Connecting scientific understanding of gender issues with SDG targets and their intervention measures, for all 17 SDGs

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Introduction

> *"Gender inequality and unfair discrimination have had devastating global consequences. More women die in wars than men. More women live in poverty than men. More women are unemployed than men. More women have been denied an education than men.*
> *Yet, if we use women's talents, then we all benefit. If we use women's talents, we can build a better world"* (Naledi Pandor, Minister for Science and Technology, South Africa, Gender Summit 5-Africa, 2015[1]).

Following the announcement of the SDG 2030 Agenda in September 2015, scientists, policy makers and gender scholars working towards advancing gender equality in science and integration of gender dimension in science knowledge[2], have argued that gender issues are relevant to all 17 SDGs, and not just SDG5, and the handful of targets scattered elsewhere[3].

Supporting these arguments is extensive scientific evidence showing that gender inequality issues cannot be separated from actions to tackle poverty, hunger, poor health, maternal death, climate change adaptation, energy and environmental burdens, economic hardships, and societal insecurity. Also, that understanding biological differences in sexual reproduction and maturation of plants, wildlife and farmed animals is relevant for protection of biodiversity, wellbeing of terrestrial and marine ecosystems and habitats, and sustainable agricultural methods.

The narrow consideration of the role of gender in the SDGs raises two concerns: firstly that many of the intervention measures will be 'gender blind', i.e. they will fail to analyse and respond to the different needs of women and men; secondly that men will benefit from the SDG Agenda much more than women.

Science and technology will shape solutions for SDG targets, but widespread, historical, male gender bias in science knowledge making means that science today has more evidence for men than for women, and the quality of research outcomes is often different (and worse) for women than for men.

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[1] http://www.gender-summit.com/images/GS5Slides2/GS5Africa_Pandor.pdf

[2] "gender dimension" is defined as integrating sex and gender analysis into all phases of basic and applied research—from setting priorities, to funding decisions, to establishing project objectives and methodologies, to data gathering, analyzing results, and evaluation.
http://genderedinnovations.stanford.edu/terms/dimension.html

[3] Heisook Lee and Elizabeth Pollitzer, Eds. *The Role of Gender-based Innovations for the UN Sustainable Development Goals. Towards 2030:Better Science and Technology for All* (Korea Centre for Women In Science, Engineering and Technology, 2016), http://www.gender-summit.com/images/GS6Docs/SDG_Report_FINAL.Jan13.pdf, accessed 31 July 2017

Therefore, when working towards achieving SDG targets, the scientific and the development communities must ask: Will this intervention work equally well for women? Will it work equally well for men? This paper shows that connecting scientific understanding of gender issues to the SDGs will enhance the scope and effectiveness of SDG interventions for women and men.

Background

Over the last ten years, a substantial body of scientific evidence has accumulated to show that sex and gender differences can influence research results, and produce different quality of outcomes for women and men[4], often with worse effects for women. As researchers examine when, why, and how sex/gender differences influence results, new insights and important discoveries emerge. For example, women mount much stronger response to vaccination than men do, which means they need a lower dose than men, and this is important for vaccination design, and vaccination strategies against infectious diseases[5].

Since 2011, scientists, gender scholars and policy makers around the world have been meeting as part of the Gender Summit[6] events to examine new evidence and agree where improvements are needed. In May 2016, the Global Research Council recommend the integration of the gender dimension in research design and in the analysis of research outcomes.[7]

In Europe, the 8th Framework Programme for Research and Innovation, Horizon 2020[8] specifically aims to: (i) improve the number of women in scientific roles; (ii) advance integration of gender as a factor/variable in study design (in topics identified by expert advisory groups); and (iii) create conditions for cross cutting benefits of gender equality actions. Of important relevance to the SDG Agenda are the seven societal challenges that frame Horizon 2020 programme (health, food, energy, transport, climate, societies, security). They are scrutinised by experts who recommend where and how gender dimension should be flagged in the calls for proposals. This intervention has increased the proportion of projects with a gender dimension to 36.2%, compared to 13.9% in the previous Framework Programme 7, which did not follow this practice[9].

