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**AGENDA ITEM 11: INTELLECTUAL PROPERTY AND INNOVATION:
WOMEN AND INNOVATION**

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11.1 Norway

210. To enhance women's economic empowerment and rights is one of the main objectives of the Norwegian Government's policies on promoting gender equality. The topic "Women and Innovation" fits very well into Norwegian policy, and Norway is therefore proud and pleased to co-sponsor this agenda item.

Labour market

211. Today, women in Norway participate on an almost equal footing as men in the labour market. The majority of Norwegian women are in employment, and three out of five students at universities and colleges are women. We have come a long way. At the same time, our labour market still has gender differences. These differences largely correspond to the division between the public and private sectors, and are kept alive through stereotypic choices of education and work.

212. Although women now account for a substantial part of the labour force, they are still clearly in minority in management positions and in innovation.

213. Norway is a small country. We cannot defend utilizing only parts of our human capital. Gender equality is a prerequisite and a key factor for economic growth. In short, gender equality is smart economics.

Female entrepreneurs

214. When it comes to innovation, women are still under-represented amongst entrepreneurs in Norway. In the last 10 years, the level of female entrepreneurs constitutes about 30%. The Norwegian Government therefore supports "Young Entrepreneurship", an organization with specific programmes aimed towards teaching female pupils about entrepreneurship. In addition, the Norwegian Government agencies responsible for promoting innovation employ an integrated approach to gender balance throughout their operations. This includes increasing the shares of women participating in government programmes for entrepreneurs and in industry clusters.

215. In 2009, the Government launched an award of one million Norwegian Kroners to a "Female Entrepreneur of the Year". This has resulted in more focus on female entrepreneurs and female participation in innovation.

Globally

216. At the global level there are even bigger gaps between women and men in access to economic opportunities and participation in innovation. This is simply bad economics. Studies show that eliminating barriers that discriminate against women working in certain sectors or occupations could increase labour productivity by as much as 25% across a range of countries.

217. Our common objectives, as reflected in the Marrakesh Agreement, are ensuring full employment and sustainable development. To achieve this innovation is needed in all sectors of society. There is good evidence to say that applying a gender perspective on innovation can extend the concept of innovation, identify structures that block innovations and demonstrate new forms of innovation systems. This can open new markets and new products.

218. In order to meet some of these challenges, the Norwegian Government has decided to integrate gender equality considerations in allocating funding for business development, social partners and the Norwegian Investment Fund for Developing Countries (Norfund). At the end of 2013, the companies in Norfund's portfolio employed more than 314,000 persons, with women accounting for 37% of all employees. Norfund has chosen financial institutions and SME funds as two of its investment areas. These sectors employ large numbers of women, and the share of women in managerial position is also relatively high (31%). Access to credit is important for women's economic empowerment and participation in innovation. We are happy to note that

approximately 26 million women are registered borrowers of Norfund's investments in financial institutions.

219. Furthermore, the Norwegian action plan for Aid-for-Trade identifies gender equality as one of its three thematic areas. This action plan will help to ensure that the gender perspective is included in national trade policy strategies and in our dialogues with multilateral actors. It provides a basis for targeted efforts to promote gender equality in regional trade organizations and for providing support for women entrepreneurs and exporters.

220. We look forward to learning from other Members' experiences and to an interesting discussion under this agenda item.

11.2 Turkey

221. We have the honour to co-sponsor and to join the discussions under the agenda item "Women and Innovation".

222. Strengthening gender equality in employment and putting a particular focus on small and medium-sized enterprises are among Turkey's priorities in 2015 as the current President of the G-20. Moreover, during the 45th annual meeting of the World Economic Forum, Prime Minister Ahmet Davutoğlu stated that he hoped to bring 100 million more women into the global workforce by 2025 through ensuring the implementation of the G20 gender gap commitment.

223. Having said that, allow me to give you some information regarding the activities in Turkey aimed at strengthening women entrepreneurship and innovation.

224. I would like to start with the activities carried out by the Ministry of Family and Social Policies. In February 2012, the Ministry held a workshop in cooperation with the Association of Entrepreneurial Business Women in Ankara. The workshop helped to develop an understanding of the need to foster women entrepreneurship and resulted in the establishment of a Working Group with a mandate to assess the needs of women entrepreneurs. At the end of its mandate, the Working Group concluded that the main difficulty women entrepreneurs face was financial constraints. In order to support women financially, a protocol between the Credit Guarantee Fund and Halkbank was signed. As of January 2014, out of 680 applications, 165 women received credit for their enterprises.

225. Currently, the Ministry of Family and Social Policies has been implementing a five-year project to promote women's access to economic opportunities. The project started in 2012 and will end in 2017. It is being conducted in cooperation with the Swedish International Development and Cooperation Agency and the World Bank. Various workshops, comparative analysis and consultations with different groups have been carried out within the framework of this project. The preliminary results and the reports of the project are being finalized and will be announced shortly.

226. In October 2014, the Ministry of Family and Social Policies organized a conference in cooperation with the Development Agency and the Union of Commerce and Commodity on Women Entrepreneurship and Women in Innovation for Sustainable Development in Ankara.

227. Let me now mention some of the activities conducted by the SME's Development Organization. In 2014 the Organization approved the five-year Entrepreneurship Strategy and the Action Plan. The Strategy and Action Plan aim to spread the culture of entrepreneurship and to establish a friendly eco-system for entrepreneurs in Turkey. Identifying the problems of women entrepreneurs and providing support to them are among the strategic targets of the Action Plan.

228. The SME's Development Organization has been organizing business start-up training courses. Three thousand participants have attended the training programmes since 2010, 45% of them being women.

229. In addition to training programmes, the SME's Development Organization provides financial support for future entrepreneurs. Women entrepreneurs, as well as young entrepreneurs enjoy favourable support ratio rates. 48% of the beneficiaries of the financial support fund are women.

230. Let me now address some of the work carried out by the Ministry of Labour and Social Security. "Women in business" is one of the Ministry's main projects aimed at enhancing the employment of women. The project has a budget of €38million and commenced with the signing of a direct grant contract between the Ministry of Labour and Social Security and the European Construction and Development Bank (EBRD). It aims to back up SMEs, which are owned or managed by women by providing them with favourable credits. The project also targets the creation of a loan mechanism for the benefit of women entrepreneurs.

231. The credit guarantee fund, which is envisaged to be established within the framework of the project, will have a capacity of 300 million €. 150million of the total fund will be allocated by Turkish banks, while the other half will be allocated by the EBRD. The project aims to support women-owned or women-managed enterprises by ensuring they have access to funds and by providing them with technical assistance and know-how.

232. Last but not least, please allow me to mention some of the awards received by Turkish female innovators in some international fairs and exhibitions.

233. In 2008, Ms Arzu YÖNEY was awarded a silver medal for her innovation "The sun is now cooling" at the Nuremberg International Trade Fair. In 2012, Dr Fatma Gülrü ERDOĞAN was awarded a gold medal for her innovation "Screw nail correcting apparatus" at the 40th Geneva International Exhibition of Invention. In 2013, Ms Dürdane DANACI, a needlework teacher, was awarded a gold medal for her innovation "Picture and industrial signboard production method with a sewing machine" at the 6th Korea International Women Inventors Exposition. At the same exhibition, Professor Kamile Nazan TURHAN was awarded a bronze medal for her innovation "Squeezable teabag" and Ms ÖZBİR, a music teacher, won the special award for her innovation "Electronic screen system able to automatically change sheet music" at the same exhibition.

234. In 2014, Ms Aynur AŞKI was awarded a gold medal for her innovation "Ornament, decoration, jewelry and textile materials made of tissues" at the 7th Korea Women Inventors Fair. At the same fair, Dr Şadiye TEMEL was awarded a gold medal for her innovation "Safe and multifunctional intravascular cannula device", while Ms Esra ÖZKAN received a special award for her innovation "Floating vertical wind tribune".

