GENDER EQUITY EFFORTS IN IAHR

BY SILKE WIEPRECHT

Gender equality is a human right and means that that everyone should receive equal treatment and not be discriminated against based on their gender [1]. United Nations Universal Declaration of Human Rights states: "Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality." [2]

IAHR still has some efforts to undertake to achieve the aim of gender equity within the organisation. The council expressed concerns about the lack of women in IAHR leadership roles, which led to the creation of a Task Force consisting of Sharon Nunes (Vice President for Research, IBM, USA), Jing Peng (Director, Division of International Cooperation, IWHR, China), Ioana Popescu (Associate Professor of Hydroinformatics, UNESCO IHE, The Netherlands), Ana Maria da Silva (Professor, Department of Civil Engineering, Queens University, Canada) and as Chair of the Task Force Silke Wieprecht (Professor, Institute for Modeling Hydraulic and Environmental Systems, University of Stuttgart, Germany). The aim was to analyze the demographics in IAHR and develop recommendations on how to ensure that the full intellectual capacity of the water profession will be represented in IAHR membership and leadership in the future.

Actual situation in IAHR

The membership database was provided by the IAHR head office (status 8/2016). Actually IAHR at that time had 4108 members, including 2506 males, 616 females and 986 whose gender was unknown. The group of "unknown" is quite high and could distort the analysis. Thus, in the following graphs this group is not considered (Figure 1).

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There are 154 members in committees and leadership teams, including 18 females and 136 males. 61 members are active in regional divisions, including 9 females and 52 males. 19 members are in the council of which 2 are females and 17 are males (Figure 2).

The age groups are represented almost equally: 34 % are under 35, 30% are in the age between 35 and 50, and 36 % are older than 50. Although there is a consistent age distribution the share of females in the age groups is very different. 30% of the members in the typical YPN-age are females, in the group of 35 to 50 the ratio of females reduces to 25 % and in the group of 50 years and older it is only 6%.

The decline of number of females is even more obvious when we look at the leadership positions. The overall share of women in IAHR membership is approximately 20%. As members of technical committees women are 12 % and in regional divisions 15 %. However, in the council there are only 2 % women.

Comparison with other institutions

Several publications and statistics can be found documenting more or less the same tendencies for STEM disciplines and for engineering in particular. DeCohen and Deterding (2009) [3] report that of the university students enrolled in engineering disciplines approximately 22 % are female and among the graduates 24 % are female. This means that the retention rate of females is higher compared to male students. However, the higher we climb the job ladder the more we are losing the young women.

Applying the published data from the National Science Foundation on the US Science and Engineering Workforce Trends and Composition we see how much (or little) women's involvement in STEM fields has changed over the course of 17 years between 1993 and 2010. The results of this study include men and women ages 16 and over pursuing studies or working in a STEM field. The male to female ratio has remained almost constant at 70:30, despite the time passed (Figure 3).

Typical drawbacks for women

Analyzing the literature, own experiences, and personal discussions with women in respective positions several typical drawbacks can be identified:

- **The struggle to break gender stereotypes:** There are many gender stereotypes surrounding everyone every day. Knowing that STEM disciplines are predominantly occupied by males, it is difficult for a female to start a career or even to be interested in STEM, or leadership positions. These stereotypes play a major role in a female's career choice.
- **Lack of female (and male) mentors:** Another barrier to females in STEM and leadership is the lack of a person they can go to for advice in a male-dominated environment. With the trend of STEM disciplines being surrounded with more men than women, it is difficult for a woman to fit in or even articulate their opinions.
- **Flexibility in the job:** Missing flexibility is a concern in some job positions. This is in a certain way also applicable to IAHR. Although, IAHR does not offer job positions for its members, it offers leadership positions and responsibilities. This represents the area where IAHR could be different from other organizations in being more flexible.

Potential measures to be taken in IAHR

Gender equity also requires an examination of organizational practices and policies that may

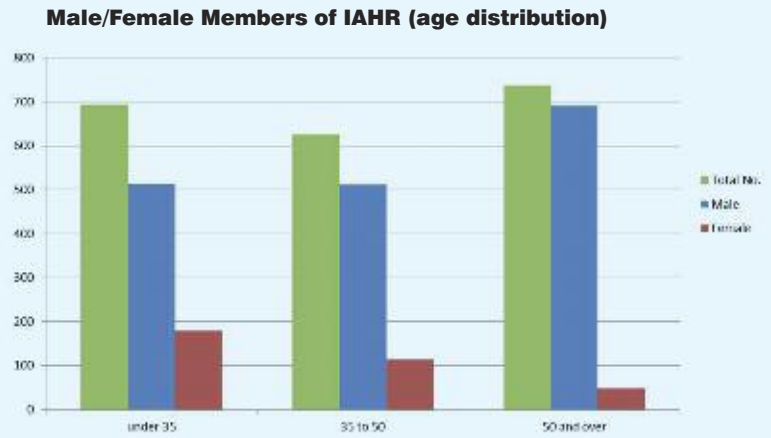

Figure 1. Absolute numbers of male and female members in IAHR distributed to the different age groups of under 35 (YPN), 35 to 50 as well as 50 and over