To ensure that the SDG Agenda and the adopted science-based interventions benefit women and men equally, a similar, evidence- and consensus-based approach could be implemented, whereby a consortium of experts[10] would monitor and identify important gender issues and recommend scientific evidence to 'gender-proof' the measures used to achieve its targets. Such expert advice would help science and development communities, and members of the Sustainable Development Solutions Networks (SDSN).

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[4] "Gendered Innovations", http://genderedinnovations.stanford.edu/index.html, accessed 29 July 2017
[5] Sabra L Klein, Anne Jedlicka, Andrew Pekosz, The Xs and Y of immune response to viral vaccine. (*Lancet Infect Dis. 2010:10*) 338-49
[6] Gender Summit is a platform for dialogue between scientists, gender scholars and policy makers, which was established in 2011 in Europe but now is also active in North America, Asia Pacific, Africa, Latin America, and is planned also for the Arab World, www.gender-summit.com

[8] "The EU Framework Programme for Research and Innovation. HORIZON 2020", http://ec.europa.eu/programmes/horizon2020/, accessed 29 July 2017
[9] The European Commission monitors and reports annually on the progress made
[10] The necessary expertise exists: the Gender Summit Newsletter has 6000 subscribers, who include scientists, gender scholars and policy experts.

This scrutiny could start with the 700 keywords for research linked to SDGs, compiled by the SDSN Australia/Pacific, published in May 2017[11]. At present, the word "gender" appears sparingly: four times under SDG4, tree times under SDG5, one time under SDG 10, and two times under SDG13. A systematic search of scientific literature using these keywords in combination with "gender" would create a valuable mapping of available scientific research to contextualise gender in each SDG.

Furthermore, since sustainability and societal challenges are not gender neutral, scientific understanding of 'gender' in the context of 'sustainability' is also needed. A recent study to trace development of sustainability science conducted by Elsevier[12] used 300 keywords spread over seven core themes: people, prosperity, planet, justice, partnership, dignity. "Gender" was only included under "people" by: "gender gap", "gender inequality", "gender wage gap", "gender identity", "gender disparity" and "transgender". The search excluded such combinations as 'gender + energy', or 'gender + food security', or 'gender + climate change', which when entered into Google produce a rich stream of results.

Mapping scientific understanding of gender issues to SDG targets

Gender equality in the context of SDGs has been conceptualised as a 'bridge' by experts working across scientific, gender and policy domains in Japan[13]:

1. Gender equality is an essential determinant of societal sustainability and wellbeing and affects how science, technology and innovation can improve people's lives. As such, gender equality provides a bridge through which different SDGs targets can be connected to help enhance implementation of all SDGs
2. Gender equality should be integrated into the implementation of all 17 SDGs through interventions that advance best solutions for innovation based on science, technology, and adopted by all stakeholders, including industry, as part of their own sustainability agendas
3. Gender equality in the context of SDG targets must recognize the influence of human and societal diversities, and, in particular, how societies define and reinforce the roles and attitudes to women, girls, men, boys, ethnicity, race, cultures etc.

When each SDG was examined independently by 27 international experts to recommend 4-5 relevant research questions, and 4-5 examples of scientific research already available, they identified a total of 170 research reports and 150 issues requiring investigation[14]. Their conclusions are summarised below.

SDG1: No Poverty

[11] "The Compiled List of SDG Keywords", http://ap-unsdsn.org/webinar-mapping-university-contributions-to-the-sdgs/, accessed 29 July 2017

[12] Sustainability Science in a Global Landscape, https://www.elsevier.com/__data/assets/pdf_file/0018/119061/SustainabilityScienceReport-Web.pdf, accessed 29 July 2017

[13] "GS Tokyo Recommendations: BRIDGE" http://www.gender-summit.com/portia_web/assets/TokyoRecommendation_GS8_2017_final.pdf

[14] Heisook Lee and Elizabeth Pollitzer, Eds. *The Role of Gender-based Innovations for the UN Sustainable Development Goals. Towards 2030:Better Science and Technology for All* (Korea Centre for Women In Science, Engineering and Technology, 2016), http://www.gender-summit.com/images/GS6Docs/SDG_Report_FINAL.Jan13.pdf

Traditional concepts of poverty alleviation heavily draw on economic understandings of efficiency, competitiveness and growth, and feature the market as the primary driver for poverty alleviation measures.

