

WOMEN SCIENTISTS MEET IN BEIJING

THE ORGANIZATION FOR WOMEN IN SCIENCE FOR THE DEVELOPING WORLD (OWSDW) – FORMERLY KNOWN AS THE THIRD WORLD ORGANIZATION FOR WOMEN IN SCIENCE (TOWOS) – HELD ITS FOURTH GENERAL ASSEMBLY IN BEIJING, CHINA, IN LATE JUNE 2010. THE ASSEMBLY WAS PRECEDED BY AN INTERNATIONAL CONFERENCE, ‘WOMEN SCIENTISTS IN A CHANGING WORLD’, ORGANIZED IN CLOSE COOPERATION WITH THE CHINESE ACADEMY OF SCIENCES (CAS). MORE THAN 600 WOMEN SCIENTISTS FROM 55 COUNTRIES WERE IN ATTENDANCE. XI JINPING, VICE PRESIDENT OF THE PEOPLE’S REPUBLIC OF CHINA, PRESENTED THE OPENING ADDRESS.

“There has been a profound change in the world’s economic system and structures since the global financial crisis,” Xi Jinping told the participants. “While economies are recovering from the crash, impacts persist. Moreover, we live in a time of growing uncertainty. There are questions, for example, concerning food security, energy supplies and climate change. And demands on the global environment continue to increase at an accelerated pace.”

Xi noted that science and technology must be a driving force in the development of societies and that there is a clear and compelling need to turn to science



and technology to guide both national and global efforts for sustainable growth.

“The scientific community,” Xi observed, “must seek to provide a greater understanding of nature. And to achieve this lofty goal, we need greater participation of women scientists.

“We thus have an obligation,” he asserted, “to respond to the needs of women scientists not just for the sake of the scientists but also for the sake of the global community.

“As the world’s largest developing country,” Xi went on to say, “China has made the issue of women scientists a national priority. We are dedicated to protecting women’s rights and helping women advance their



NEW EXECUTIVE BOARD

Fang Xin, a research professor and member of the presidium of the Chinese Academy of Sciences (CAS), was elected the new president of OWSDW. Outgoing president, Kaiser Jamil (India), remains on the executive board as ‘immediate past president’.

The OWSDW board for 2010-2014 also includes:

Africa: Dolly Ahbor Ighoroje (Nigeria), vice president, and Esi Awuah (Ghana), member;

Arab Region: Samira Omar (Kuwait), vice president, and Rokhsana Abdul Rahman (Yemen), member;

Asia and the Pacific: Farida Habib Shah (Malaysia), vice president, and Sudha Nair (India), member;

Latin America and the Caribbean: Mayra de la Torre (Mexico), vice president, and Miriam Diaz (Venezuela), member.

of science and technology; Lu Yongxiang, president of CAS; Mohamed Hassan, executive director of TWAS; Lidia Brito, assistant director general of UNESCO’s science policy division; Howard Alper, co-chair of IAP; and David Ruth, executive director of the Elsevier Foundation, the sponsors (along with TWAS) of the first ‘TWOWS Awards for Young Women Scientists’.

careers, and we support women in their efforts to make new and greater contributions to China’s economic development,” he declared.

In sentiments that concurred with Xi Jinping, Kaiser Jamil, outgoing OWSDW president, called for more to be done to “protect the rights of women and help them to advance their careers.” She noted that women succeeded in all areas of science but they remain too few in numbers, especially in many parts of the developing world.

“We need,” she contended, “to remove the roadblocks that women face on a daily basis and allow them to assume their rightful place in the workplace equipped with the know-how and skills that they need to succeed.”

Other officials giving opening remarks at the ceremony included Naledi Pandor, South Africa’s minister

Indeed, the TWOWS/OWSDW awards proved to be the highlight of the opening ceremony. Ten of the 12 young women researchers chosen by the selection committee were present in Beijing to receive their awards from Vice President Xi (see box on p. 16).

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CONFERENCE KICK-OFF

Naledi Pandor, Minister of Science and Technology of South Africa, gave the opening speech at the OWSDW international conference,

‘Women Scientists in a Changing World’.

“China’s phenomenal economic growth serves as a source of inspiration for much of Africa,” she began. “It gives African countries renewed hope that we too can lift our citizens out of poverty.

