UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD), twentieth session
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Opening Ceremony
Item 1: Adoption of the agenda and other organizational matters

Statement submitted by

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Mr. President of ECOSOC, Your Excellency Mr. Frederick Shava,

Chair of the 20th Session of the UN Commission on Science and Technology for Development, Mr. Ruijin Wang,

Secretary-General of UNCTAD, Dr. Mukhisa Kituyi,

Secretary-General of ITU, Mr. Houlin Zhao

Your Excellencies

Distinguished Guests

Ladies and Gentlemen

Thank you for your generous invitation to appear as a special guest speaker at the 20th Session of the Commission on Science and Technology for Development. The opportunity to stand among so many visionary and influential minds makes this an invitation that I shall long appreciate. and I am pleased to address and contribute to this important conference.

The theme Science and Technology for Development represents a passion of mine, as I always believe that only through science and arts we can bridge the world. In my speech at the ceremony of the 50th anniversary of UNESCO, I said that The Western / Eastern and Northern / Southern Dialogue cannot remain restricted to one domain, but should be extended to broader vistas. The Dialogue has to move to Science, Education, Culture and Arts. Thus International

Peace and Tolerance will be implemented only through creating different aspects of collaboration between individuals and organizations that indeed will help in narrowing the gap between developed and the developing countries".

I am pleased to represent RASIT's vision and work in this Conference. The 20th Session of the Commission on Science and Technology for Development is very timely as we are one week away from the 2nd ECOSOC STI Forum, and almost one month from the first Oceans Conference.

We are here to discuss the role of science in achieving sustainable development goals, particularly goals 1,2,3,5,9 and 14.

The focus of my speech at this Conference is on transformation - a key word for implementation of all the new global agendas. The sub-title of the 2030 Agenda is "Transforming our World". Indeed, fundamental transformations in the way the world lives, works, and does business are needed to: End poverty; to achieve food security and promote sustainable agriculture; to Ensure healthy lives and promote well-being for all; to Ensure inclusive and quality education for all; for building the low carbon, climate resilient, green and inclusive economies and societies of the future; and last but not least to Achieve gender equality and empower all women and girls.

The Agenda 2030 challenges us in three major points:

- to transform for "people" and for "planet";

- to transform how we understand and how we strive for "prosperity";

- and to travel a road to transformation based on peace, stability, inclusion, and partnerships.

Let me refer first to just some of the significant challenges our world faces.

1. Poverty, Hunger, inequality and Conflicts

Despite the tremendous progress has been made on lifting people out of abject poverty in the last thirty years, more than 790 million people worldwide still lack regular access to adequate amounts of nutrition, and many inequalities have become starker, for example:

• 8% of the world's population now earns 50% of the world's income;

• the richest 1% owns 48 % of the world's assets;

• countries in conflict or facing significant insecurity have been unable to reduce poverty because of the disruption they suffer to the course of human life and to their infrastructure and institutions.

Overall, inequalities have grown in the majority of the world's countries, with very few exceptions. Wealth, opportunity, and ultimately power is increasingly concentrated in the hands of the few. High levels of inequality limit the political will to address poverty, and they tear at

the very fabric of our societies. Political exclusion, and a lack of hope for young people, has contributed to the rise of radicalization and violence.

Mahatma Gandhi said: “The world has enough for everyone's need, but not enough for everyone's greed.”

The extremist and terrorist groups which are attracting young men and women from poor and unemployed backgrounds threatens to destabilize parts of our world for years to come.

Terrorism and conflict can dissolve human development in an instant and reverses decades of progress, leaving generations of young people without education and the opportunities for decent jobs and livelihoods. The impact on women and girls is typically abhorrent.

It is clearly indicated at the 2030 Agenda that "there can be no sustainable development without peace, and no peace without sustainable development".

We need to invest in a better understanding of the root causes of conflict and their complex economic, social, and political dynamics.

We need to acknowledge that poverty and hunger is a major root of radicalization and terrorism.

The Other Challenge is Youth Empowerment:

The majority of world citizens are under the age of thirty. If I look around, I do not see youth science graduates participating or addressing this conference.

One of the priorities of RASIT is Youth Empowerment. The integration of Youth into society, among other avenues that can be taken, can be achieved by encouraging intergenerational dialogue on: Education, Employment, Rights, Health, and Entrepreneurship. Further, by inviting them into conferences to learn, gain experience and knowledge, and to be given the chance to be heard.