We need to ask:
- ❖ What are the coping strategies and adaptive capacity of women and men in response to poverty
- ❖ How does poverty interact with gender inequality
- ❖ What determines women's income generating activities
- ❖ How do poverty conditions affect women and men and the social cohesion of their communities
- ❖ How does socio-economic development influences societal attitudes towards gender equality
- ❖ How does technology contribute to poverty reduction of women and men
- ❖ How do large infrastructure project impact on women and men
- ❖ What are the determinants of rural-urban poverty, and their effects on women and men
- ❖ How is poverty linked to how women and men access and benefit from ecosystem services e.g. as source of cash, food, employment
- ❖ How poverty and HIV/AIDS impact on humanitarian emergencies.

SDG 2: Zero hunger
Food insecurity is a risk factor for under-nutrition as well as obesity. Good nutrition comes from well-balanced meals. Education, empowerment, and a bigger role in food production will provide women with needed resources to help reduce under-nutrition as well as obesity and chronic diseases.

We need to ask:
- ❖ How to integrate the needs of women and girls in agricultural interventions
- ❖ How to conduct situational analysis and comparisons of women's place in agriculture
- ❖ What strategies enable women to be effective food producers
- ❖ How to enable equitable access to market opportunities within agricultural value chains to improve earning potential of women
- ❖ What are the real conditions (not covered by treaties or codes of conduct) in agricultural value chains, which depend on underpaid labour of women and girls in primary food production
- ❖ What roles do women and men play in food security and agricultural systems, e.g. comparing access to land, other resources, knowledge, financial services and markets, opportunities for value addition and non-farm employment
- ❖ What is the impact of food price variations on socioeconomic and nutrition status of women and men, in households and communities
- ❖ What are the effects of food insecurity on the welfare of women and girls, and on societal stability
- ❖ How to tackle severe malnutrition of women and children with little or no access to formal health services, especially in rural areas
- ❖ What are the best micronutrient interventions, provision of safe drinking water, education on/support for better diets, attention to vulnerable groups such as pregnant women and young children
- ❖ What are the pathologic features and chronic effects in women, girls, men and boys of deficiencies in macronutrients (protein, carbohydrates and fat, leading to protein– energy malnutrition) and micronutrients (electrolytes, minerals and vitamins
- ❖ What relationships hold between malnutrition and bacterial and parasitic disease among females/males through different life stages
- ❖ How to utilize scientific understanding of sexual reproduction and maturation of plants and animals grown for food to improve quality and quantity of food

production

SDG 3: Good health and wellbeing
Sex-gender differences impact on health outcomes and have been well documented, but many important issues still need investigation, such as the impact of adolescent pregnancy on maternal cognitive development and the socio-economic implications for these mothers, their families and society.
We need to ask:
- ❖ What are the health behaviours of women and men
- ❖ What are the socio-economic impacts of mental health on women and men
- ❖ How is health affected by personal crises such as widowhood or poor physical wellbeing
- ❖ What conditions differentiate sexual and reproductive health needs
- ❖ What risk factors influence the occurrence and progress of non-communicable diseases
- ❖ What is the relationship between fertility rate in lower income and in rich countries and the gender gaps in education, health, and labour markets
- ❖ What are the socioeconomic impacts of poor mental health on women, men, and households (e.g. consumption poverty, education, illness, low labour force participation, poor physical health, widowhood or other crises
- ❖ What conditions differentiate sexual and reproductive health needs, access to services, and treatment outcomes for different groups of women and men (e.g. those who are adolescents; married; in rural/urban areas, or affected by war)
- ❖ What are the health risk factors associated with consumption of food, especially fish and water, contaminated with mercury, arsenic or other metals for women, men and children
- ❖ What risk factors act as potential targets for improving cardiovascular disease management in women and men
- ❖ How to ensure that clinical trials include a representative sample of women to test new or improve existing treatment methods.

