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Empowering Women in the Indonesian Geothermal Industry

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ABSTRACT

In 2018, to celebrate International Women's Day and in conjunction with 60 years of friendship and collaboration between Indonesia and New Zealand, an event was hosted by New Zealand's Ministry of Foreign Affairs and Trade (MFAT) to highlight and celebrate the contribution women make to the geothermal sector in Indonesia. Since then, an Indonesian chapter of Women in Geothermal (WING) was launched, a mentoring programme established and several events a year held to bring women from many parts of the industry together.

As is prevalent in the global geothermal industry, participation of women is low with only 10-15% at graduate levels and even lower at middle and senior management levels. Mentoring young women through their careers is noted as a key facilitator in encouraging them to remain in the industry and to push for managerial roles and responsibilities. Additionally, networking events specially aimed at women provide an efficient way to meet valuable contacts, gain ideas and increase confidence. And for some, female-only networking groups provide a space for gender issues and equality to be discussed without judgement.

The geothermal sector in Indonesia needs to be actively involved in supporting and encouraging women in the industry, to have open and candid discussions on structural, organisational and societal barriers that hinder gender equity and to give women the tools and a voice to reach for the top.

1. INTRODUCTION

Part of the *2030 Agenda for Sustainable Development* is Sustainable Development Goal 5: Achieve gender equality and empower all women and girls. However, the United Nations (2017) notes that achieving gender equality will require further "vigorous efforts, including legal frameworks, to counter deeply rooted gender-based discrimination that often results from patriarchal attitudes and related social norms."

Progress has been made in some areas - women have closed much of the gender gap in health and education outcomes, however inequality persists in economic participation and political empowerment. Just 22% of individuals holding senior managerial positions are women (WEF Global Gender Gap Report 2017). In Indonesia the share of female tertiary graduates in STEM programmes from the period 2007-2017, is approximately 15% and is not dissimilar to New Zealand. Likewise for the female share of employment in senior and middle management stands at about 20% (UNDP 2017 gender inequality index[1]).

The New Zealand Government Aid Programme called "Accelerating Geothermal Energy Development in Indonesia" (Geo-INZ) has a component of enhancing gender equality in the Indonesian geothermal industry. Included in this programme, of which Jacobs is managing, is working with stakeholders to encourage women to enter the Indonesian geothermal industry, to form support networks and to move into decision making roles.

2. INDONESIA'S QUEENS OF STEAM

To highlight the contribution women make in the geothermal sector in Indonesia, the New Zealand Ministry of Foreign Affairs and Trade (MFAT) hosted an event on 8th March 2018 to coincide with International Women's Day. The purpose of the event was to bring together women in the Indonesian geothermal sector where they can network and share resources, inspire each other to set goals and move towards them, and initiate a mentoring network to support women's career in geothermal sector.

In partnership with the Ministry of Energy and Mineral Resources (EBTKE) and PT. Sarana Multi Infrastruktur (PT. SMI), the day-long event attracted almost 100 attendees, guest speakers and dignitaries. Women (and some men!) from government, universities, developers, NGO's and consultants listened to a number of high-level keynote speakers and panelists. The audience was then invited to share their thoughts and question the panelists on the future of women in the Industry.

Key messages throughout the sessions included the vital need to increase the participation of women in the industry where numbers currently stand at 10-15% at junior levels (anecdotally) and even lower at middle and senior management levels. Attracting women into the geothermal industry starts at university level where more women are needed in the sciences and engineering.

[1] http://hdr.undp.org/en/content/gender-inequality-index-gii

Mentoring young woman through their careers was also noted as a key facilitator in encouraging those to remain in the industry and push for managerial roles and responsibilities. However, juggling career and family commitments and expectations weighed heavily on some women, which often puts the brakes on many promising careers.

The overriding message of the event is that organisations in Indonesia need to be actively involved in supporting and encouraging women in the industry, have open and candid discussions on structural, organisational and societal barriers that hinder gender equity and give women the tools and a voice to reach for the top.

Figure 1: Photos from the Women in Geothermal event March 2018

3. WOMEN IN STEM

There is a shortage of talent in the labour force around the globe, particularly in STEM fields - of the top ten most difficult jobs to fill, six are STEM-related (Feldhaus and Bentrem 2015). Even in scientific fields where women are present, they are underrepresented in policy-making and programming (UNESCO 2015). As an example, women represent just 3% of PT Indonesia Power's operations, maintenance and engineering workforce; while they account for 36% of its human resources, finance and administrative staff (ESMAP 2018).