“China’s economic transformation has been closely associated with increased investment in science, technology, and engineering,” she continued, adding that



China's president Hu Jintao is an engineer, China's premier Wen Jiabao is an engineer, and almost every Chinese official in a position of power is a university graduate with an engineering degree.

"Enter the office of any head of any Chinese state-owned entity, and you will find an engineer," she said. "Yet, the official will in all probability be a man. Even here in China, and indeed in most of the developing world, women's scientific skills and abilities are still underutilized.

"Women," Pandor lamented, "are still under-represented in the fields of science and technology. Women are still under-represented in top research managerial positions, and women are still under-represented in science, technology, and innovation policy-making.

"As a result, one of the primary challenges for the developing world is to ensure that the gender imbalance in the practice of science, technology and innovation activities is addressed.

"Without incentives that support and recognize women in research, significant change is unlikely to take place," maintained Pandor.

Finally, Pandor called attention to the need to encourage girls to take classes and pursue careers in science. And she urged women scientists, especially



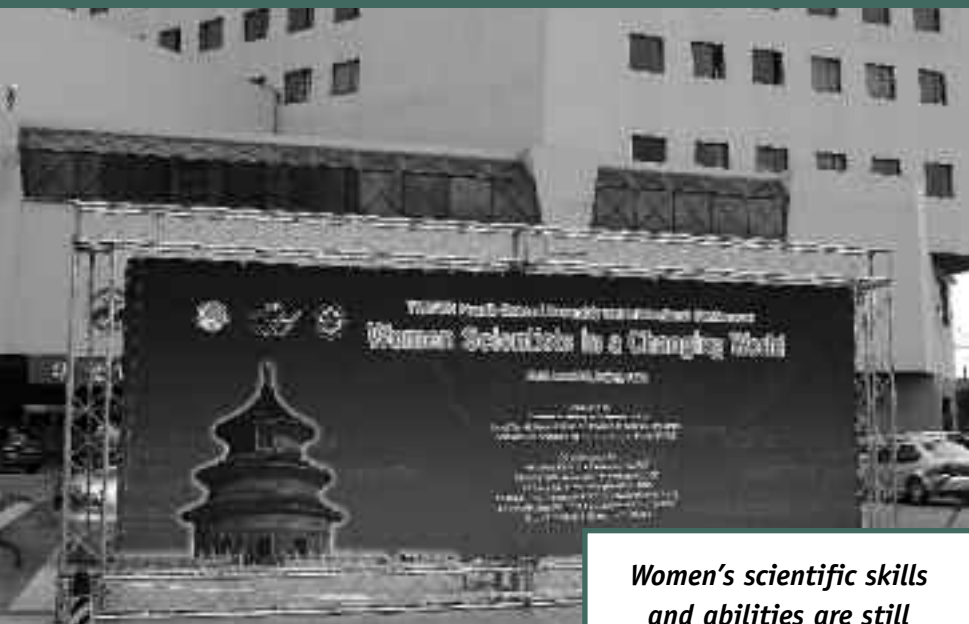
those participating in the OWSDW conference, to serve as role models and mentors in their countries for the next generation of women scientists.

INVITED LECTURES

Following Pandor to the podium was Sharon Hrynkow of the Bureau of Oceans, Environment and Science, U.S. State Department, who spoke about "Women scientists as change-agents in a changing world", a presentation that outlined the over-arching theme of the conference.

"Despite the challenges", Hrynkow observed, "this is a time for great optimism for women in science." Indeed, she added, "we are at a moment when many

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positive trends are converging.” Hrynkow cited four key reasons to be optimistic:

First, momentum for science is at an all-time high in many nations: China, for example, recently outlined plans to support nearly 4 million researchers by 2020; Brazil, under the Lula administration, has doubled its science budget in less than a decade; and Algeria has proclaimed it will double its research budget over the next five years.

Second, programmes are being developed and implemented to encourage women to pursue careers in science. For example, the US National Foundation’s ADVANCE programme enables US universities to sup-

port women (and men) as they care for their children, elderly parents or tend to other family matters. Support for extra postdocs or technicians to keep the laboratory moving in the absence of the principal investigator is a key feature of this programme, which has now been replicated in other nations, including Switzerland.