SDG 4: Quality education
Statistics about girls' and women's participation in education have reached a ceiling in terms of their power to explain deeper causes affecting education outcomes of girls and women because they tell us only about the presence and intensity of certain variables.
We need to ask:
- ❖ What kind of social dynamics and gender ideologies define educational systems
- ❖ What kind of gender-related experiences and gender-socialization practices are found among teachers in schools, including those in teacher training programs
- ❖ How to help teachers acquire gender-responsive knowledge and skills
- ❖ How to improve retention of girls in schools, particularly those affected by early/forced marriage, early pregnancy, and poverty
- ❖ How to improve retention among girls and boys in rural areas
- ❖ How does gender influence transition from primary to secondary schooling
- ❖ How negotiation of gender roles and identities is performed by women teachers in schools, families and communities
- ❖ What kind of classrooms and school practices enable girls to exercise and develop assertive gender identities
- ❖ How can non-formal education programs empower adult women
- ❖ What barriers prevent greater participation of women in education leadership, e.g. as school administrators and decision makers.

SDG 5: Gender equality

The goal of gender equality is separate from that of gender empowerment. Their conflation has led governments and developing agencies in the past to focus primarily on quantitative indicators, which misses important facets of empowerment processes and outcomes for both women and girls.

We need to ask:

- ❖ How to scientifically and systematically unpack the idea of "women's empowerment"
- ❖ How to understand the simultaneous influence of economic, cultural, and social factors on the construction of subordinate gender identities among women
- ❖ What mechanisms and processes are needed for women to be empowered in their daily lives at micro- and macro-social levels
- ❖ What are the current practices and experiences of how girls and women negotiate gender roles and identities in families and in communities
- ❖ What factors determine individual and collective agency and empowerment of women and girls
- ❖ How to advance women-led non-governmental organisations in the provision of transformative knowledge for urban and rural low- income women
- ❖ How to promote non-traditional careers, e.g. women in technical jobs, men in nursing, pre-schools, etc., responsive to social class, ethnicity, prestige, etc.
- ❖ How does use of ICT promotes empowerment, participation, creativity, collaboration, and social engagement of women and men.

SDG 6: Clean water and sanitation

Women's voices, needs and leadership have been missing in implementation decisions about infrastructure development and in water projects. As the primary water collectors worldwide, women are disproportionately affected by the scarcity of adequate resources.

We need to ask:

- ❖ How do men's and women's values, attitudes and behaviour towards water use/reuse differ, at individual, public and policy levels
- ❖ How to conceptualise access to water as a human right for women and men
- ❖ What are the gendered definitions of sufficient, safe, acceptable, physically accessible, and affordable water
- ❖ What are the gender differences in water use and water resource management, including as a source of livelihood
- ❖ What are the gender-related climate change adaptation strategies and mitigation activities linked to changes in water ecosystem services
- ❖ How to construct water ecosystems inventories, including consideration of the livelihoods to track changes in the quantity and quality of services from the perspective of both women and men as beneficiaries
- ❖ What are the health related gender effects of unsafe drinking water
- ❖ How women's economic and domestic activities are affected by water and sanitation infrastructure
- ❖ How securing enough water to meet family needs impacts on women's health, access to education and employment.
- ❖ How does lack of clean water impact on girls' schooling and the economic productivity of women and men
- ❖ How inadequate sanitation in public places impacts on health and education of young girls who reach puberty.

SDG 7: Affordable and clean energy

Energy planning is implemented under assumption that energy policies benefit women and men equally. This 'gender-blindness' fails to recognise that the needs of

men and women are often different.
We need to ask:
- ❖ How do gender-related behavioural and technical sides of energy consumption interact
- ❖ How do gender and other socio- economic and socio-demographic influences impact on energy utilization and management
- ❖ What are the impacts of (non-technical and technical) energy efficiency measures on gender relations and gender division of labour
- ❖ Are there gender differences in implementation, results, acceptance, and preferences of the users, or those involved in the implementation of energy efficiency projects
- ❖ How do women and men respond to green energy choices, energy conservation and sustainable consumption of energy
- ❖ What are the consequences for women's lives of disruptive effects of climate change on energy costs
- ❖ What kind of household energy interventions can help ease time demands on women's roles, and reduce their exposure to indoor pollution
- ❖ What effects has commercialisation of fuel on women's labour
- ❖ What role has women's labour as a factor in the adoption of new energy technologies.