11.3 Japan

235. My delegation is delighted to co-sponsor this agenda item with the United States, Norway and other Members. Japan fully recognizes the importance of the role of women in innovation. Japan appreciates this opportunity to share its experience on how to advance women's contributions to society, with a particular focus on innovation and intellectual property. We believe that our experience is useful for other Members.

236. In 2013, the Prime Minister of Japan, Mr Abe, set forth a growth strategy aimed at revitalizing the Japanese economy. This strategy outlined a comprehensive policy package that includes regulatory and institutional reforms, putting a premium on how to further advance contributions by women. The strategy's major goal is to have no less than 30% of leadership positions in all areas of society filled by women by 2020, forging a roadmap for "a society in which women shine", for instance, by providing support to women who "start businesses after raising children".

237. Behind this strategy is the idea that making the best use of women's talents will give Japan a competitive edge in the global market and consequently put Japan on a growth track. In this regard, there are considerable studies demonstrating that having more female board directors or executive officers in a company creates a more positive effect for advancing innovative activities of the company.

238. In achieving this growth strategy, Japan has been making various efforts to promote women's contributions to society. One of them is a project called "Diversity Management Selection 100. Diversity management means conducting corporate management that enables innovations to be created and generates value by utilizing various human resources such as women and seniors to the maximum extent possible. In this project, Japan recognizes enterprises that proactively

make efforts to carry out diversity management, and makes these efforts available to the public as best practices.

239. In addition, Japan provides subsidies for entrepreneurship and they are, of course, available to women. To name just a few, the "Support Fund for Female, Young and Senior Entrepreneurs" provides loans to women, seniors and young people who started new businesses not less than five years ago; and the "New Business Support Fund" provides financial support to individuals who plan to start new businesses to revitalize local economies and expand their business overseas.

240. Finally, in connection with the aforementioned "Diversity Management Selection 100" project, I would like to touch upon two cases demonstrating the importance of the role of women in innovation.

241. A Japanese printing company, Toppan Forms, was constantly in the limelight ever since it was selected in 2013 as one of the Diversity Management Selection 100. In 2007, three women from the research and development department were assigned to a new product development team formed to create new packaging for strawberries. This company conventionally printed packaging on paper. However, the new team put their heads together, thought out of the box, and developed a successful product. The new packaging for strawberries was not printed on paper but on transparent film, more interestingly, with traceability information on the strawberries such as the area of production and grower.

242. With regard to this case, this delegation would like to bring two things to your attention. Firstly, the development team examined possible packaging from the consumer's perspective and reflected on how consumers could buy fruits without worry. After conducting repeated consumer surveys and interviews with farmers, they began to understand that transparent packaging and traceability were key factors. Secondly, they acquired intellectual property rights for their product. They registered the name of the strawberry wrapping film as a trademark and filed a patent application for their printing technology.

243. Another example is S.T. Corporation, a Japanese manufacturer of household goods such as air fresheners. Before 2000, despite the fact that the majority of the consumers in its market were women, there were no women involved with product development and design in the company. In 2001, as a means to increase diversity, the company's President appointed a female designer to design air fresheners. She developed an asymmetric design by making use of curves – a design never seen before in an air freshener. In addition to its impact, the design also created a sense of softness because of the curves, which differentiated the product from others placed in air freshener sections in stores. It was widely welcomed by consumers, even though it was a latecomer. It became a megabrand, thanks to the design.

244. Currently, in the company, female employees are widely involved in various tasks, developing, designing, and marketing of all types of products. The company registered the shape of the air freshener as an industrial design right, which we believe contributes to continuous innovation.

245. In summary, Japan attaches great importance to women's active contribution to innovation and is undertaking a number of initiatives to further advance such contributions to society and innovation. Japan continues to develop new initiatives in the hope that they can contribute to further promoting innovation and economic growth. We would welcome other Members' insightful comments on this issue.

11.4 United States of America

246. I would like to thank the European Union, Japan, Montenegro, Norway and Turkey for co-sponsoring this agenda item today. I will briefly introduce this item and will then turn to my fellow US delegates Rachel Bae and Karin Ferriter, who you all know well.

247. We co-sponsor this item on the eve of Women's History Month in the United States in March and of International Women's Day on 8 March. While these single months and days and even this TRIPS Council meeting champion women, this endeavour should be for all of us for all 12 months and 365 days of every year. With that, I turn to Rachel and Karin to present the US intervention.

248. The role of women in innovation is a thread that runs through all of the previous discussions we have held under the IP and innovation agenda here in the TRIPS Council, including at the recent Innovation Fair, where women innovators were represented.

249. As we have highlighted in the context of our ongoing discussions – including on national innovation policies, university research, innovation incubators, small and medium-sized enterprises, as well as green technology, sports, and low-cost innovation and social entrepreneurship – government policies are critical to creating an enabling environment that fosters innovation.

250. Numerous WTO delegations have highlighted in successive TRIPS Council meetings that innovation needs the appropriate environment to thrive. This is perhaps especially true for women innovators.

251. Like other SMEs, those owned by women need training and counselling as well as access to credit and capital. In the United States, for example, the US Small Business Administration (SBA) helps to meet this need with over 100 educational centres that assist women in starting and growing their businesses. In addition, the US SBA helps with access to credit and capital, and backed nearly 10,000 loans worth about US\$2 billion to women entrepreneurs in 2009 alone.¹ In discussing Innovation Incubators in our past intervention, we could have also mentioned the *Women's Incubator and Training Center* (WITC) in Saudi Arabia, and *Women Innovate Mobile*, a new accelerator in New York for mobile technology start-ups that have a female founder or co-founder.

252. Finally, in discussing Environmentally Sensitive Technologies, we could have mentioned the importance of women in responding to climate change. Numerous resolutions and other documents from the United Nations Framework Convention on Climate Change and the World Health Organization recognize the disproportionate impacts of this environmental challenge on women.

253. In those international organizations, governments have pledged to empower women and improve their lives. We could have also recognized Dr Wandee Khunchornyakong, or perhaps I should just say the solar queen of South-East Asia. She is the Chief Executive Officer of Thailand's largest solar farm developer, the Solar Power Company Group and 2013 Women Entrepreneur of the Year. With 36 solar farm projects, Dr Wandee is a leader in responding to the global climate imperative.

254. Today, I will provide examples of innovative women and describe their contributions to technologies which we may take for granted today, but which have greatly impacted the way we live. I will then turn to Karin to explain why we need to do more and what we can do, including with respect to promoting gender parity and economic empowerment, including by advancing science education, stimulating entrepreneurialism, recognizing achievement and mentoring female innovators.

Examples of Innovative Women

255. There are many examples of well-known female artists and inventors.

256. For example², the circular saw was invented by Tabitha Babbitt. Tabitha realized that the straight blade of a saw could be more energy efficient if it was circular and created a prototype of the circular saw that was itself a revolutionary step in the milling industry.

¹ <https://www.sba.gov/offices/headquarters/wbo/about-us>.

² Many of these examples were taken from "Top Inventions from Women Top 10 Things that Women Invented," by Molly Edmonds <http://science.howstuffworks.com/innovation/inventions/10-things-that-women-invented.htm#> page 10 (5 February 2015). See also http://en.wikipedia.org/wiki/Women_in_science.

257. Another example of a far-reaching invention by an American woman is the Compiler and COBOL Computer Language. Admiral Grace Murray Hopper joined the US military in 1943 and worked on the first large-scale computer in the United States.

258. In the 1950s, Admiral Hopper invented the compiler, which translates English commands into computer code. Her second compiler was used to program the first computers available commercially.

259. Admiral Hopper also oversaw the development of the Common Business-Oriented Language (COBOL), one of the first computer programming languages. Admiral Hopper received the US National Medal of Technology and Innovation for her pioneering accomplishments in the development of computer programming languages that simplified computer technology and opened the door to a significantly larger universe of users.

