

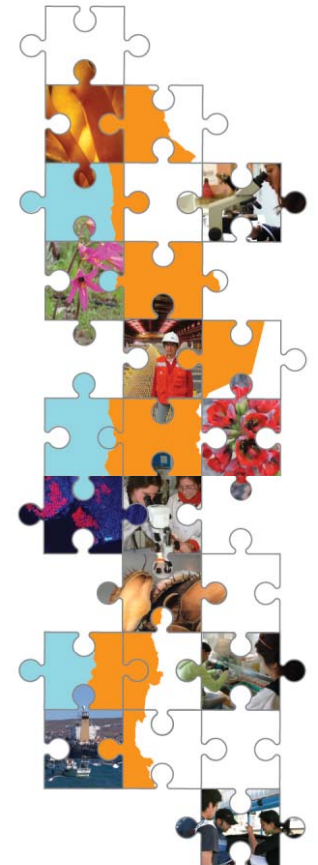
Report on the WLN - APEC workshop

Fostering women leaders in science and engineering fields

Tokyo, September 20, 2010

Elisabeth von Brand

Sendai September 24, 2010



Content

- 🧩 Brief Introduction of WLN
- 🧩 Workshop panelists
- 🧩 Women in science in Chile
- 🧩 Main conclusions workshop
- 🧩 Becoming a Scientist Being a Woman
(side event)



Women Leader Network

The original [1996] purpose of the WLN was stated as '***to seek ways and develop strategies so that women's concerns are heard, their aspirations considered, and their involvement firmly established when decisions and policies are made within APEC.***

Taken from WLN website



Women Leader Network

- ❖ **WLN was founded 1996 by joint effort between Philippines and Canada**
- ❖ **WLN meets in the same country then APEC, but is not an official APEC event**
- ❖ **WLN recommendations however go to the ministers and presidents meetings**



Participation at 15th WLN-APEC

- Representing my university, region and country
- Panelist in Key note speech “Role of WLN in APEC and challenges for the future”
- Panelist in workshop *Fostering women leaders in science and engineering fields*
- Panelist in side event
- Opportunity to visit Sendai after 20 years



Official Website:

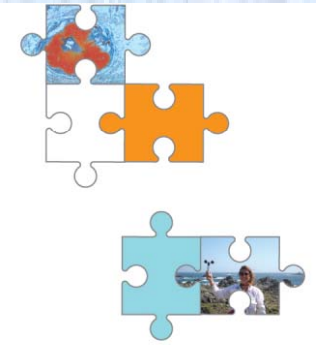
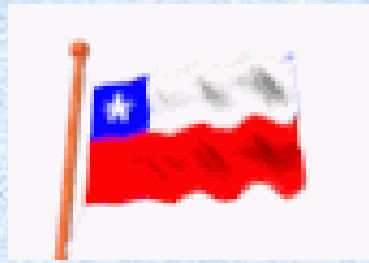
<http://www.apecwln2010.jp/>



Workshop Panelists

- Dr. **Irena Atov** [IEEE; Telstra Corp. Australia]- Moderator
- Dr. **Hideko Kunii** [Ricoh IT Solutions Co.- Japan]
- Dr. **Shao Fengjing** (vice-president Qingdao University China)
- Dr. **Estrella Alabastro** (First Woman Secretary of DOST from 2001 - 2009, Philippines)
- Dr. **Shinobu Yamaguchi** (Moderator-Tokyo Institute for Technology)
- Dr. **Elisabeth von Brand** (Senior Scientists, Chile)
- Dr. **Takako Hashimoto** (IEEE Organizer-Japan)