Third, women are finding new ways to serve as mentors, supporters, and collaborators in science. They are networking with each other to propel the agenda forward. Organizations such as OWSDW have played – and must continue to play – a pivotal role in this effort.

Fourth, the importance of educating girls is becoming part of the global policy agenda. For instance, the Commission on the Status of Women, a UN body, has announced that its theme for the 2011 meeting will be ‘Access and participation of women and girls to education, training, science and technology, including for the promotion of women’s equal access to full employment and decent work’.

SCIENCE TALKS

Following Hrynkow, Esther Orozco, professor, Department of Experimental Pathology, CINVESTAV-IPN, Mexico, who was the first of four L’Oréal-UNESCO



TWOWS TO OWSDW

In Beijing, TWOWS members voted to change their name to the Organization for Women in Science for the Developing World (OWSDW). The new name is intended to better reflect the organization's focus on promoting both the greater participation of women in science, technology and innovation as well as the use of science, technology and innovation to improve the lives of people in the developing world.

prize laureates to give presentations, spoke about the 'Biological sagacity of pathogens: The biggest challenge to human intelligence'.

The talk examined the ways in which humans may become infected by pathogens and the mechanisms that the pathogens use to avoid the host's immune response.

"The best way for us to fight pathogens," concluded Orozco, "is to study them and to gain new knowledge. Pathogens pose a hidden, yet significant, challenge to economic development and are a major reason why we need both basic and applied science."

An overview of the L'Oréal-UNESCO award scheme for women scientists was provided by another previous winner, Grace Taylor Olaniyan, professor, Department of Chemical Pathology, College of Medicine, University of Ibadan, Nigeria, who reviewed the scheme's implementation and growing recognition and impact since its inception 12 years ago.

The final two L'Oréal-UNESCO laureates to speak were Nagwa Meguid, head, Department of Human Genetics, National Research Center, Egypt, who outlined her thoughts on the 'Recognition of Arab women in science: A model of efforts in human genetics', and Ameenah Gurib-Fakim, Dean, Faculty of Science, University of Mauritius, who spoke on 'From basic sciences to a business model: The case of medicinal and aromatic plants in Mauritius'.

In total, the conference featured some 35 parallel sessions focusing on such topics as 'Women scientists

and global change'; 'Women, innovation, entrepreneurship and leadership capacity'; and 'Gender mainstreaming in the global scientific community'. There was also a 'Young women scientists forum', which included:

- Presentations by the recipients of the first-ever OWSDW Awards for Young Women Scientists.
- A networking session for graduates of the OWSDW Fellowship programme, which provides grants to young women scientists from sub-Saharan Africa and Least Developed Countries (LDCs). To date, some 87 young women have graduated through the programme. With travel grants provided by the Swedish International Development Cooperation Agency (Sida), which also sponsors the fellowships programme, 27 graduates came to Beijing to share their experiences and present their scientific work.
- A discussion panel organized by IAP, the global network of science academies, on 'Regional perspectives on IAC's *Women for Science* report: Recommendations for the Global Network of Science Academies'.
- An announcement by the Elsevier Foundation that it had renewed its support for the OWSDW Awards for Young Women Scientists.
- Another announcement by the Elsevier Foundation that it will support a 'National assessments and bench-

WHERE WOMEN STAND IN PHYSICS

The four young women physicists who won 'TWOWS Awards' in Beijing offer contrasting examples of the under-representation of women in this field of science.

In developed countries, there are significantly fewer female physicists than male. The divide is even more evident in many developing countries.

Christine Steenkamp, for example, who won the award for physics for the Africa region, observes that she is the first woman physicist to be appointed to a full faculty position at the University of Stellenbosch in South Africa. When asked why she thinks this is so, one explanation she gives is the lack of female physicist role models. "I hope that by making this breakthrough, I can help mentor more female students into careers in physics," she says.

The situation in Yemen is even more difficult. Sakina Fakhraddin A. Ali was accompanied by her colleague Magda A. Rahim Mohammed, when she came to Beijing to receive her award for physics for the Arab region. The two women represent the sum total of women physicists in Yemen.