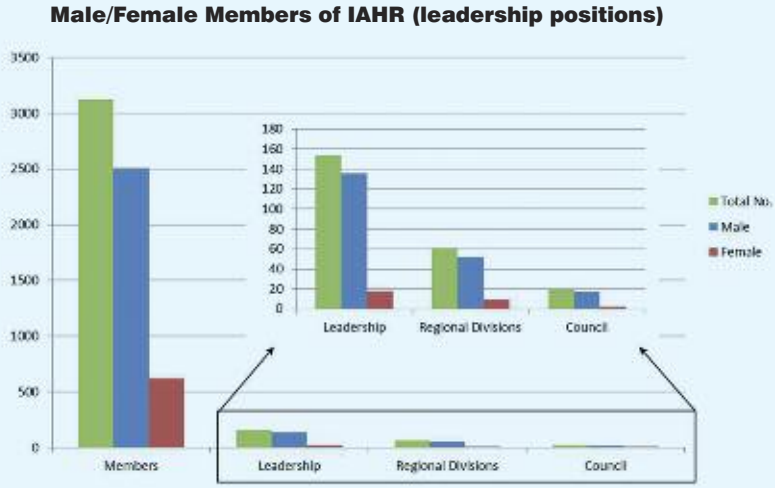

Figure 2. Absolute numbers of male and female members in IAHR distributed to the different positions of all members, leadership positions (e.g. technical committees), members in regional divisions as well as council members

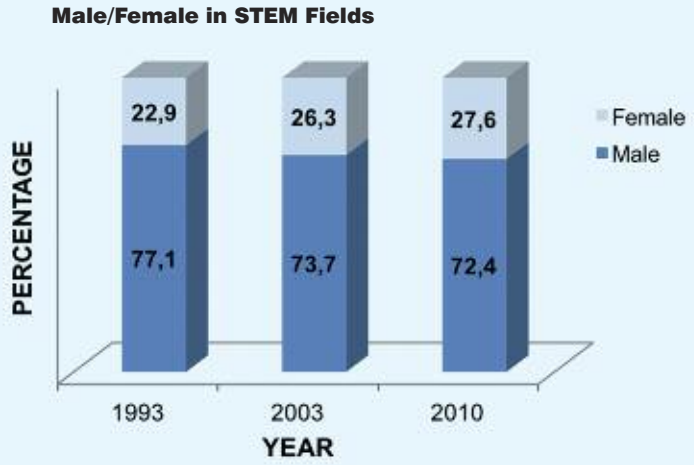

Figure 3. Percentage of women in STEM fields (Data from US S&E Workforce: Trends and Composition from National Science Foundation)

hinder the participation and development of women. Therefore ideas for potential measures are identified:

- **Awareness and importance of the topic:** It is important that we set up, enhance, revive and exemplify within IAHR a culture which breaks the gender stereotypes and mitigates their past effects. This means that gender equity is not an issue only for women. It is in fact an issue for the entire IAHR community. It is a serious and important topic and nobody should smile at it. It is also not a "nice-to-have", or an inconvenient duty. In fact, it is a basic requirement for a well-functioning, diverse and emancipated association.
- **Mentoring:** We are a male-dominated association. There is only a restricted number of females in leadership positions. Consequently, it is obvious that not only the women in IAHR can take over mentorship positions. It is a task for the whole community having mentors in a male-dominated workplace, who support females to work towards their interest in STEM fields and leadership positions.

Conclusion

Gender equality will be achieved only when women and men enjoy the same opportunities, rights and obligations in all spheres of life. This means sharing equally in the distribution of power and influence, and having equal opportunities and realizing their personal ambitions.

IAHR has committed itself to contribute to gender equity within the organization. Hence, it is essential to develop a common understanding that this topic is important for both, men and women. We want to provide an environment which supports women and men to step up and take ownership of this topic.

Especially, the young-age group, as the future generation of the association, can considerably contribute. The activities of the Young Professional Network (YPN) show the first successful results like increasing number of memberships. Quantity-wise this is also the age group with the highest share of females. Thus, it is very important to encourage them to stay loyal to IAHR when they proceed from the YPN status to "full" members. ■

References

[1] United Nations. Report of the Economic and Social Council for 1997. A/52/3.18 September 1997,
[2] United Nations "Universal Declaration of Human Rights" (PDF). wwda.org December 16, 1948. Retrieved October 31, 2016.
[3] De Cohen and Deterding, 2009. Widening the net: national estimates of gender disparities in Engineering, ASEE. Journal of Engineering Education, July 2009