Women in science in Chile

Elisabeth von Brand

WLN – APEC workshop

Fostering women leaders in science and engineering fields

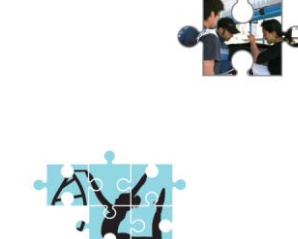
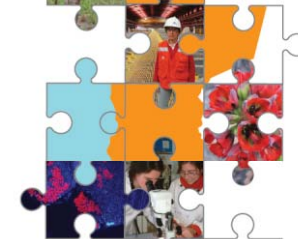
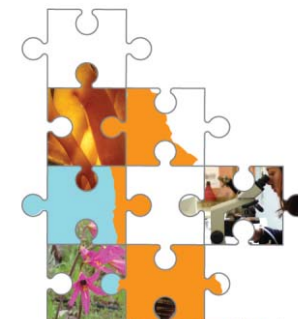
Tokyo, 2010













Some information for starters

- ✓ Chile has a population of roughly 17 millions, and about half are women
- ✓ 12 school years are compulsory
- ✓ Chile is long and narrow with different realities
- ✓ Central and South Chile with better schools, higher percentages of students attend universities
- ✓ Northern Chile has lower population densities, less schools, etc.
- ✓ CONICYT: national commission for science & technology