260. More recently, Stephanie Kwolek won the US National Medal of Technology and Innovation "for her contributions to the discovery, development and liquid crystal processing of high-performance aramid fibres," now known as Kevlar. In 1964, while working at DuPont, Ms Kwolek was researching polymers with rod-like molecules that all lined up in one direction. Kwolek thought the uniform lines would make the resulting material stronger than polymers where the molecules that were jumbled.

261. Her fibre, once spun, is ounce-for-ounce as strong as steel. Kevlar is used to manufacture skis, radial tires and brake pads, suspension bridge cables, helmets, hiking and camping gear, and bulletproof vests.

262. Other American women who have been awarded the National Medal of Technology and Innovation, include:

- Esther Sans Takeuchi "For her seminal development of the silver vanadium oxide battery that powers the majority of the world's lifesaving implantable cardiac defibrillators, and her innovations in other medical battery technologies that improve the health and quality of life of millions of people."
- Helen M. Free "For her seminal contributions to diagnostic chemistry, primarily through dip-and-read urinalysis tests, that first enabled diabetics to monitor their blood glucose levels on their own."

263. And women have also made invaluable contributions to education, to the very foundation for promoting tomorrow's innovators and creators. Those include:

- Cherry A. Murray: "For contributions to the advancement of devices for telecommunications, the use of light for studying matter, and for leadership in the development of the Science, Technology, Engineering, and Math (STEM) workforce in the United States."
- Mary Shaw: "For pioneering leadership in the development of innovative curricula in Computer Science."

264. Of course, on Thursday we will recognize numerous TRIPS Agreement negotiators, whose hard work, commitment and creativity made a critical and fundamental contribution to today's global innovation ecosystem, including:

- Catherine Field from the United States.
- Jayashree Watal from our very own TRIPS Council Secretariat, who was working for the Government of India at the time.
- And Thu-Lang Tran Wasescha, formerly of the TRIPS Council Secretariat who is now again and was then representing Switzerland.

265. I could go on, there is no shortage of examples.

We Need to Do More

266. But the purpose of today's intervention is not simply to celebrate the accomplishments of women innovators. It is to acknowledge that more can be done to promote many more such accomplishments. We cannot solve today's problems if half of the global population is marginalized or otherwise incapable of reaching their innovative potential. This is true of many women and girls.

267. This year, we are celebrating the 40th anniversary of the First World Conference on Women in Mexico City, and the 20th anniversary of the Beijing Declaration and Platform for Action. In 1975, the First World Conference on Women was convened to unite the international community, as discrimination against women continued to be a persistent problem in much of the world.

268. While international efforts helped to improve women's conditions, the basic structure of inequality between men and women remained in place. Fortunately, the 1995 Beijing conference sparked a renewed global commitment to the empowerment of women. Today, women are better represented in parliaments and boardrooms around the world. More girls are enrolled in primary and secondary school than ever before.

269. Women are also making significant contributions to economies. The Economist reported that the growth in employment of women in developed economies between 1996 and 2006 made paradigm-changing shifts to the global economy.³ However, despite our progress, women still own only 1% of the world's wealth, are named as the first inventor in only 11% of the world's patents, have only a 10% share of global income, and occupy only 14% of leadership positions in the public and private sectors.

270. I will now turn to Karin to elaborate on ways to overcome the challenges that remain to increasing the role of women in innovation.

Introduce The Future She Deserves Initiative

271. This year, the United States has launched a new initiative focussed on protecting and empowering women and girls, called "*The Future She Deserves*". The four pillars of this initiative are:

- To ensure adolescent girls have access to the full range of appropriate health services.
- To enhance opportunities to prevent and respond to gender-based violence against women and girls.
- To economically empower women and girls, including through improved access to trade and entrepreneurship.
- To develop and promote gender-equal leadership opportunities, including gender parity.

272. Elsewhere in Geneva, you will hear the United States mentioning this initiative, but today, I would like to spend some time discussing the third and fourth pillars on gender parity and economic empowerment.

Gender Parity

273. As Rachel indicated, gender parity is a challenge facing every nation's innovation potential, given that women are named as the first inventor in only 11% of the world's patents.

274. I will speak in a few minutes about ways to achieve greater gender parity in innovation and ways to unlock the innovation potential of women – including through education, entrepreneurialism, recognition and mentoring. Before I do, I want to describe our efforts to achieve gender parity among examiners at the U.S. Patent and Trademark Office.

³ Economist, April 12, 2006, "Women and the World Economy: A Guide to Womenomics"
<http://www.economist.com/node/6802551>.

275. I am happy to note that the number of female patent examiners has increased substantially at the PTO. In 1992, there were 396 patent examiners (or 20.4%) of our total of 1,937 examiners. Today, USPTO employs more female examiners than the total number of patent examiners at USPTO in 1992. Today, there are 1,993 female examiners out of a total of 7,469 patent examiners at PTO, or a total of 26.7% of female examiners.

276. The pursuit of gender parity has also achieved important results for female trademark examiners at the PTO. In 1992, the USPTO had 103 female trademark attorneys and 94 male. In other words, 52% of all trademark attorneys at the PTO were women. Today, 313 trademark attorneys are women and 199 are men.

277. It is worth noting at USPTO that the Under-Secretary designate and Director of PTO, as well as the Commissioners for Patents and Trademarks, the General Counsel, the Chief Policy Officer and Director of International Affairs are women.

278. Likewise, the United States Copyright Office has also made significant strides with respect to gender parity. For example, the current Register of Copyrights and Director of the US Copyright Office, Maria A. Pallante, and the immediate past Register of Copyrights, Marybeth Peters, as well as Register Barbara Ringer, are women.

279. In addition, half of the current Register Palante's cabinet are women, including Karyn Temple Clagget, who is the Associate Register of Copyrights and Director of Policy and International Affairs, and Jacqueline Charlesworth, who is the General Counsel and Associate Register of Copyrights.

Economic Empowerment

280. Turning to the fourth pillar of the *Future She Deserves* initiative, innovation offers tremendous potential for the economic empowerment for women. But, how can that potential be realized? What else can we do as societies to promote innovation by women and girls?

281. One critical area is education, particularly science, technology, engineering, and mathematics (STEM) education. STEM is critical to having and maintaining a skilled workforce. Unfortunately, perhaps because of these same cultural biases, the limited number of role models, and less family-friendly flexibility in STEM fields, girls and women have often been discouraged from STEM educations and careers.

282. Although women fill close to half of all US jobs in the US economy, they hold less than 25 percent of STEM jobs.⁴ Furthermore, although about 40 percent of men with STEM college degrees work in STEM jobs, only 26 percent of women do. Correcting these gaps and supporting female STEM students, researchers and workers is not only an essential part of America's economic strategy; it is also important to women themselves.

283. Women in STEM jobs earn 33% more than those in non-STEM occupations and experience a smaller wage gap relative to men. This means that women in STEM can make a bigger impact within their families and their communities, countries and the world.

284. And STEM careers offer women the opportunity to engage in some of the most exciting realms of discovery and technological innovation. Increasing employment of women in these fields is an important step towards realizing greater economic success and equality for women across the board.

285. Finally, another way of increasing the number of girls and women in science and STEM education is through promoting entrepreneurialism, as well as recognition and mentoring.