Harvard Business Review (HBR 2008) states that 52% of women in STEM fields quit their jobs, with the majority doing so in their mid-to-late 30s. HBR provides reasons for this extraordinary figure as:

- Hostility of the workplace culture
- A sense of isolation when a woman is the only female on her team or at her rank
- A disconnect between women's preferred work rhythms and risky behaviour which is recognized and rewarded in male-dominated fields
- Jobs with long work-weeks and significant travel are particularly prevalent in science, engineering, and technology companies; and
- The mystery around career advancement, with a lack of sponsors to discern the pathway upward.

Dawson et al (2015) note that these women leaving STEM is due "not to a deficit in academic preparation, ability, or talent but rather to a drop in confidence that is triggered by a range of experiences along the STEM pathway." This includes the reasons listed above, as well as an environment that includes "few role models and mentors, a dearth of female peers, intimidation, and implicit or overt bias against women". They note that six out of seven women identified a lack of guidance and support as a reason for their decision to leave science.

The low rate of participation of women in STEM is an issue for society as a whole. Women in areas with inequitable participation rates have lower salaries, more limited career and professional development opportunities, and less say in the development of their personal lives and their society (Allmendinger 2002). Societies in which women are underrepresented in STEM also pay a collective economic price in the form of shortages of skilled labour.

4. WOMEN IN GEOTHERMAL

Women's direct employment by energy infrastructure projects is constrained by traditional gender roles and social norms, and a lack of technical and professional skills. Whilst nearly 50% of the global workforce is comprised of women, just 15% work in Industry (ILO, 2018), and that proportion has been decreasing over time.

As noted by World Bank Group (2018), geothermal projects employ mainly men for both skilled and unskilled jobs, and the technical jobs consist mainly of engineers, geologists, geochemists and geophysicists: "Therefore, women are far underrepresented in positions of influence, decision-making, or team-leading in the industry." The reasons for this include those outlined above as well as "the inertia from more than a century of power sector labour segregation".

Given the nature of geothermal energy, the lack of a safe and suitable work environment deters many women from the sector, for example a lack of sanitary facilities and separate quarters on site, or discrimination on the basis of physical strength (ESMAP 2019). Yet we know that gender balanced teams can increase company performance. Ernst and Young (Women in Power and

Utilities Index 2016) found that among power utilities, those with the most female executive and governance representation outperformed those companies with the least. In 2011 Reykjavik Energy (OR) were determined to eliminate the gender pay-gap (which at that time was 7% in favour of men). By 2017 they had closed this gap and increased the number of women on their board. What OR found is that the gender make-up of the energy sector can be changed quickly if there is the resolve of management to do so. and they now receive a higher number and higher quality job applications from both genders (Bjarni Bjarnason 2017).

5. MENTORING PROGRAMME

Following on from the March 2018 event, the Geo-INZ mentoring programme was initiated in April with fourteen pairs of mentors and mentees. As noted already, mentoring is a vital component in keeping young women in the industry and is especially important for females in settings where there are few women, because they often have difficulty building social capital at work (Chrisler and McCreary 2010).

The main purposes of the programme included:

- Development and support of junior staff;
- Enhancement of leadership, coaching and communication skills of senior staff;
- Transfer of knowledge and experience to build capacity within the industry;
- Gain an understanding of the obstacles women in the industry face and how to overcome them; and
- Extend the networks of both mentors and mentees.

Research into mentoring ahead of initiating the program showed that mentored individuals are not only more satisfied with their careers, more likely to expect career success, and more satisfied with their jobs, but also have more favorable salary, bonuses, and total compensation (Kao, et al. 2014). Furthermore, mentees prove to be more resilient, which is valuable in terms of coping successfully in challenging roles, tasks, and situations.

Dawson et al (2015) found that “women’s persistence in the sciences and engineering … is directly linked to the availability of a strong mentor.” They further note that not only does mentoring increase the professional skills of the mentee, but “equally importantly, mentoring can provide the psychosocial support needed to counter the elevated stress and discouragement and the falling confidence that some women in STEM experience.”