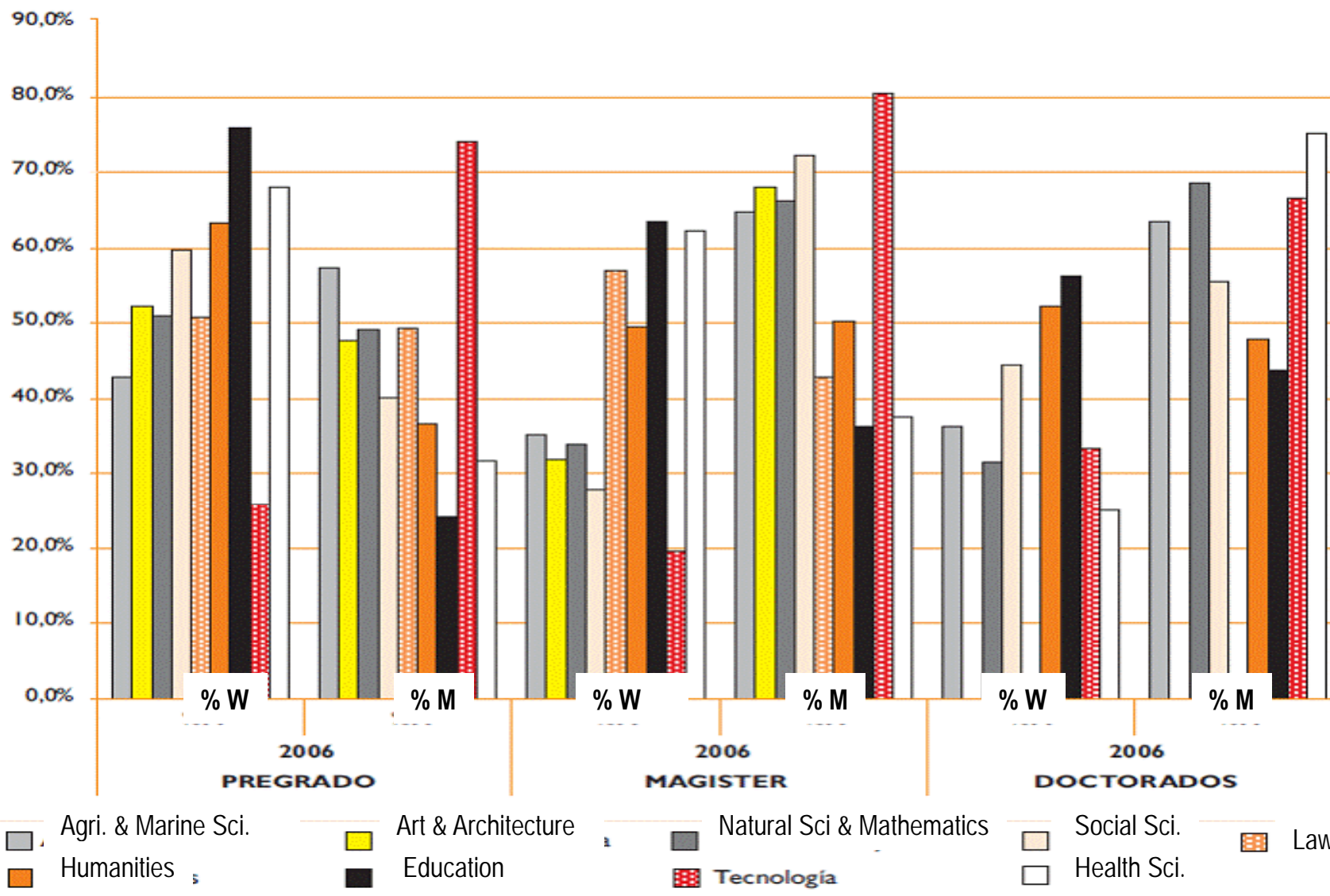


Gender equality ...

-  SERNAM (office for women affairs) created in 1991
-  Gender equality included in public policies since 2002
-  2003 national poll to determine number of active scientists, gender differentiated data were not included
-  2006 first published results analyzing science and gender (FLACSO Chile)
-  2007 and 2008 participation of women in a specific science program (Millenium Science Initiative) was determined