286. Regarding entrepreneurialism, as for all inventors, support is critical at the early stages of the life cycle of innovation. Such support can include incubators and accelerators for fledgling innovative start-ups and spin offs. One example is the *Women's Entrepreneurial Centres of Resources, Education, Access, and Training for Economic Empowerment (WECREATE)*, an initiative

⁴ This data is from the DOC website- ESA Issue Brief 04-11.

of the US Department of State.⁵ The objective of WECREATE is to establish entrepreneurial community centres in safe and centralized locations for women to gain access to the essential resources required for starting or growing their own businesses. The first WECREATE centre to be launched was in Islamabad, Pakistan and now WECREATE Centres are currently under development in Zambia, Kenya, Cambodia, and Vietnam, with other Centres expected to be open in the very near future. Once several WECREATE centres are up and running, we plan to connect female entrepreneurs in different countries so that they can collaborate, partner, build capacity, and help integrate their products into the global supply chain. The power of WECREATE is in connecting women around the world and integrating them into the global economy. Ultimately, it means accelerating growth and enhancing economic prosperity, health, stability, and the security of entire societies. We are confident that this model will spread and we are thrilled that some of our partners are already doing this work.

287. A third key to unlocking the economic potential of women innovators is recognition. The Nobel Prize exemplifies the opportunities and challenges with respect to the recognition of women inventors. In 1903, only two years after the Nobel Foundation was established, the Nobel Prize was awarded to Marie Curie. Since then, thirteen women have won the prize for literature, eleven for physiology and medicine, three for chemistry, and two for physics. Recognized on the global stage as leaders in their field, the Nobel Prize epitomizes the importance of such acknowledgement. At the same time, gender parity remains elusive, with many more men having been recognized in these fields than women.

288. Turning to the private sector, the business community has also developed commendable initiatives with respect to recognition. One company that deserves special acknowledgement is L'Oréal. Seventy per cent of L'Oréal's scientists and innovators are women. We are not aware of another company that can claim such success.

289. And L'Oréal's success in this respect is also extended out to others through the "For Women in Science programme," which is a partnership with UNESCO, and seeks to recognize and reward women scientists around the world at critical stages of their career. More than 2,000 L'Oréal scientists in over 100 countries and on all continents have been recognized since the global programme began in 1998. So far, 82 women have been distinguished by the L'Oréal-UNESCO Awards, two of whom subsequently received the Nobel Prize.

290. Finally, mentoring is also critical. According to the US National Institutes of Health⁶, "[w]omen are underrepresented in leadership positions in academia and often report feeling alienated and isolated." And "[a]ccess to quality mentoring remains important throughout a woman's scientific career." Women with mentors publish more frequently and are more likely to receive grant funding. Female assistant professors with mentors were 25% more likely to receive grant funding than their female colleagues without mentors.

291. The academic and business communities have taken up this challenge and are working through a variety of initiatives to provide mentoring opportunities to promote economic empowerment, entrepreneurialism and innovation. For example, *TechWomen* is a San Francisco, California-based organization that empowers, connects, and supports the next generation of female leaders in science, technology, engineering, and mathematics from Africa, Central Asia, and the Middle East.

292. Through mentorship and exchange, TechWomen strengthens participants' professional capacity, increases mutual understanding between key networks of professionals, and expands girls' interest in STEM careers by exposing them to female role models. TechWomen is relatively new, having only been launched in 2011, but 156 participants have completed the programme, from 16 countries, involving 71 San Francisco Bay-area companies and 242 Bay-area women in mentoring.

Conclusion

293. In conclusion, policies to promote women and innovation begin with providing women with the same access to education as boys and with delivering the message that girls can grow up to be

⁵ <http://www.state.gov/r/pa/prs/ps/2015/02/237487.htm>.

⁶ <http://orwh.od.nih.gov/career/pdf/ORWH-Mentor-Factsheet.pdf>.

leaders, scientists, and technology professionals. We need to acknowledge and work to eliminate gender bias, and promote gender parity. Economic empowerment is also essential, and STEM education, entrepreneurialism, recognition and mentoring can play an invaluable role in achieving that objective.

294. Finally, to have more women in innovation, we need to ensure that our policies promote the same access to finance, capital, equipment and land as men. None of these policies is out of reach, and by working independently as well as together, we can ensure that Girls and Women have the Future She Deserves.

11.5 European Union

295. Let me start by thanking, in particular, the United States for proposing this interesting subject and also the co-sponsors, Norway, Turkey, Japan and Montenegro.

Innovating Women

296. For the European Union (EU), the promotion of gender equality and women's rights are not only a core value but smart economics. When women have access to resources and opportunities and participate on an equal footing in economic life, including innovations, it both benefits women themselves, and also contributes to economic growth.

297. The EU invests not only in research but also in gender-sensitive innovation systems to ensure that the benefits from research are available and accessible to both men and women. This means that men and women participate equally in the innovation systems in different capacities as researchers, extension workers, decision makers and beneficiaries.

298. We know that gender diversity is essential for creativity and innovation, but while more and more women are reaching senior levels in science and engineering, the aspiration of reaching gender equality is not yet fulfilled. The EU She Figures 2012 report on women in science shows that although 46% of all PhD graduates were women, there are far less women at the top levels of science and research. Women hold only 12% of top science positions in Europe.

299. UNESCO also promotes gender equality. It has set elevating gender equality to United Nations' agencies as a top strategic priority. UNESCO programmes aim to have women play an active role as agents of change and social transformation. Their activities aim to design and implement gender responsive science and technology policies, promote gender parity in fora and dialogues and most importantly, promote gender balance in decision-making bodies on science, technology and innovation issues and policies.

300. There are still critical barriers and constraints to the recruitment, retention and advancement of women in the European scientific system. This gender segregation has its roots in the subject choices made by girls in secondary schools and in university, but also female graduates often opt out of science after they have completed their PhD.

301. The EU works on finding effective mechanisms to make science and technology more attractive to young women and to encourage workplace environment and institutional practices that value the participation of girls and young women in the field of science and technology jobs.

EU action

302. In 2012, the European Commission launched "Science: It's a girl thing!", a campaign aimed at awakening the interest of more girls in science, technology and engineering.

303. The EU-funded project "Towards Women in Science and Technology" ignited discussions on the issues surrounding women in science through a series of coordinated activities in seven European science centres. The project is raising awareness about the role and representation of women in science through programmes and activities in science centres and museums. The project targets young people, their teachers and parents as well as the general public.

304. The EU's Institutional Transformation for Effecting Gender Equality in Research project brings together a consortium of organizations committed to carrying out "sustainable transformational change" to improve the career progression of female scientific researchers.

Promoting Gender Equality in Research and Innovation in Horizon 2020

305. In Horizon 2020 gender is a cross-cutting issue and is mainstreamed in each of the different parts of the Work Programme, ensuring a more integrated approach to research and innovation.

306. Three objectives underpin the strategy on gender equality in Horizon 2020:

- Fostering gender balance in research teams, in order to close the gaps in the participation of women.
- Ensuring gender balance in decision-making, in order to reach the target of 40% of the under-represented sex in panels and groups and of 50% in advisory groups.
- Integrating the gender dimension in research and innovation content, helps improve the scientific quality and societal relevance of the produced knowledge, technology and/or innovation.

307. In many topics across the work programme, it is explicitly requested that applicants take into account women as well as men's needs and behaviours. In addition, grant beneficiaries commit to promoting equal opportunities and a balanced participation of women and men at all levels in research and innovation teams and in management structures.

308. The Science with and for Society' Work Programme funds specific initiatives in support of the gender equality strategy. Support is given to research organizations to remove barriers that generate discrimination against women in scientific careers and decision-making, by supporting research organizations to implement gender equality plans and providing support to integrate a gender dimension in research content.

309. Funding is also provided for the development of a common framework to evaluate national initiatives promoting gender equality in research policy. A dedicated campaign aims at encouraging girls to study science and female students to further embrace a career in research. Research will be funded to analyse the impact of gender diversity in research teams on research and innovation performance.

310. These activities are targeted at researchers and innovators, research organizations, primary, secondary and higher education establishments, science museums, citizens and their associations or groupings, media, policymakers at national, regional and local levels, etc.