Youth and young adults has promoted change and embraced innovative values by being the initiators of social movements that have given rise to cultural and social transformations throughout history.

The main constraints young people face in taking action include doubts about how and where to begin, limited confidence in their ability to make a difference, inadequate monetary resources, competing demands on their time, insufficient encouragement from peers, and a lack of political and community support.

For young people to be successful in driving change they require a role model and a strong support system that includes parents, teachers, community, the Government, the private sector, the media, and civil society. Existing infrastructure and social systems are not always supportive of positive change. Many systemic barriers do exist that effectively preclude meaningful civic engagement among youth.

Although youth involvement is widespread and the value of youth participation is internationally acknowledged, the idea that giving Youth a role in society can lead to better policy outcomes is far from being accepted. The rights and decision-making capacities of young people often remain unrecognized, and their potential as a valuable resource, is seldom realized.

Unfortunately, young people are nowhere near achieving this level of empowerment.

Frustrated youth have three options: Freeze and accept their conditions, Fight the status, or take Flight and leave their countries.

The predominant tendency seems to be waiting for education, housing, marriage, employment, and credit. But if youth are in waiting mode, what is it that they do? What drives their energy? And what other social and political challenges do they face?

To achieve a real sustainability in development: Education, health, agriculture, environment, science, and equality, we really need to involve youth and integrate them into all programs.

Allow me to give you an example of the youth in science vision:

A field study conducted by RASIT's Science Committee youth associates indicated the following:

There are many food banks organizations in the world that are doing their best to help the poor. However, they are not tackling the problem of poverty: the poor remains poor and still dependent on the donations. Our associates recommended that there should be social workers studying the case of each family, and while providing the help and support for the family, they work as Human Resources and find a job for a member or members of the family. This conclusion was adopted by one of the NGOs in Turkey and the model became very successful. More young people were either offered training and jobs, lifting these people from poverty and its outcome hunger, most importantly helped people maintain their dignity and self-confidence.

I believe that this model presented by youth should be applied by all Food banks to lift people from poverty as much as possible before 2030.

The other main challenges are Food Security, environment, and gender equality:

So what is the role of Science in Sustainable Development:

There is no doubt whatsoever that Scientific research plays a vital role in translating knowledge into action to achieve sustainable development for generations to come.

For example: Science and Agriculture

Science's contribution to agriculture have allowed us to produce more and more, with less and less.

Historically, the results have been spectacular. Since the introduction of the green revolution crops alone, global crop production has increased dramatically.

But with the boom came significant costs – including topsoil depletion, groundwater contamination, the decline of family farms, increasing costs of production, and in some places, the disintegration of economic and social conditions in rural communities.

And now we add to these unprecedented global challenges – climate change, wars and conflicts, refugees, polluted lands from Depleted Uranium and other harmful chemicals used in wars, hundreds of millions of people starving, and an ageing farming workforce.

On top of these, the predicted increase in world's population, requiring an increase in global food production of 70 %.

Providing enough food in this context will be an unprecedented scientific, economic and political challenge.

So today we look towards a new era for agriculture – one focused on longevity, on endurance, on sustainability.

To be sustainable we need to grow our food in ways that are less resource intensive, while still satisfying the demands of an expanding global population. Again, we need to find ways to produce more, with less.

Science will continue to be crucial in this endeavour. As an example, the quality of land and water resources is dependent on our understanding of chemistry, biology and genetics.

However, Sustainable Agriculture, thus food security, is not going to get better around the world if more people leaving agricultural science and workforce.

In Australia, for example, where they have a very solid Science and R&D base to build upon. And yet, the number of people undertaking formal agricultural science education, *and* the number of people entering the agricultural workforce in decreasing. A report from Australia showing a declining in student participation in Agricultural Science subjects (down 31% between 2002 and 2010) and its impacts not just on Australian producers and economy but also on its foreign policy.

While so many people arguing that there is no need to be concerned about the future because humans will always have technology and innovation to get out of trouble. And while I agree that science holds the solutions to many of our future challenges, assuming that science will always be there when we need it is incredibly risky, especially if we can't engage and inspire the younger generations, particularly women to pursue science.

The big fact is that the science base is as strong as the people in it.

But how we will be able to attract, train and retain people, from all backgrounds, into different fields of sciences.

If we are serious about closing gap between countries, societies and communities, if we are serious about the role of science in achieving the SDGs, we should re-define excellence in education.

If we believe the purpose of education is to help every young person realize their potential, it cannot be right that governments do not address the shortage of teachers particularly science teachers.