-  2009 first nationwide initiative about women, science & technology was launched by Explora – Conicyt
-  8 proposals granted on competitive basis, out of 40 presented.
-  Our proposal was carried out August 13, 2010 with an attendance of ca. 250 women



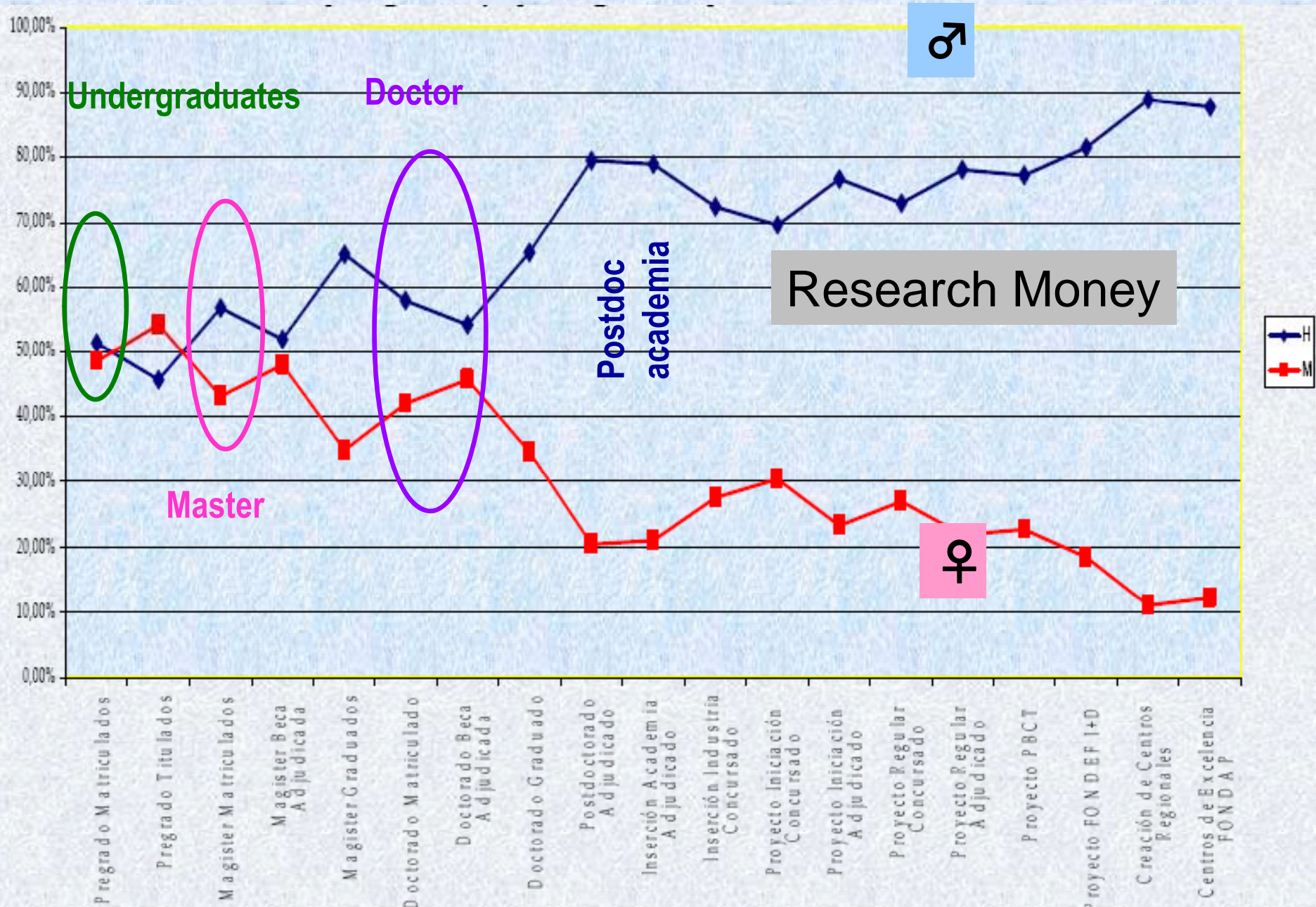
Gender Composition (%) of graduated undergraduate and graduate students per discipline in Chile year 2006 (Rebufel 2009)