EU Prize for Women Innovators 2014: Commission rewards winners

311. In Europe, the existence of Women in Science awards is important because despite some advances in recent years, women in research and entrepreneurship remain a minority. This is a waste of talent that we cannot afford. The EU Prize for Women Innovators fosters gender equality and also raises the profile of successful women innovators.

312. The situation of women in science varies from one country to another. Giving female scientists more visibility promotes best practice at the European level.

313. Winners of the 2014 EU Prize for Women Innovators included Laura van 't Veer. This competition celebrates women who have combined their scientific excellence with a head for business to set up innovative enterprises.

314. Laura van 't Veer is co-founder and Chief Research Officer at Agendia. Van 't Veer is a world renowned molecular biologist and inventor of MammaPrint, a diagnostic test that foretells the risk of recurrence for breast cancer patients. The use of MammaPrint by patients diagnosed today leads to a reduction of overtreatment by chemotherapy of up to 30%.

315. 2011 EU Prize for Women Innovators Winner was Fabienne Hermitte, who co-founded IPSOGEN in 1999. Her work made her company a pioneer in personalized healthcare diagnostics, which allow more individualized treatments for cancer patients

316. Since 2003, her company develops and commercializes diagnostic products based on fully validated biomarkers that enable oncologists to manage leukaemia and breast cancer. IPSOGEN is a world leader in blood cancer molecular diagnostics. It has developed 15 biomarkers; the most widely used and innovative amongst them are those for breast cancer and leukaemia diagnosis. IPSOGEN sold its products to over 70 countries in Europe, North America, the Middle-East and Asia-Pacific. These advanced diagnostics provide significant benefits to patients by improving standards of care and by optimizing overall treatment costs.

317. 2011 EU Prize for Women Innovators Prize Winner Iliaria Rosso co-founded the company Electro Power Systems in 2005. Her company developed the first self-recharging hydrogen fuel cell system for backup power – a clean, renewable alternative to lead-acid batteries and diesel generators. Her company's innovation helps cut down on fuel logistics, diesel refuelling or battery replacement costs.

318. These green technology products propose an alternative to traditional backups and provide significant cost reductions and a more robust infrastructure. The target markets are telecommunication operators, secure communications network for police, smart grids, etc. Electro Power Systems has more than 600 installations in the EU as well as in Asia, Africa and the Americas and is growing fast. The product offers a reliable backup infrastructure, significant savings and clean, renewable power anywhere in the world.

Women as frugal innovators

319. At a previous occasion this Council already discussed the importance of frugal innovation. Women are important frugal innovators.

320. Women play a vital role, for instance, in agriculture, seed production, animal husbandry, natural resource management and energy management. By taking care of basic necessities, such as food, water, fuel, health care and social security, women provide subsistence to their families and communities. Therefore women have large practical know-how and knowledge on how work, for instance, in these areas could be done more efficiently. However, they often face barriers to recognize and advance their innovations.

321. The EU takes action concerning women in frugal innovation. For example, the Partnership for Improved Nutrition in Nepal action aims to improve maternal, infant and child nutrition by working with mothers on developing recipes from locally available foods to prepare improved complementary food. It works with mothers to distribute Biogas and Improved Cook Stoves technologies and demonstrate their use for preparation of improved essential nutrition.

Innovation for women

322. The EU supports several projects that lead to innovation for women.

323. One example is the Community-based scheduled screening and treatment of malaria in pregnancy for improved maternal and infant health: a cluster-randomized trial (COSMIC). COSMIC aims to develop a low-cost intervention, focusing on improving the control of malaria, building on the community case management of malaria in pregnancy, and involving community health workers.

324. The work is undertaken in close collaboration with research institutions in malaria endemic countries (Benin, Burkina Faso and Gambia) and with the National Malaria Control Programmes and the World Health Organization. The budget for countries such as Burkina Faso is €694.719,00 and for Benin €566.998,00.

325. The project aims to educate community health workers and consumers to improve the use of rapid diagnostic tests, which will increase the acceptability of test results. It is assumed that the follow-up of pregnant women by the community health workers providing a preventive treatment

to these women will improve both the attendance at antenatal clinics, and hence the coverage of the preventive treatment. This will also allow the early detection and treatment of malaria occurring outside the post-treatment prophylactic period. These activities should improve the protection against malaria among pregnant women and their offspring, and will have an immediate impact in reducing the malaria burden in these resource-poor countries, reducing malaria morbidity and mortality in these areas.

326. Another example is CommCare. Funded by the UK Department for International Development's Global Development Innovation Ventures, it is an open source, cloud-based, mobile platform that allows health workers to quickly create and customize health applications and download them onto their phones for free, for example, applications that deliver maternal health education to new mothers, tailored to literacy level and local dialect. The programme's contribution to the global deployment and scale-up of CommCare, allows the technology to be refined for use in ten countries. This has mobilized more than \$1.5 million of follow-on investment. In addition, the Gates Foundation commissioned CommCare for their \$100million effort in Bihar.

327. There are several more programmes, which I will mention only briefly:

- STOPPAM Strategies TO Prevent Pregnancy-Associated Malaria in Benin (€539.866,00) and Tanzania (€692.212,00);
- Quality of maternal and prenatal care: bridging the know-how gap in Burkina Faso (€502.636,00 and Tanzania (€474.260,00);
- OPTIMUNISE - Optimizing the impact and cost-effectiveness of child health intervention programmes of vaccines and micronutrients in low-income countries in Burkina Faso (€778.400,00) and Guinea-Bissau (€784.390,00).

11.6 Montenegro

328. Montenegro joins other Members in co-sponsoring today's agenda item on women and innovation. We would like to congratulate the delegations of the United States, Norway, the European Union, Turkey and Japan for their comprehensive and stimulating presentations.

329. My delegation's decision to co-sponsor this initiative is part of Montenegro's overall efforts within the UN system in Geneva to continuously support and highlight the importance of economic empowerment for women, particularly in 2015 as we celebrate many important anniversaries related to women's issues.

330. It is also in line with Montenegro's domestic efforts to implement the policies that create opportunities for innovative women to re-train, re-skill and take advantage of current and emerging opportunities. My Government has recently introduced a series of projects entitled "Women and entrepreneurship" aimed to empower women to reach their innovative potentials, to stimulate wider inclusiveness, access to finance, international trade and equity. It is worth mentioning that the Ministry of Science of Montenegro has launched cooperation with CERN to promote young scientist and teachers in scientific education particularly female teachers. In addition, Montenegro is part of several regional initiatives including Euro-Mediterranean project for progress, for higher education and research for women and network opportunities as a platform for information exchange and shared success.

331. We appreciate that today's presentation and number of interventions have recognized the key role of education for women and girls. Also, the importance of effective national policy goals, such as the transfer of knowledge between the science and business community and effective support for small business as important sources of innovation to further advance women entrepreneurs.

332. To achieve these goals and to do more, collaboration and partnership is essential. Montenegro stands ready to join efforts within the WTO and the TRIPS Council in sharing good practice and working together to promote and advance opportunities for women.

11.7 Mexico

333. I would like to thank the sponsors for having brought this matter to our attention.

334. Mexico has developed a number of programmes to promote women's participation in our national economy through our national development plan for 2013-2018. One of our cross-cutting programmes is gender mainstreaming and we hope in this way to change our approach to problems and their solution. The idea is to recognize differences between men and women, identify inequalities and find ways of doing away with them. This is a change of approach that must start in the federal public sector. This can be done through doing away with gender stereotyping, eliminating inequalities between men and women and ensuring that there are gender-awareness programmes.

335. Since 2007, the Mexican Intellectual Property Office established an institute for the culture of equality through our Institute for Women's Affairs. The main objective of this programme is to ensure that we have a benchmark for all of the federal civil offices and services to encourage action plans with a view to developing gender mainstreaming programmes with a focus on genuine gender equality.