SDG 8: Decent work and economic growth

The debate on women and economic empowerment is framed by two arguments: (i) the 'right-based' argument, focused on increasing women's job opportunities and their freedom to work in security and dignity; and (ii) 'economic' argument that emphasises women's potential contribution to economic growth.
We need to ask:
- ❖ How do countries compare on gender-sensitive actions to reduce inequality at national level
- ❖ How do countries compare on female inclusion in formal and informal financial systems, and on income inequality between women and men
- ❖ How to quantify the economic growth effects of gender policies in developing economies
- ❖ How do gender inequality in employment and in pay impact on economic growth
- ❖ How is economic growth affected by the provision of infrastructure and women's time allocation
- ❖ How do gender bias against women in the workplace, the gender pay gap, and the saving behaviors of women and men, influence one another
- ❖ How does female employment and earnings influences women's bargaining power within families and communities
- ❖ What are the connections between exploitative production practices and women's participation in the labour force
- ❖ How do discriminatory legal institutions and cultural traditions limit women's ability to achieve equal status
- ❖ What gender norms and treatment of women dominate newly urbanized populations
- ❖ How does globalisation affect income thresholds and gender equality at specific phased of development.

SDG 9: Industry, innovation and infrastructure

Infrastructure projects are often gender insensitive because it is assumed that women and men will automatically benefit equally from new infrastructure, without due acknowledgement of the full range of social and economic impacts, whether positive or negative.

We need to ask:
- ❖ How does infrastructure performance impact on livelihoods and societal benefits for women and men (e.g. reduced access to health through unsafe water and lack of sanitation)
- ❖ How does infrastructure provision for the urban and rural poor affect women and men (e.g. access to education and safe drinking water)
- ❖ What kind of infrastructure deficit affects economic productive capacity of women and men
- ❖ What data is needed to monitor infrastructure investments and its impacts on productivity and incomes of women and men
- ❖ How does economic development influences intra-household bargaining, poverty alleviation, and equal opportunities in employment
- ❖ How does public investment in education and scientific and technological infrastructure can promote gender equality
- ❖ How can industrialisation and innovation promote socially inclusive development and gender equality, including income equality
- ❖ What gender roles and biases influence planning and management of large-scale infrastructure sectors (e.g. water, sanitation, rural transport, communication).

SDG 10: Reduced inequalities

Gender related inequalities can be caused by rigid and traditional gender norms; discrimination against ethnic groups, people with disabilities and other vulnerable groups; geographical disadvantage; access to resources.

We need to ask:
- ❖ What gender relationships dictate intra-household resource allocation, especially for children in large households faced with severe income constraints
- ❖ How can we monitor anti-female bias in measures such as sex ratios of population, food distribution, human capital investment, time allocation, and expenditure patterns
- ❖ How do gender discrimination and income growth interact, and compare between regions, e.g. between gender bias in child mortality and income growth
- ❖ What are the patterns of inequality (gender, income, health) within and across countries
- ❖ What are the social preferences/tolerance for gender income inequality
- ❖ Is investment in girls' education an efficient economic choice for developing countries
- ❖ What interlinks gender inequality and the social or cultural preferences about gender roles
- ❖ How to demonstrate impact of investment in advancing equality for girls
- ❖ What are the determinants and long-term effects of female and male migration and how they compare between source and destination countries.

SDG 11 Sustainable cities and communities

Urban quality shapes human behaviour and is shaped by it. We know what the challenges are: water, air, food, sanitation, transport, road network, energy, buildings, waste, health services, schools, employment, and security.

