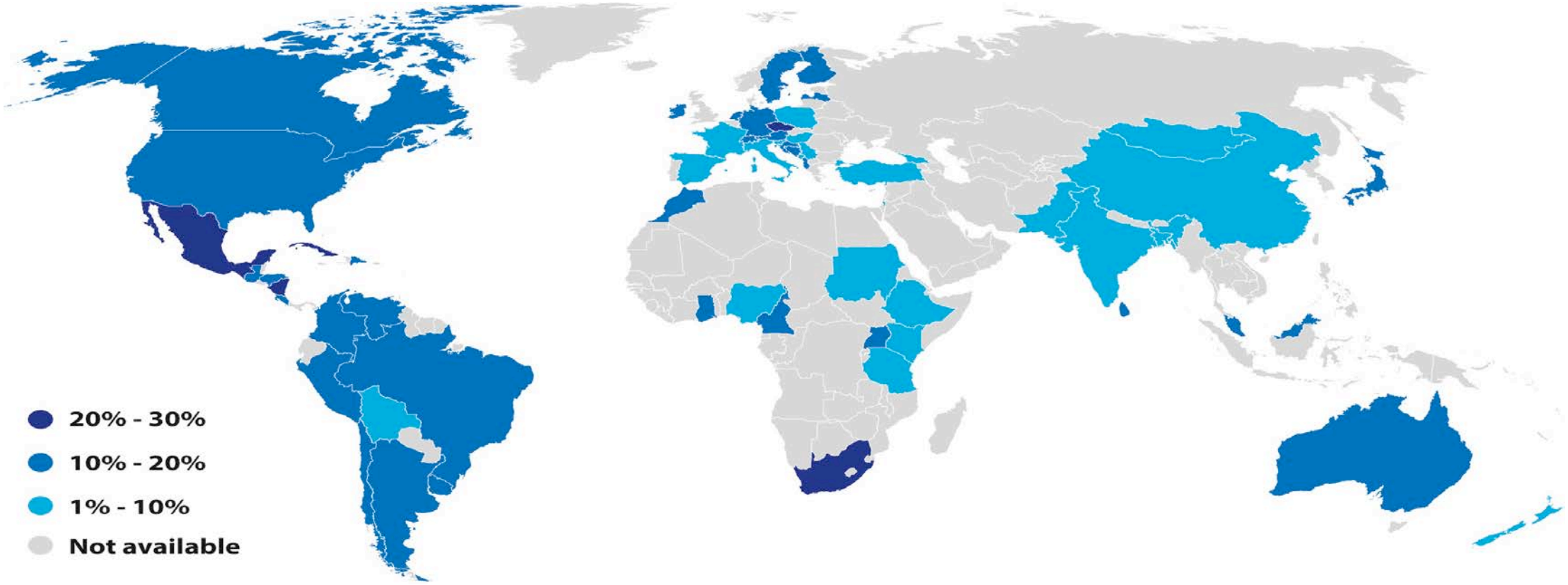
the interacademy partnership

Women for Science: Inclusion and Participation in Academies of Science

A Survey of
the Members of IAP:
The Global Network of Science
Academies



IAP-IANAS Survey December 2015 (women membership in academies)



Source: IAP-IANAS Survey 2015

The IANAS-Anneke Levelt Sengers Prize

recognizes and encourages young women scientists in the Americas
(2014 for Venezuela and 2016 for Cuba)

The IANAS Women for Science working group with the Co-Chair of IANAS (Juan Asenjo)

Gender Summits®
Quality Research and Innovation through Equality

Thanks, Gracias, Merci, Obrigado!

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and
Juan Pedro Laclette (Past-IANAS Co-Chair)

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