336. As a result of studies carried out by our survey of organizational atmosphere and culture, we have seen what has to be done, in order to ensure that we change our approach. First of all, gender parity should be strengthened throughout the cultural organization of the Mexican Intellectual Property Office, in order to build capacity. Once the national development plan imposed these programmes on our civil service with a view to developing gender mainstreaming, there was a decision to ensure that we deal with gender and equality and encourage the participation of women in all national activities. The Mexican Intellectual Property Institute is seeking to encourage the participation of women and young people in our national economy by promoting innovation and creating advisory services, as well as seeking to enable women to carry out their projects and create enterprises, so that they are part of the active sector of the country and economy. I will give you just some examples.

337. Our national Entrepreneurs Institute, for instance, has a programme called Women Moving Mexico. This is a network of entrepreneurship, which ensures that there are contact points for the networks throughout Mexico allowing for capacity building in the area of entrepreneurship, as well as providing technical assistance guidance and programmes for women entrepreneurs throughout the country. And we also have a portal to provide some assistance to women, in order that they can see where there have been successful entrepreneurs who have enjoyed support from the Women Moving Mexico programme.

338. Another programme, Promati, supports the productivity of women entrepreneurs. The purpose of this programme is to encourage women's productivity for women entrepreneurs eighteen or over, who are working in the main agricultural areas of the country. We also have the trust fund of the micro-funding programme for rural women that specializes in micro-financing for low-income rural women who lack access to conventional banking. The programme has a series of strategic approaches, in order to ensure that it can have a positive effect on families' incomes as well as their entrepreneurship. The National Social Economy Institute develops public sector instruments for the social sector of the economy, in order to strengthen and to consolidate this sector as one of the pillars of national development through participation, training, research, dissemination and support involving a productive project in this social sector. One of the main objectives of the National Social Economy Institute is to include disadvantaged groups in the population, with particular attention being paid to women's projects.

339. Finally, another example is Pro-Mexico. This body has different programmes that encourage invention as well as innovation and investment such as programmes for technological innovation, as well as for innovation stimulation. Pro Mexico works with the National Council on Science and Technology. The purpose of this programme is to provide national incentives to national companies, to encourage them to invest in activities and projects relating to research, technological development and innovation. This is done through complementary stimulation programmes to ensure that the support provides for maximum possible support to competitiveness in the national economy.

340. In short, Mexico has a number of programmes that are directly focussed on women and have an indirect effect on intellectual property and innovation.

11.8 Chile

341. We should like to thank the delegations, in particular the proponents, for sharing their experiences, to which we have given due consideration. Chile attaches the utmost importance to gender issues, in particular the role of women in modern society, and has taken significant steps towards enhancing and strengthening the full integration of women in all aspects of society, including, needless to say, innovation.

342. Chile has recently passed the law establishing the Ministry of Women, the main objectives of which are, *inter alia*, to coordinate State and private bodies with a view to developing gender programmes, studies and research, to foster laws, regulations and administrative measures that guarantee women the full exercise of their rights and capacities, and to promote the changes required to put a stop to the stereotypes, prejudices and practices that discriminate against women.

343. We are convinced that this new institutional approach will enable us to continue to protect and promote the role of women and, in the context of this forum, to engage in experience sharing, generate new ideas and establish future guidelines on good practice."

11.9 Switzerland

344. My delegation would also like to thank the United States and the co-sponsors for suggesting this agenda item. We have heard a lot of insightful presentations so far and we should like to thank them for all for the information that has been presented on national programmes and initiatives to promote women in innovation and intellectual property.

345. Human capital is universally acknowledged as being central to innovation and IP systems play a crucial part in tapping into that innovation. However, unseen obstacles can prejudice against certain sections of society. Women, in particular can be unintentionally excluded owing to historical or social factors.

346. It is the view of my delegation that this item fits into the broader goal of the WTO, to raise living standards and ensure that everyone has access to the tools to contribute to economic development, and be adequately recognized and rewarded for this contribution.

347. There is room within the TRIPS Council to exchange national experiences and we have already learnt from the contributions of other Members on this topic.

348. The participation of women in innovative activities varies across the world. Clearly, this is not a North/South issue. On the contrary, it is noteworthy that developing countries often do better than the so-called developed countries. The Global Entrepreneurship Monitor has for example found that in Sub-Saharan Africa, rates of female early-stage entrepreneurship are equal, if not higher, than in Switzerland.

349. A problem we face in my country is to translate the early female participation rate into equity at later stages. For example, currently, only 18% of sole founders of start-up companies in Switzerland are women.

How to address the deficit?

350. In order to address and possibly remedy this gap, Switzerland has been actively engaged in finding ways to encourage women to utilize the instruments available, although more still needs to be done.

Women in innovation

351. There has been a concerted effort to encourage women to pursue careers in areas where they are statistically under-represented, in particular academia and the science and engineering

sectors. These measures have ranged from encouraging girls from an early age to take part in technical subjects, to a programme to increase the percentage of female professors at Swiss universities, especially the two federal technical universities.

Women in intellectual property

352. The intended effect of these efforts is to encourage women into technical professions elsewhere, not only in technical industries, but also in the administrative and regulatory institutions that aid the commercialization of ideas, including in the Patent Division of the Swiss Intellectual Property Office.

353. Intellectual property rights are an important mechanism to assist innovators in bringing their ideas to fruition. Currently, women make up only a fraction of patent holders worldwide and professions linked to intellectual property are still dominated by men. This gender imbalance can stifle women innovators who feel alienated from the system that should be there to protect them and their ideas.

354. However, there is also progress. Women's engagement in intellectual property is growing. Groups like "Women in IP Switzerland" provide a platform for professional women within intellectual property to exchange experiences and offer each other support. Such networks are indicative of positive steps being taken to give women a voice in this vital sector.

355. In conclusion I would like to reiterate my delegations support for this agenda item. It is important that in the TRIPS Council we draw attention to such societal issues and discuss them in striving to ensure that intellectual property rights can be for the benefit of the whole of society. This is an area where we can all learn from each other and share experiences. My delegation is keen to hear how other countries have looked at and tackled these issues and we are eager to learn of the successes or failures of the schemes that they have implemented.

11.10 Canada

356. Canada recognizes the fundamental importance of innovation for economic development and growth. We note that the 2011 report of the OECD on gender parity shows that gender equality can improve innovation and competition in business.

357. In the last 20 years we have made significant headway with respect to women in science and technology. Women, between the ages of 25 and 34, hold 59% of science and technology diplomas in that age group and in engineering their proportion has reached 23%. That does not mean that we can in any way rest on our laurels. We recognize the importance of a growing role of women in science, technology, engineering and mathematics. We are therefore making every effort to encourage women's participation in these areas.

358. Mentoring and sponsors can make a critical difference to women who hope to have careers in these areas. I would note the mentoring programmes such as that of the Canadian Society for Science and Technology. It has an online mentoring programme, which is aimed at women, and is funded by the Women Affairs Ministry. The Programme for Chairs for Women in Science and Engineering was launched in 1996 by the Council for Research into Natural Sciences in Engineering in Canada to encourage the participation of women in these areas. The Research Council into Natural Sciences and Engineering facilitates a programme, Promoscience, which aims at working with young Canadians, including young women and girls, in order to promote their participation in science, engineering, technology and mathematics.

359. And finally, the Government of Canada has an initiative "Women and Technology". The role of this initiative is to ensure that women play a more significant role in the digital economy of Canada, where they are under-represented. In this context the Women's Affairs Ministry is funding six projects over 36 months, in cooperation with the Council for Technology, Information and Communication.

11.11 Chinese Taipei

360. My delegation would first like to join others in thanking the United States and the other five Members for adding this item to the agenda and for their introduction to this subject. We are very pleased to have the opportunity of sharing our own experiences with fellow Members and of being able to learn from the experience of other Members at the same time.