We need to ask:
- ❖ How should cities respond to the complexity of gender related needs and interactions
- ❖ How gender differentiates inequalities related to income, class, age, race, ethnicity, health status, etc. and affects impacts of climate change on women and men in urban settings

- ❖ How to improve the collection and sharing of gender statistics on fatalities caused by disasters in the cities
- ❖ How to ensure inclusion of gender dimension in climate change policies, plans and programmes for cities
- ❖ How to conduct systematic assessment of gender differentials in resource use and the resulting contributions of these actions to the wellbeing of communities
- ❖ How to analyse differentiated needs of women and men in the cities in relation to safety and health, housing and shelter, mobility, nutrition and food security, sanitation services
- ❖ How to analyse gender differentials in vulnerability, taking women's and men's needs into account, including coping strategies and response to adversity.

SDG 12: Responsible consumption and production
Gender aspects of consumption often relate to inhumane working conditions in globalised production chains. But, consumption practices are embedded in a social context, including the context of household, family and community life, and are shaped by structural factors, such as participation in unpaid housework and the labour market.
We need to ask:
- ❖ What socio-demographic and gender conditions drive household consumer expenditure as part and beyond the need (e.g. energy, transport, housing, food, lifestyle)
- ❖ How does consumption by household members relates to specific purposes, e.g. care work, commuting, and personal consumption
- ❖ How do women and men engage with urban waste management, including in waste sector micro-enterprises
- ❖ What are the gendered work roles and differences in health risk exposure to and effects of chemical substances used for work
- ❖ What kind of gender differentiated effects are produced by privatisation and commercialisation of natural resources (water, land, forests, etc.)
- ❖ How to implement gender differentiated approach to consumption patterns and analyse individual and framework conditions influencing consumption.

SDG 13: Climate action
The discourse on climate change does not pay adequate attention to women. It ignores the potential of women as agents of change for climate mitigation through being part of the economic cycle; and their extensive theoretical and practical knowledge of the environment and resource conservation.
We need to ask:
- ❖ How transformation towards decarbonisation/low-carbon development affects gender relations
- ❖ How do women and men respond and adapt to climate change
- ❖ How transition to low carbon economy can also respect gender equality and climate justice principles
- ❖ How does transition to decarbonisation impact on different groups in society (i.e. migrants, single parents, elderly...) and gender relations
- ❖ What are the benefits of climate change mitigation beyond the reduction of carbon emissions
- ❖ What multiple effects (e.g. health, gender equality, jobs, safety....) could bring higher acceptance to climate change measures
- ❖ What measures can improve gender mainstreaming into climate issues
- ❖ What measures can speed-up the necessary reduction of CO_2-emissions by contributing to the necessary societal shift

❖ What biological/physiological factors limit capacity of women and men, and of other organisms, to cope with extreme climate change conditions

SDG 14: Life below water

Coastal systems include mangroves forests, coral reefs, seagrass beds, algal beds, estuaries, lagoons, sandy beaches, mudflats, shallow coastal, deep of shore seas, to name a few. These ecosystems represent an important source of socioeconomic for the poor.

We need to ask:

❖ How to effectively monitor health of marine organisms
❖ How to establish effective bio-monitoring methods to evaluate not only the presence, but also the response of organisms to pollutants
❖ How to determine toxic effects of pollutants, including when they are present at low, sub-lethal concentrations
❖ What are the impacts of current developments in fisheries on the lives and livelihoods of fishing communities and women's experiences
❖ How to construct and share local fishery agendas and strategies and increase women's role
❖ How to utilise understanding of sex differences in fish reproduction to take advantage (without use of hormones) that in some fish species it is the male that grows bigger (e.g. Tilapia) and in others it is the female (e.g. Turbot)
❖ How to help fish farmers effectively sex young fish, which is currently done manually and requires special training
❖ How to improve methods for controlled fish reproduction in mixed sex populations, which is currently done through administration of methyl testosterone, which may pose a health risk to workers
❖ What is the fate of the hormone in the effluent and ground water
❖ How do young and old fish divert food resources into growth and reproduction, and how to manage fishing and fisheries to protect fertile older female fish.