Priya Mahadevan, who earned the award for physics for the Asia region, reports that, of the 30 physicists working in her institute, the S.N. Bose National Centre for the Basic Sciences in Kolkata, India, three are women – a situation that she regards as "not so bad" – despite the obvious disparity.

"When I say that we are three women faculty out of 30, I am comparing the situation with some departments of the other top universities and research institutes in India, which have far worse ratios." She adds that her institute, like many others, has a much higher percentage of students and postdoctoral researchers who are women.

"Of 100 students, 22 are female," she says. "The number of women who are postdocs and those holding other 'soft' positions (such as visiting fellows) is about 50%." According to Mahadevan, many women take breaks after their PhD studies and find it difficult to get back into the system, except for short-term, non-permanent positions.

She notes that "in other instances, getting a job in the same city as your spouse is a consideration. Several institutions have a hiring policy where both husband and wife will not be given a job in the same place – and often there is no other place for the spouse to get a job in the same city."

The fourth winner of the award for physics was Aimé Peláiz-Barranco from the University of Havana, Cuba. "There is a good representation of women in science in Cuba, especially in biology, biochemistry, microbiology, chemistry and medicine," she says. "Physics and mathematics have lower representation, but the situation is not as severe as in many other countries. For example, women in the physics department of Havana University represent more 25% of the faculty."

Originally from Kenya, Emily Ngubia Kuria, who presented a paper on the gender-mathematics gap at the conference, works at the Institute for the History of Medicine, Charité Berlin, Germany, and is also an associate member of the Graduate School for Gender Studies at the Humboldt University, Berlin. Her research focuses on understanding female under-representation in science and on evaluating the validity of research in experimental psychology and neuroscience that continues to allude to biological roots for this phenomenon.

When asked how differences in the representation of females in physics and mathematics may have come about, Kuria says: "We cannot overlook the fact that women have been allowed to participate in academia for only a century. Mathematics and physics are male-dominated fields, and many female students must compete against entrenched attitudes. There are, of course, women who have entered and excelled in these fields. But for the numbers to increase, a critical mass of women must become permanent faculty members so that many more girls and women can come to believe they have equal opportunities."



marking of gender, science, technology and innovation' project. The seven-country assessment, which will be carried out in collaboration with WIGSAT (Women, Technology, Society), aims to provide a snapshot of the level of support, opportunities and participation of women in innovation systems in developed, emerging and developing countries, including Brazil, China, India, Indonesia, South Africa, the United States and Europe. A series of policy recommendations will then be developed to help countries achieve their national targets for women's participation in science, especially in those countries that are experiencing rapid growth in research.

GENERAL ASSEMBLY

The OWSDW Fourth General Assembly, held in Beijing as part of the meeting, gave members an opportunity to discuss the direction and ambitions of their organization. Indeed, members agreed to introduce several key changes that they hope will help position the organization to address current global challenges and opportunities and to support its emergence as a leading organization for women scientists:

- A new president and executive board was elected (see box on p. 12).
- A change in the name of the organization from the 'Third World Organization for Women in Science (TOWWS)' to the 'Organization for Women in Science for the Developing World (OWSDW)' (see box on p. 15).
- Amendments to the organization's statutes. Two

changes were particularly significant. First, social scientists will be eligible for full membership of OWSDW (previously they were only allowed to be non-voting associate members). Second, women scientists from the developed world who have a proven track record of working for the developing world will now be allowed to join OWSDW as full members.

In the Beijing Statement issued at the conclusion of the conference, participants called on governments and the international community to recognize, document and highlight the contributions made by women

to science, technology, engineering and innovation, and to work with decision-makers to ensure the full participation of women and girls in all aspects of science and technology.

In the closing ceremony, OWSDW's newly elected president Fang Xin expressed appreciation to the membership for "putting its trust in me and electing me to lead OWSDW." She added that she "hoped to be able to continue to help the organization grow" during her term as president.

Fang went on to say that "OWSDW is at a transitional point in its history" as it seeks to "move from a small network to a large, active and influential global organization."

"The organization has come a long way," she observed. "Together, I am confident that we can make even greater strides for women scientists in the years ahead."

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TWOWS/OWSDW 4TH GENERAL ASSEMBLY





Beijing, China, 27-30 June 2010