361. The innovative development policy pursued by my government for a number of years now has been a real catalyst for some of the most significant changes in women's roles, options and opportunities that have taken place in our society. Economic growth has fuelled higher living standards and life expectancy. Government investment in factories across both urban and rural areas and home-based factories have facilitated women's economic participation in manufacturing, which has led, in turn, to the social and ultimately, the economic and political empowerment of women that we see today. Since 2011, my government has been committed to promoting a series of individual action plans in an initiative under the theme of economic innovation for women, and in line with the APEC and San Francisco Declaration it has introduced a policy partnership on women and the economy (PPWE). At the same time, our gender equality department, has been actively gathering together relevant government agencies to develop and enhance women's economic empowerment. I would like to describe to you just briefly some of the policy initiatives implemented and their results. I will do this under the four headings identified as being the key issues highlighted by the San Francisco Declaration.

362. Firstly, access to capital. The Phoenix Micro Start-Up Programme, young entrepreneur loans and government credit guarantees for SMEs, are some of the schemes introduced specifically to help female entrepreneurs obtain business start-up loans more easily. In 2013, for example, more than 97,000 of the successful applications for government credit guarantees for SMEs were made by women, or 25% of all cases. A total of US\$7.86 billion in guarantees and a US\$9.9 billion in overall financing were provided to women.

363. The Civilian Bank Pilot Programme was also established to encourage the participation of rural women in cooperatives and credit unions. In 2013, a total of 54 applications were made for a programme, 89% of them by women. In the process, we are able to help female entrepreneurs meet with investors, so as to capture sufficient resources for their business.

364. Secondly, access to markets: in 2007, the Taiwan Women's Business Network was started and features enterprises established by women and their products. In 2012, a women's marketplace was added to GoFun, a website selling local products. The market place provides a sales channel for female micro-business entrepreneurs, as well as indigenous and rural women. Since 2008, the Council of Agriculture has been helping rural women to develop handicrafts products based on the rural culture and traditional handicraft techniques with agriculture by-products. The government has also been holding training courses in what we call the Tianmama Programme aimed at boosting the employment of rural women from 2011 to 2013. There were 429 such courses attracting 4,000 participants, 90% of whom were women.

365. Thirdly, capability and skills building: entrepreneurship training courses have been established with the specific purpose of equipping business women with the skills needed for each of the stages of a start-up operation. From 2011 to 2013, the number of incubation centres increased from 73 to 86, the number of female entrepreneurs trained increased by 21%. Furthermore, e-learning courses on access to and entrepreneurship for women and training courses for outstanding professional executives were open at the SME Online university. These were provided to help business women develop their competencies in critical entrepreneurship and business operation. From 2012 to 2013, 26,000 women registered as new students at the online university accounting for 52% of the total. Female entrepreneurship, networks and platforms for information exchange have been established to create interpersonal opportunities for business women to help them set up companies successfully. In 2013, the Phoenix Micro-Start-up Programme helped 3,820 women to establish businesses and provided 10,000 job opportunities for women. Bridging the digital divide for women programmes was implemented from 2007 to 2013, providing 24-hour basic computer skills training for women in rural areas. A total of 2,300 courses were held with 21,000 women taking part, 59% of all participants.

366. Fourthly, women's leadership in 2012: the Female Innovative Entrepreneurship Project was established to select and develop outstanding female entrepreneurs as raw models of success. In 2013, the number of competitors in this programme more than doubled.

367. In summary, over recent years women have tended to be regarded as a major driving force for global economic growth. New technologies are influencing all aspects of our society and they play a pivotal role in promoting impact assessment susceptibility worldwide. Increasing attention has focused on the rules and potential and emerging value-added services of information and communication technology as the pathway to bridge the gender economic development divide. As my delegation attaches great importance to this issue as we assume all WTO Members do. We very much look forward to hearing about how the governments of other Members are promoting women's economic empowerment through innovation, and learning about their various policies and programmes.

11.12 Australia

368. Australia would like to thank the sponsors of this agenda item for bringing it to the TRIPS Council and for the informative contributions that have been made by Members here today.

369. Australia recognizes the crucial "human factor" in innovation – the education and training of talented individuals to deliver innovative outcomes. Australia was delighted to host the 2014 launch of the Global Innovation Index, which paid special attention to the "human factor" in innovation.

370. We well understand that empowering women to be innovation leaders and contributors is not only the right thing to do, it is the smart thing to do. Evidence shows us that improving the labour force participation of women increases GDP significantly. Australia's Women in Global Business Programme seeks to increase female participation in international trade and investment, delivering increased economic benefit and job creation through greater diversity.

371. Australia also recognizes the individual achievements of innovative women – like molecular biologist, Professor Elizabeth Blackburn, our first female Nobel Laureate

372. We also recognise the importance of systemic factors to improving the participation, retention at senior levels, and success of women in science and technology-related fields in Australia

373. Women in innovation networks and fellowships, through Australian research institutions, help to attract and retain many talented women in these areas. Under Australia's aid programme, we are also focussing on partnerships to promote women's economic empowerment; for example, Australia is one of a number of countries supporting the International Trade Centre's Women's Economic Empowerment Programme. This programme assists women to participate in trade.

374. Projects in the Pacific region are providing businesswomen with opportunities to take their innovative and unique products to market.

375. Similarly, in other aid projects, Australia is providing financial support to encourage women to obtain small grants and loans to set up small businesses, be involved in local markets, and become part of local supply chains.

376. Once again, we welcome this very informative exchange and thank Members for their contributions.

11.13 India

377. My delegation would like to thank the delegations of the United States, Norway, European Union, Japan, Turkey and Montenegro for tabling this agenda item on "Intellectual Property and Innovation: Women and Innovation".

378. Let me just recall our intervention when the agenda item on "Intellectual Property and Innovation" was first introduced in the TRIPS Council. Our statement is still relevant when we are discussing women and innovation under the broad theme of "Intellectual Property and Innovation". In that meeting India pointed out that the word "innovation" appeared just once in the TRIPS Agreement, in Article 7, which states that Intellectual Property Rights (IPRs) "should contribute to the promotion of technological innovation and to the transfer and dissemination of technology,"

and not for the sake of innovation itself, but "to the mutual advantage of producers and users of technological knowledge, and in a manner conducive to social and economic welfare, and to a balance of rights and obligations". Thus the TRIPS Agreement makes it very clear that the purpose of the intellectual property system is not solely to protect the commercial interests of the intellectual property holder, but it is one of the many tools available to the society to achieve technological development, social and economic welfare and innovation.

379. According to Petra Moser, "Patents and Innovation: Evidence from Economic History", *Journal of Economic Perspectives*—Volume 27, No. 1—Winter 2013—pp. 23–44:

"Overall, the weight of the existing historical evidence suggests that patent policies, which grant strong intellectual property rights to early generations of inventors, may discourage innovation. On the contrary, policies that encourage the diffusion of ideas and modify patent laws to facilitate entry and encourage competition may be an effective mechanism to encourage innovation."

380. Innovation should not be viewed within the narrow prism of intellectual property monopolies but framed within a holistic, knowledge ecosystem that includes open innovation, open knowledge approaches and the delinkage of R&D costs from product prices. According to the Trilateral Study by the WTO, WHO and WIPO on "Promoting Access to Medical Technologies and Innovation: Intersections between Public Health, Intellectual Property and Trade (2013)" (Page 126):

"Patent law is not a stand-alone innovation system. It is only one element of the innovation process, and one which can be deployed differently in diverse innovation scenarios. Patent law has little bearing on many other factors that lead to the successful development of technologies, e.g. the nature and extent of demand, commercial advantages gained by marketing and ancillary services and support, commercial and technical viability of production processes, and compliance with regulatory requirements, including through effective management of clinical trials data".

381. India declared the decade of 2011-2020 as the Decade of Innovation. The spirit of innovation has to permeate all sectors of the economy from universities, business and government to people at all levels. The future prosperity of India in the new knowledge economy will increasingly depend on its ability to generate new ideas, processes and solutions, and the process of innovation would convert knowledge into social good and economic wealth.