Since 2000, the world has made good progress in getting tens of millions of children into school; however, there is an acute shortage of teachers, particularly science teachers. Based on a report published by the British Royal Society of Chemistry, there are shortages of specialist teachers at both secondary and primary levels; for example, in England

- One third of secondary school chemistry teachers do not have a chemistry degree.
- Only 8.3% of primary school teachers in England have a science degree.

Without teachers, a school is just a building

Without trained teachers, schooling is not education

Without Science teachers, No more people interested in science, and thus Science will not be able to provide solutions for world development.

It is a necessity to ensure that all teachers – new recruits as well as those already in classrooms – are well-trained, have access to ongoing training and are treated as professionals – with decent pay and conditions as well as Recognition.

If governments truly want to achieve sustainable development goals, then they must value teachers in general and science teachers in particular. I repeat that the big fact is that the science base is as strong as the people in it.

The questions I would like to raise here are: How could the current global approach be improved through commitment to a transformational, 2030 sustainable development agenda consistent with the vision and values of each country? What role can science and innovation play in driving development?

The challenges facing the world's countries – its prosperity and economy, creativity, exchange, equity, and opportunity – will be met only if we deploy social science knowledge, skills and methods of inquiry ever more intensively. To thrive we must innovate. In innovation, we must marry progress in technology and the physical and life sciences with insights from studying behavior, place, economy and society. To exploit the vastness of Big Data emerging from social media, the biosphere, health and public administration, it is necessary to collaborate across the disciplines.

Advancing and applying science depends on profits, policies, markets, organizations and attitudes. These are social science themes.

Large problems – whether called challenges or opportunities – lie ahead. The challenges of the world will demand evidence and insight from social scientists working in new ways with colleagues from the natural and life sciences, engineering, arts and humanities.

For this reason, we need both ‘hard’ and ‘soft’ sciences on board. ‘Hard’ science will continue to tackle the challenge of doing more with less. But this needs to be seen in the context of how and who it will benefit, which is the domain of the ‘soft’ social sciences.

We are meeting today in this historical building and under the umbrella of the United Nations to discuss practical solutions for world’s problems.

The questions raised here are:

Who decides what is best for people?

Why has the agony of people increased worldwide? Poverty rate is increasing dramatically and at the same time the number of wealth in increasing day after day.

In 2001, it was the tragedy of September 11th, when it became the start for the death of peace around the world.

In 2003, the Anglo-American invasion on Iraq happened, which resulted in civil war and destruction of a country and a nation. With more usage of depleted Uranium weapons.

The war in Syria

And since that time, wars became the solution.

Lack of leadership, and so on.

With all of that, the Economy is not stable, the level of scientific research funding decreased, unemployment rate and poverty increased, National health services in decline, number of refugees and displaced people is at highest rate, and so on.

The problems are increasing day after another, simply because our voices are not heard. The voices of Professionals, Women and Men in Science, and our fate is decided by politicians and the most forward-thinking companies on the planet who are running and planning its agendas ignoring peoples' needs. Decisions are made without proper studies, and decision-makers are planning and taking their decision while in offices, in fact they are not on the ground, or maybe they forgot how to be on the ground.

Allow me to give you an example:

As the world and its economies become increasingly globalized, it is necessary to think about health in a global context. While there are talks about sustainable development for health, little is mentioned about health for sustainable development. For example, Other than reproductive medicine, the subject of women's health has not been presented or discussed as fully as possible around the world. As a result, there is insufficient knowledge at healthcare, public- and policy-maker levels on sex- (i.e. biological) and gender- (i.e. socioeconomic) based disparities, climate change and changing patterns of diseases, and increased conflicts and migration in the prevalence, progression and outcome of numerous diseases and conditions, including non-communicable diseases and mental illnesses. This insufficient knowledge not only affects women but also men and the whole of society.

Based on the World Health Organization Reports: Many communicable and non-communicable diseases are more severe in women than in men, and death rates from such diseases are higher in women than in men. If the International Community is still considering women's health is only within the patterns of sexual and reproductive, and not focusing on the sex- difference in health and illness, this would explain why most of the medications available in the market for decades are not suitable for treating women!

The above points were discussed in the High-Level Inaugural World Women's Health and Development Forum, that was organized by RASIT in close collaboration with the Division of Sustainable Development, DESA. The Outcome Declaration of the Forum, which the participants contributed to and approved by acclamation reflects an ambitious global action agenda and serves as a Road Map for women's health and development. However, there are key issues outlined in the declaration that are missing in the agreed text on the "Agenda 2030".