W = women

M = men

Composition of Male (♂) and female (♀) participation in studies and CONICYT funding



Taken from Rebufel (FLACSO, 2009)

Chilean reality for women

As student no obstacles due to gender
School; University (undergraduate studies)

Application for scholarships → no problem
National; international

Working for none or small fees → no problem
As research assistant and not as researcher

Problems start when searching for a permanent
position Priority for men; traditional role as family providers

Readiness to move away from home to a lesser
developed area increases possibilities to find a
job



Chilean reality for women in professional life



Undergraduate students close to equal



Graduate studies: (♀ vs ♂)

- 17% less women enrolling in MSc and PhD programs
- 30% less women completing their degrees



Post Doc grants: only 17% awarded to women



Research funds: higher number of women leading lower budget funding, and viceversa



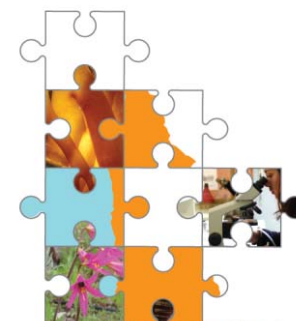
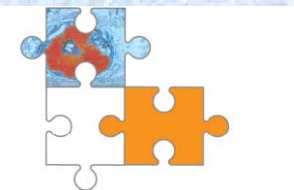
Peer reviewers: only about 20% are women



Data obtained from FLACSO Reports 2008, 2009

Some results for women in science so far...

- Discussion about role and presence of women in science & technology present in public agenda
- Awareness is being created at different levels
- Public policies are working towards shared responsibilities in parenting (maternal leave shared with father)
- Consideration towards pregnancy & maternity leave during Chilean funded scholarships, and research proposal submission.



Each panelist prepared a similar presentation, and after the discussion was finished, we prepared concluding remarks, and recommendations.