382. The contribution of women to the society and the economy is well known. If given proper opportunity and encouragement, women have the potential to excel in every field. The Government of India's Department of Science and Technology is operating several schemes with the aim to bring gender parity in science. Knowledge Involvement in Research Advancement through Nurturing (KIRAN) is designed to provide an integrated enabling and supportive framework for gender mainstreaming of women in science, technology and innovation. The scheme pertains to gender parity and aims to invest in a talented women scientist and technologist base in a planned manner, with a mind-set of leveraging their potentials and knowledge strength into the developmental processes of the country.

383. KIRAN has many women-centric programmes, including the Woman Scientists Scheme (especially for women taking a "break in their careers" arising out of motherhood and family responsibilities); the Consolidation of University Research for Innovation and Excellence (CURIE) scheme to improve the R&D infrastructure of women universities; and the Technology Development and Utilization programme for Women (TDUPW), which is relevant to technology development and utilization by women. More details about the women centric programmes to bring gender parity in Science, technology and innovation are available at the official website of the the Department of Science and Technology (www.dst.gov.in).

384. I would like to conclude by stating that there is no direct correlation between 'Intellectual Property and Innovation' and the countries have to define their path, depending on their level of socio-economic development.

11.14 World Bank

385. Thank you for this opportunity to make a few brief comments on what is a very important topic for the World Bank. I would like just to focus on two specific points of priority for the World Bank's work.

386. The World Bank Group works to achieve two goals: eliminating extreme poverty globally by 2030, and boosting economic prospects for the poorest 40%, so that there is greater sharing of the gains of growth. These goals can only be achieved with the full economic participation of both men and women. At the same time, we know that innovation is an important engine of development. Robust innovation performance helps build dynamic and resilient economies. Innovation allows firms to specialize, meet international best-practice standards, and upgrade quality. It also allows them to formalize, grow and provide good quality jobs. At the same time approaches combining innovative business models and technology are allowing key services like health, energy and education and finance to reach the poorest in ways that were previously thought too difficult.

387. The Bank is working to address challenges at the nexus of women's economic participation and innovation in a number of ways. I would like to address four aspects of the issue of women and innovation:

- The relationship between entrepreneurship and innovation in women-owned businesses;
- Inclusive innovation models that bring women into the design and delivery of products for low-income households;
- The under-representation of women in innovation-related education; and
- Barriers to women's participation in the economy and trade in particular.

Entrepreneurship

388. Entrepreneurship and innovation go hand in hand. There is growing evidence that within every economy a subset of high growth young companies make a disproportionately large contribution to productivity and job creation. They bring new ideas and approaches to existing sectors driving competition, or create entirely new sectors bringing new products and choice to consumers.

389. Female entrepreneurs must be a critical part of this. However, women tend to face barriers to their entrepreneurial activity beyond those faced by men. These include limited access to finance, less access to education, or laws explicitly discriminating against women. Because of these constraints, women entrepreneurs are more likely to work in the informal economy and in low productivity sectors with limited potential for growth. This deprives them and their families of opportunity, and the economy of the full potential of entrepreneurship.

390. Addressing these constraints can help foster women's entrepreneurship and drive innovation in the economy. The challenges should not be underestimated, but two examples of World Bank projects indicate the kind of approach that can be taken.

391. In the Caribbean, the Bank supported the development of the Caribbean Women Innovators Network. This connects women entrepreneurs and helps them scale their businesses through mentoring, training, and peer-to-peer learning. Experience shows that entrepreneurs learn best from peers and role models they can identify with. This is why women in the region lead the network, which has engaged hundreds of women online and provided hands-on training to women entrepreneurs.

392. In Côte d'Ivoire, the Bank is helping the Government implement reforms to its family law to increase female participation in business. For example, amendments to the Family Code allowed both spouses a role in choosing the family domicile and pursuing their career of choice, taking into account the interests of the family. The code was also reformed to eliminate provisions providing childcare benefits only to men as head of household. In addition, married women no longer need

to provide their marriage certificates to obtain passports. These changes have helped to facilitate a greater role of women in business in Côte d'Ivoire.

Inclusive innovation

393. The second dimension of this issue concerns what is commonly known as "inclusive innovation". This refers to the growing attention globally on how to find and scale innovative business models that reach the poorest – what is often called the "Base of the Pyramid" – in order to supply basic services in areas such as health, education, energy, and water. Many of the ultimate users of these services are women – and women are increasingly involved in the design and delivery of these innovative approaches.

394. Let me give two examples of these inclusive innovation approaches that show the relevance of this agenda to women. The first of these is the "Chotu Kool", a low cost, low-energy refrigerator developed by Indian firms and designed in conjunction with low-income women. This innovative system has helped make food safer, by lowering the cost of refrigeration, while also bringing other benefits like refrigerating medicines and vaccines. With women in Indian rural households typically responsible for food storage and preparation, their role in designing and fostering adoption of this innovative product was essential.

395. Another is an example from Mexico. CEMEX, a Mexican building materials company, used enterprising women in target communities to develop a distribution, marketing, and financing network for housing. This helps women earn additional income while also access improved housing.

396. The Bank and other partners are leading efforts to promote the frameworks needed, so that these sorts of inclusive innovation models can be replicated elsewhere. Although the private sector drives the development and adoption of inclusive innovation models, governments have an essential role to play by creating an enabling environment for inclusive innovation, while also using these providers and their models for services they previously tried to deliver in-house.

Participation of women in STEM education

397. The third dimension of this issue that I would like to address is the under-representation of women in science, technology, engineering and mathematics education. These areas are critical to participation in the innovation economy. However, women are under-represented in these fields globally.

398. In Africa, for example, whereas women now constitute 38% of higher education enrolments in the continent, they make up less than 20% of science and technology students. The disparities are even greater at the level of science and technology postgraduate programmes.

399. Of course, such disparities are not limited to one region alone. Women are also under-represented in the education system and innovative industries in the largest developed economies - witness the ongoing debate about the under-representation of women in Silicon Valley. This problem must be tackled to allow women the full potential to participate in innovation.

Participation of women in trade

400. Finally, there is growing awareness of the constraints to women's participation in trade. In many low-income countries, the majority of small traders crossing borders are women. Trade itself can be a key driver of innovation – and innovative products and services may give a firm a competitive edge, allowing it to break into export markets and generate additional income. However, a range of limitations can hinder the participation of women in trade.

401. For example, in Africa, up to 70% of small traders crossing borders on a daily basis are women. These traders are subject to specific risks and vulnerabilities because of their gender. A lack of transparency on trade-related rules and regulations – and an absence of mechanisms for reporting abuse – makes these small women traders particularly vulnerable to abuse. And the ability of women to grow their businesses from small trader status into more formal larger

businesses is then often inhibited by the constraints I mentioned earlier in relation to entrepreneurship.

402. The links between trade and women must also be kept in mind as countries seek to foster greater innovation.

World Bank's work

403. I would like to close with a few points on the World Bank's wider work at the global level on gender. The first is to remind Members that the World Development Report 2012 entitled "Gender Equality and Development," documented that gender equality is a longer-term driver of competitiveness and equity that is even more important in an increasingly globalized world.

404. Another publication – the Women, Business and the Law Report, an off-shoot of the World Bank Group's Doing Business report, focuses on setting out the legal differentiations on the basis of gender in 143 economies around the world, and covers six thematic areas. The 2014 is the latest edition and is the third in this series of reports and has significantly expanded in depth of data covered.

405. We are currently working on a new gender strategy, to be launched later this year in September. This new strategy will focus on how the Bank can address deep-seated issues of gender inequality through its operations and results with a focus on the transformational solutions areas. The strategy will have a renewed focus on the world of work and jobs, asset ownership, as well as how voice and agency can have transformational effects globally.