Thus, there is an urgent need to promote new thinking at International Community on the mechanisms that support innovation in health programs. Further, it is essential to recognize the importance and need of science and technology for development and the critical role of science, technology and innovation in addressing global challenges and in realizing sustainable development to enhance health, and reduce the burdens of illness and disability.

The 2030 Agenda puts people at the center of sustainable development - as its ultimate beneficiaries.

It is essential and necessary to focus on the role of women in science, economy, humanitarian outreach, health, and global strategies.

Enabling us to discuss the many existing problems, issues facing women and societies today, and then to determine the indispensable solutions, actions, policies and programs to overcome these problems and issues, we need to recognize the role of Women in Science in the sustainable development process. Such recognition should be through acknowledging the accomplishments and the achievements of Women in Science.

We are in 2017,

It is not acceptable that in many countries including USA and UK, women in science are paid less than their male colleagues;

It is not acceptable that girls do not have the equal quality of science education in many regions around the world;

It is not acceptable that women in science are not well represented in policy-making process including in Intergovernmental Organizations.

This is not the future we want!

In terms of women and girls in science, it is valuable to note that a thorough search through google reveals that women have literally played a role with men through 4,000 years of recorded history in terms of science.

For more than 48 years, we at RASIT are working closely with the United Nations and its entities, as well as with other Intergovernmental Organizations, Governments, and Civil Society and advocating on the need to insure equality and full participation for Women in Science in decision making and sustainable development programs; and access to comprehensive, high-quality education, equal employment opportunities and promotion, with a clear consideration for the different needs of different societies and cultures.

As a woman in science, allow me to say that a main landmark in 2015 was the adoption of the Resolution presented by RASIT to the President of General Assembly to proclaim February 11 the International Day of Women and Girls in Science.

Following outreach to a number of partners and stakeholders at all levels and with RASIT's partnership with the Ministry for Social Dialogue, Consumer Affairs and Civil Liberties, the Republic of Malta, a milestone year was reached in which the 70th Session of the United Nations General Assembly adopted resolution 70/212 proclaiming February 11th annually the International Day of Women and Girls in Science. The sponsorship of more than 68 countries and the approval

of all Member States to the resolution signals the global community's interest in transforming our world through achieving gender parity in educational opportunity and scientific participation.

The International Day for Women and girls in Science would add prestige to the scientific achievements within the UN system, in national contexts, in universities and non-governmental organizations, and the private sector. Women in Science talents, perspectives, work methods and skills could be recognized worldwide on such a day for wide impact. Promotion of education for women in science and for their entry into scientific careers will also serve to build inclusive institutional climates within all countries, and allow policies and procedures to be crafted for gender equality, leadership training, and mentoring.

Commemoration of such a day will also assist in:

- the cultural transformation from women's consignment to a separate and lesser sphere than male counterparts to an inclusive and collegial climate that encourages women to add their talents to implementation of Agenda 2030;

- the full potential of every person being realized when science belongs to all citizens, male or female, rich or poor; and

- ensuring that girls and boys will see women role models in order to find the encouragement to enter into courses of study that will enable them to become scientists.

This is the future we want.

I am very proud to say that The Royal Academy of Science International Trust organized the first and second commemorations of the International Day of Women and Girls in Science, in close collaboration with the UN DESA and Government of Malta. The 2017 theme was about the role of media in achieving parity in science and sustainable development.

Media has a great and direct impact on societies and its development. In addition to its role in bridging the world, the entertainment media, including cinema and television drama, has a crucial psychological and sociological influence in educating and making individuals.

Although entertainment media has succeeded in addressing many issues, the media gender stereotyping found in portrayals of women in general and women in science in particular have played a significant negative impact on the participation of young women and girls in science.

Media plays a crucial role in educating and making individuals, communities, and society conscious about sustainable development, the need for more sustainable patterns of production and consumption, and encouraging action directed towards change and a more sustainable future.

It is important to trace the underrepresentation and gender stereotyping found in portrayals of women in science in the mass media. Further, it is significant to define the role these media portrayals play as factors that can limit the representation and status of women in the science workforce, and to examine the potential of more progressive portrayals to broaden the participation of girls in science.

Although overt sex discrimination is rare, women in science are battling engrained bias, both at the institutional and personal levels. These biases and inequalities need to be tackled by enlightened policies and institutional good practice. But there are also some things that individual women scientists can do to boost their chances of success in a male-dominated work environment. These include developing their ability to communicate and present their science with clarity, confidence and authority.