2010 APEC
WNLN
15th Women Leaders Network Meeting



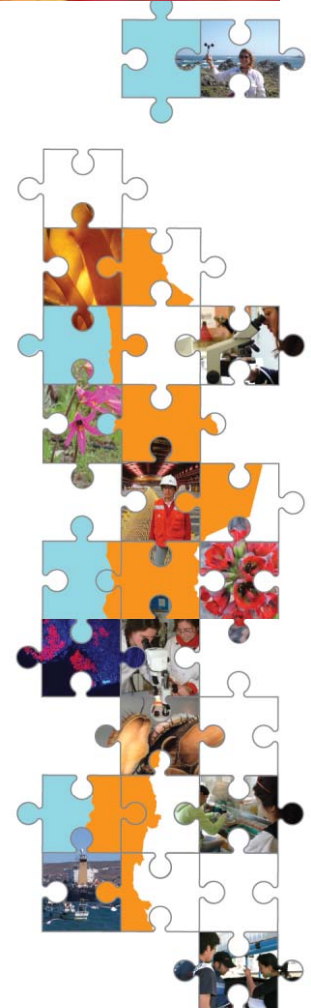
Concluding Remarks and Recommendations

15th APEC Women Leaders Network Meeting

Workshop 3: Fostering Women Leaders in the Scientific and Engineering Field

(女性技術者・科学者のリーダーの育成)

20 September 2010





Gender Differences in Education and Social & Cultural Structures

Tertiary level enrolment of women has been increasing steadily and is approaching or exceeding 50 percent of the total number of tertiary students in APEC economies

Philippines:

- Gender equality high in education and had a vast improvement over last 25 years
- Favourable outcomes are due to improving policy environment

Australia:

- Women obtain more than half of all university degrees at both undergraduate and postgraduate levels (55% and 51.8%, respectively)

Chile: Women obtain more than half of all university degrees (53%) but have lower (35%) participation rate in post-graduate studies

Japan:

- Female students in higher education increased from 23% in 1985 to 40% in 2008

Gender Issues in Science, Engineering & Technology

Women are significantly under represented in Science, Engineering & Technology {SET} disciplines in APEC countries making up 15.9% of graduates in engineering (amongst lowest levels in the world !)

Maintaining the already small numbers of women in the SET workforce is a problem

Horizontal segregation by profession and vertical segregation by role in SET is seen in all countries and impact on women's capacity to participate and succeed in SET

Philippines:

- Low levels of female graduates in engineering and technology (but women are overrepresented in health and life sciences)

Australia:

- Women make up less than 20% of graduates in engineering and IT, 30% in mathematical and physical sciences and 7% of Fellows in the academies

Chile:

- Women make about 25% in the technological areas of education

China:

- Numbers of female graduate students in SET and female researchers have increased over the years although remain low (14%). The advancement of women is poor as reflected in the low rates of women in the academies (5%)

Japan:

- Numbers of female students have been increasing (engineering about 12% and science about 25%) and female researches in SET (13%)

Positive Initiatives on Gender Equality (Programs and Policies)

Progress for women is not a fact of nature but the result of careful interventions on the part of individuals, institutions and governmental agencies

Philippines:

- Plan for gender sensitiveness (1995- 2025) – blueprint for a comprehensive gender and development (GAD) program

Australia:

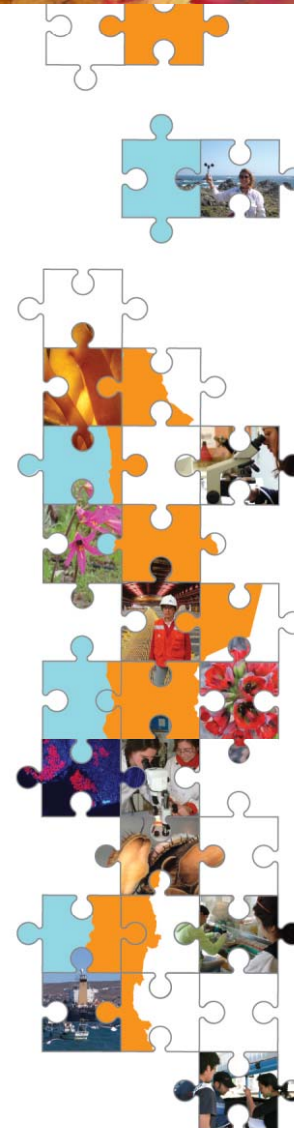
- Office for Women created to promote women's equality and leadership generally
- Equal Opportunity for Women in the Workplace Act 1999 –a workplace program
- 2010 is Year of Women in Local Government to promote women in leadership