After six months of the programme participants were asked to give feedback. Whilst comments were generally positive, there was some disappointment that both mentors and mentees didn’t get the full benefit of the relationship that they were hoping. One of the key factors identified was a lack of time and difficulties in aligning schedules for meetings. After doing further research in to what makes a successful mentoring relationship, we understood that training for mentors is hugely important. Good training really focuses on the value mentors bring to support the development of talent and helps them learn about themselves as well.

A mentoring workshop was subsequently held in August 2019 with the aim of assisting the mentors to understand and apply a range of effective mentoring tools and techniques.

Figure 2: Mentors breakfast feedback session September 2018

6. WING INDONESIA CHAPTER

The Indonesian chapter of WING, which has been endorsed by the Indonesia Geothermal Association (INAGA) was officially launched in March 2019 by Pri Utami, the WING Ambassador for Indonesia. Following on from the launch, WING Indonesia plans further networking events throughout the year, and where possible will coordinate these with larger geothermal workshops or conferences.

For these events to be as inclusive and successful as possible, it requires ‘buy-in’ from as many Indonesian geothermal organisations as possible. They need to be partners with WING in promoting gender equality and women’s empowerment in the

industry. This engagement with the Indonesian community has already begun with the successful event held a year prior in March 2018. We want to build on the good-will generated then and foster those great relationships.

A social media campaign on various platforms was also initiated with co-ordination by Ratih Nurruhliati and other contributors #WINGIndonesia.

Figure 3: WING Indonesia launch March 2019 (left), WING networking with Badan Geologi June 2019 (right)

7. SUPPORT FROM THE INDONESIAN GEOTHERMAL INDUSTRY

A recent study found that Fortune 500 companies with high percentages of women officers had a 35% higher return on equity and a 34% higher total return than companies with fewer women executives. Clearly, the business case for recruiting, developing and advancing women maintains that companies that have diversity and manage it properly make better decisions, produce better results, and retain several key business advantages over more homogenous companies. In other words, the business case for women in management contends that companies that achieve diversity and mange it well attains better financial results than other companies.

Organisations within the Indonesian geothermal industry have expressed their support for WING Indonesia, as they also realise that having more women in their workplace improves every aspect of their business. What WING is planning is the collection of gender disaggregated data on employment in this sector and documenting and publicising the economic benefits of gender diversity. This is an indispensable and useful strategy for convincing geothermal companies to recruit, retain and promote more women (IRENA 2019).

Feedback received from the women who attended the event in March 2018 had experienced the following obstacles to their career progression:

- Lack of awareness of opportunities
- Lack of sponsorship
- Lack of support from senior leaders
- Unfair evaluation or promotion criteria, and
- Lack of support from supervisor.

In addition, 34% of women felt they had been discriminated against at their workplace and 100% of the women wanted more flexible working arrangements such as flexi-time, longer maternity leave and less time in the field. Key issues for the women surveyed included:

- The need (but sometimes lack) for support from family, friends, community, leaders;
- The requirement to spend time in the field (particularly for mothers);
- The lack of opportunity to move up;
- Lack of training on what constitutes harassment and discrimination, and the lack of protection for victims;
- The traditional nature of the education system; and
- The perception that women cannot commit 100% to their career because of their other commitments (such as family).

These issues and concerns need to be acknowledged and addressed by industry leaders and the leadership teams within these Indonesian organisations. *'At the end of the day it is a question of corporate culture and the determination of the management to develop it'* - Bjarni Bjarnason, Reykjavik Energy 2017

8. CONCLUSIONS

Developing geothermal is complex process and necessitates a holistic approach with collaboration and understanding between those involved. Knowledge sharing is a crucial part of a successful development team; however, women often feel isolated in such male-dominated environments. Getting women into the geothermal industry, retaining them and moving them into positions of decision-making and policy design is imperative. The Geo-INZ program (MFAT-sponsored support to the Indonesian geothermal industry) has a component of enhancing gender equality in the Indonesian geothermal industry. This support has enabled the WING Indonesia Chapter to flourish and establish its own identity, in addition to holding networking events and launching the mentoring program.

The Indonesian geothermal community and their leadership need to be fully aware of the specific barriers women entering and advancing in the industry face and what they can do to promote gender diversity in their industry.

9. ACKNOWLEDGMENTS

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