There is an urgent need for more authoritative women in science voices in the media. Broadcasters themselves acknowledge that they would like to book more expert women in science to appear on their programs, but struggle to find them!

To achieve a sustainable society, behavioral change is necessary, and for this change in behavior the public should have sufficient access to information, as well as an opportunity to freely express views and opinions.

Scientific communication and strengthening the public understanding of science should be leveraged as a cultural instrument, not only to inform or dialogue, but also to build a higher responsibility in scientific research for development. Society needs to acquire fundamental scientific knowledge and attitudes for developing their cultural heritage since science and society are intrinsically related, and this is the role of the media.

Considering the fundamental role media occupy in national development, and that for sustainable development to become a reality in every country, the identified issues that impede the achievement of sustainable development should be addressed, so that the media can effectively champion sustainable development efforts in all the sectors including parity in science and women's empowerment.

I believe that the International community should consider The media, whether printed, the audiovisual (including TV and radio), the entertainment (including cinema, drama, etc.) and the electronic (including social media), as a major stakeholder in the realization of sustainable development worldwide.

We achieved an international day for women and girls in science,

We achieved international recognition for the enormous and great achievements of women in science,

The questions I would like to raise here are:

What role of women in science can play in achieving the SDGs and in driving development?

What role of women in science can play in transfer of technology and building bridges between the North and South.

What are Women in science: social responsibilities and how to encourage women scientists into public engagement?

The answers will be revealed Next Monday on the High level Panel on Women in Innovation and Connectivity, that is organized by RASIT, Ministry of Social Dialogue Consumer Affairs and Civil Liberties of Malta, and UNCTAD.

We all are meeting here to discuss HOW to achieve the SDGs objectives.

The question to be asked: where we can meet to create a real change and to bridge the World, to create transformation without leaving anyone behind?

We only can achieve all of this if we work together hand-in-hand, in the WE mentality.

Today more than ever, the global strategy for health, education, economy, development, and humanitarian outreach needs precisely the radiant sun of women and men in science—to provide light and nourishment. To provide healing. To dry out the swamps of poverty and unrest.

Agenda 2030 will be marked by true partnerships that will bloom in abundance.

The difference between partnership initiatives out of Rio 1992, Johannesburg 2002 and a variety of other significant summits and international meetings is that the international community said "let a thousand flowers bloom" but these partnerships from all sides were based on individual entities, the "I" mentality rather than the WE mentality, and 995 flowers died due to lack of nurturance.

We at RASIT strongly believe in the WE mentality. The partnership between RASIT and the Government of Malta, truly is one of global partnership, that illustrates SDG 17.

And I am looking forward for a partnership with your governments and institutions, a Partnership with a genuine spirit of working together, through obstacles, to produce success routed in the fertile earth of multilateralism.

By working together in a cooperative, innovative and constructive way, we can leave behind us the many tragedies we see unfold around the world. By this we can help build a life of opportunity and dignity for all.

I would like to end my speech by quoting some sentences from the vision of my 11 year old nephew HRH Prince Zain El-Hashemite. This vision he presented to at the 1st Commemoration of the International Day of Women and Girls in Science at the UNHQ.

"I believe if we want to achieve the sustainable development goals, we need to start by making the goals simple and easy to understand by young students and make them a part of the learning process and student's development programs. These educated and well prepared young students will turn into the good citizens who will practice the goals of gender equality, ending poverty, achieving zero hunger, good health etc. This will become part of their daily routine".

Sustainable agriculture, health, environment etc., need science and innovation, but science needs people and our support.

For it's only through recognizing the importance of education, science, invention, and technology that we can possibly hope to guarantee a truly sustainable future, for our world.

I will leave you with three quotes:

Prophet Muhammad (Peace Upon Him) said:

"Education and Knowledge is the root of all noble, beneficial and valuable work and act.

Ali bin Abi Talib said:

"There is no greater wealth than wisdom, no greater poverty than ignorance; no greater heritage than culture."

One of Rumi's quotations that I love very much is:

"Woman is a ray of God. She is not that earthly beloved: she is creative, not created".

So I urge everyone—all women and men of goodwill—to dare to make the difference and believe in women in science. I promise you this: you will not be disappointed. For when women in science shine like the sun, their radiance will be forever undimmed.

Excellencies, Ladies and Gentlemen: I thank you for your attention and wish you success.