Chile:

- SERNAM (office for women issues) created in 1991
- Gender equality included in public policies since 2002

Japan:

- The 3rd Science and Technology Basic Plan (FY 2006 – 2010)
- National Project on promoting gender equity in higher educational institutions



Recommendations

High Level Goal – Continue to Advance the Agenda

- Develop, progress and strengthen strategies, policies and programs on national and regional levels that increase women's participation in the SET fields

Promote Opportunities in SET for Women, Highlight Success of Women and Foster Leaders

- Promote the success of women leaders in science and technology by increasing their visibility and thus increase role modeling

APEC Gender Statistics & Indicators in SET

- APEC to consider developing a set of uniform indicators of women's education, workforce participation & career advancement in science, engineering and technology (SET), establish benchmarks and monitor progress through yearly reporting

APEC Policy Options to Aid Decision Makers in SET (Institutional Cultures & Decision Making)

- Promote laws and policies for reinforcing gender equality



**Mujeres
de Ciencia**
MACROZONA NORTE DE CHILE

Becoming a scientist Being a woman

*Elisabeth von Brand
Chile*

**Global Career Development for Women in the Scientific &
Engineering Field
-Learn from APEC economies-**

APEC side-event

The Center for the Advancement of Working Women


Tokyo, September 22, 2010



Genetics USA


Biology Chile

Chinchillas



My PhD


Tohoku University





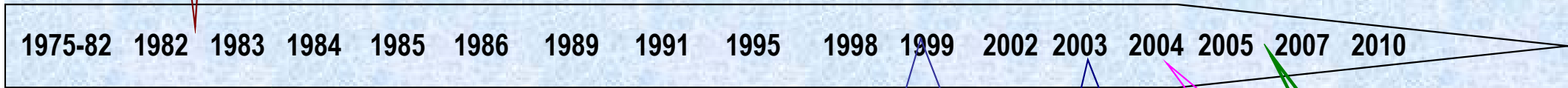
Japan

Big research grants


Fondef 1 & 2



Gender awareness

Natural Products Chile