SDG 15: Life on land

Land ownership confers direct economic benefits as a key input into agricultural production. There remains the danger of pushing women further toward marginalization, insecurity and despair through changes in land use.

We need to ask:

❖ How do rapid change in land use, driven by export- oriented growth in agricultural products, such as palm oil and natural rubber, transform farming practices and influence gender-specific agricultural roles
❖ What are the shifts in gender division of labour and decision-making, e.g. collection of firewood, medicinal plants and wild fruit for household
❖ How to protect forests from insect pests and diseases by exploiting knowledge of their reproduction processes and growth conditions
❖ How is rapid erosion of soil causing reduction in food production and losses in biodiversity
❖ How do female and male farmers understand and protect the character and functioning of soil ecosystems in different types of soil and regions.
❖ How to link local soil knowledge and management practices with cultural, socioeconomic and environmental conditions
❖ How to establish the context of how farmers, women and men, classify soils with regard to fertility and erosion, what they view as the cause of erosion, and how they control erosion
❖ How do gender differences in knowledge of plant use influences gender divisions of labour, and the gendered spatial knowledge for conservation.

SDG 16: Peace and justice strong institutions

Gender equality and women's rights issues are often framed as mainstreaming concerns, rather than as transformative necessity. Cultures of violence, and patriarchal political systems, are not solely supported by men and undemocratic leaders, they are reproduced by the society as a whole: by men and women, by power-holders and subordinates.

We need to ask:

- ❖ How do gender stereotypes obstruct prevention of gender-based violence in populations affected by armed conflict
- ❖ How do conceptions of masculinity put boys and men at risk of living a life of violence (as victims, survivors and/or perpetrators), or become victims of sexual violence, or become child soldiers, or join violent gangs
- ❖ How do conflict, displacement, economic insecurity, and broken social networks lead to destabilising social environments for women
- ❖ How to prevent and overcome consequences of conflict, rape and/or sexual torture used as deliberate weapons of war
- ❖ What is the impact of migration on women
- ❖ What comparative indicators are needed that integrate women's rights and the human rights principles
- ❖ What are the barriers to women's full participation in social movements and in the design, delivery, monitoring and evaluation of the development goals
- ❖ What are the effects of corruption on the lives and socioeconomic status of women and of men, and children.

SDG 17: Partnership for the goals

Most budgets and programs focused on 'gender', focus target women only and the sectors associated with women, e.g. health, maternal mortality, education and sexual violence. This ignores male victims of sexual violence and leaves out 'masculine' sectors of economic development, such as infrastructure, government and security.

We need to ask:

- ❖ What gender and environmental change concerns are a priority today, worldwide
- ❖ What analytic and data gathering tools are in place for use in the field to achieve global collaborative information systems, which links knowledge and action
- ❖ How to demonstrate national and international commitment to gender equality
- ❖ How to help governments and practitioners with the interpretation of gender-related data sets
- ❖ How to improve inclusion of gender aspects into SDG targets to enable shared collection of relevant datasets and development of effective indicators
- ❖ How to ensure systematic sex disaggregated analysis of gender and climate change in national legislative, policy and institutional frameworks
- ❖ Why gender gaps do not appear to fall systematically with growth, and they appear to rise with GDP per capita, and with greater access to resources and inputs
- ❖ What is the impact of health system financing, and of financial protection on socio-economic wellbeing of women and men
- ❖ What can we learn about the scope and intensity of the gender digital divide, in a global knowledge society
- ❖ Is higher income inequality for women and men, within and between countries, the inevitable outcome of technology-driven industrial development
- ❖ What are the benefits of technology-led industrialization for women and different citizen groups, in different countries
- ❖ How to improve access to finance for women and men workers for better occupational choices, and labour market mobility.

Conclusions

1. Gender issues play a much greater role in SDG targets than currently identified
2. Substantial body of scientific evidence is available to show when, why and how gender issues can influence outcomes of SDG interventions
3. A systematic mapping is needed of available gender knowledge to improve design and implementation of SDG interventions
4. Great number of experts are available globally to advise how to connect scientific understanding of gender issues to specific SDG targets in order to ensure equal outcomes and benefits for women and men.