Camilo

Julián

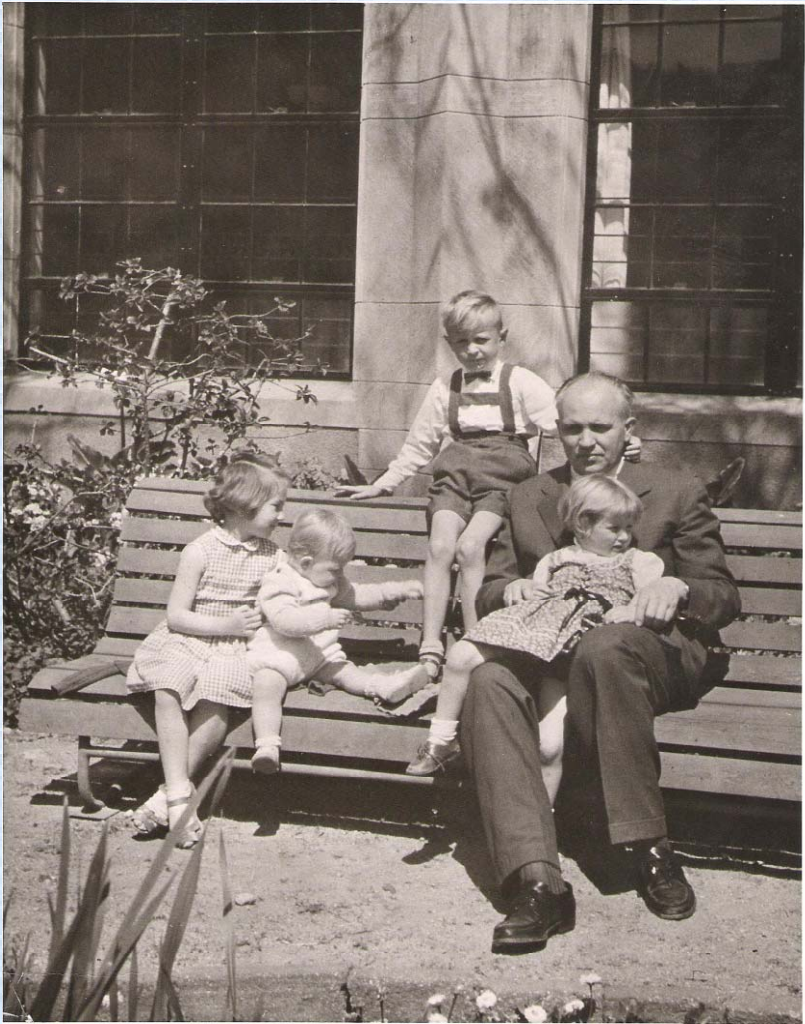
Milena

First female Dean FCM

Since 1986 research in scallop genetics



My role models



Work at the university (age 5)
Role model: my father



Biology: my schoolteacher Otto Zöllner



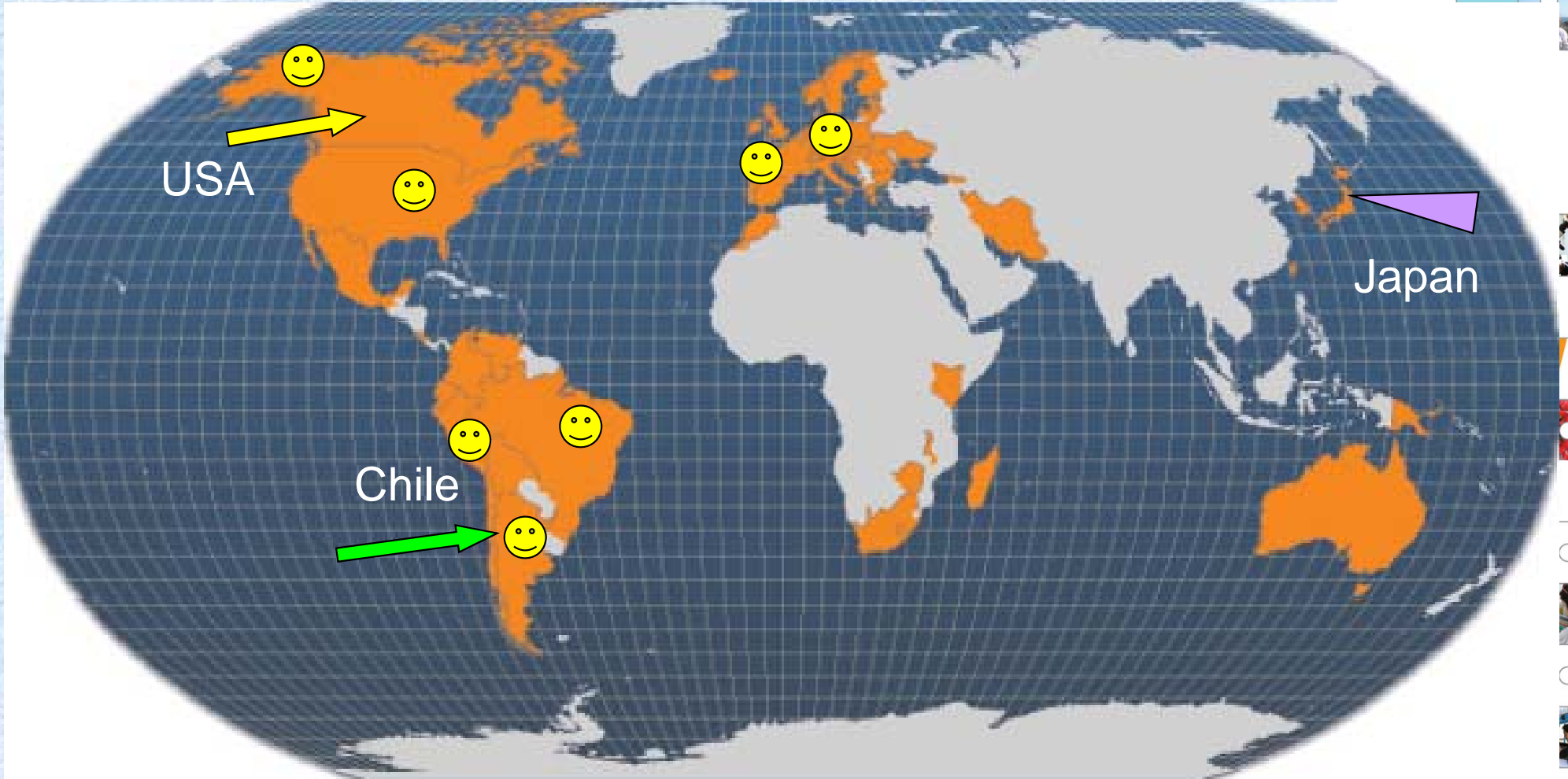
University: my mentor Wanda Quilhot



Don't hesitate to cross the ocean



USA: Genetics



Chile: school & undergraduate studies

😊 Other places I have been

Japan: PhD



Passion is necessary for science

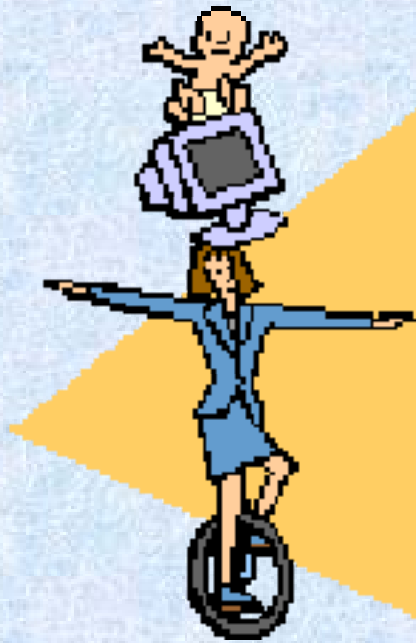
- ✓ Learn languages
- ✓ Get international experience take the risk to go abroad
- ✓ Construct your curriculum by learning...learning...learning
- ✓ Networks are necessary



Enjoy every step of the learning process



Science is hard work, but if you really like what you are doing you will achieve your goals easily



Find a partner who shares your dreams, and is willing to share other responsibilities

Don't forget to live a happy life

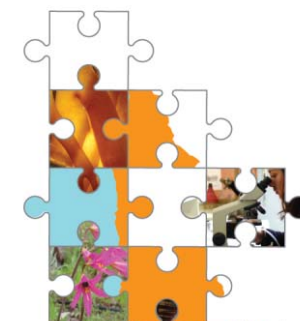
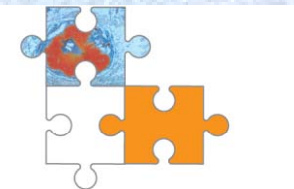


Main Conclusions of Side Event

- 1. We share similar problems even if there are differences in types of work, research fields, responsibilities, etc.**
- 2. Role model ! Look (inside & outside) to find role model to fit you**
- 3. Find a driving force to be a professional**
- 4. Network can be effective not only for sharing information, but also for having fun! Join to “organize” events for networking! Etc....**
- 5. Balancing your life style is important to sustain your career development**



Thank you for your attention



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