

THE FUTURE WE WANT

RIO+20 ZERO DRAFT

Amendments proposed by the Scientific and Technological Community

Major Group Co-organizing Partners: International Council for Science (ICSU) and World Federation of Engineering Organizations (WFEO)

[B. Assessing the progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development and addressing new and emerging challenges (Integration, Implementation, Coherence)]

4. We are also committed to enhancing cooperation and addressing the ongoing and emerging issues in ways which will enhance opportunities for all, be centred on human development while preserving and protecting the life support system of our common home, our shared planet, within the carrying capacity of its ecosystems and planetary boundaries.

5. We urge bold and decisive action on the objective and themes for the conference. We renew our commitment to sustainable development and express our determination to pursue the green economy in the context of sustainable development and poverty eradication. We further affirm our resolve to strengthen the institutional framework for sustainable development. Taken together our actions should fill the implementation gaps and achieve greater integration among the three pillars of sustainable development – the economic, the social and the environmental

[10. bis We recognize that [research and scientific and engineering analysis – Mexico] have opened new opportunities, for both developing and developed countries, for achieving sustainable development and the contribution of the scientific and technological community is crucial in this respect. We also acknowledge that technological development and

innovations from the private sector and other stakeholders offer solutions to many problems, taking into account. – [EU]

Comment [GG1]: This proposal is strongly supported by the Scientific and Technological Community.

Deleted: ¶

11. We acknowledge, however, that there have also been setbacks because of multiple interrelated crises – financial, economic and volatile energy and food prices. Food insecurity, climate change and biodiversity loss have adversely affected development gains. New scientific evidence points to the gravity of the threats we face. New and emerging challenges include the further intensification of earlier problems calling for more urgent responses. We are deeply concerned that around 1.4 billion people still live in extreme poverty and one sixth of the world's population is undernourished, pandemics and epidemics are omnipresent threats. **Implementation in many sustainable development areas has been woefully insufficient.** Unsustainable development has increased the stress on the earth's limited natural resources, on the carrying capacity of ecosystems, and has moved humanity closer to the risk of exceeding planetary boundaries of our Earth system. Our planet supports seven billion people expected to reach nine billion by 2050.

Comment [GG2]: Yes - there is strong new scientific evidence.

Deleted: and

Deleted: .

13. We nevertheless observe that, despite efforts by Governments and non-State actors in all countries, sustainable development remains a distant goal and there remain major barriers and systemic gaps in the implementation of internationally agreed commitments.

14. We resolve to redouble our efforts to eradicate poverty and hunger and to ensure that human activities respect the earth's ecosystems and life-support systems. We need to mainstream sustainable development in all aspects of the way we live. We acknowledge the particular responsibility to nurture sustainable development and sustainable consumption and production **pattern.**

Comment [GG3]: Moving away from current unsustainable consumption and production patterns in part of the world and in specific groups of society and economy must be addressed as a priority area of Rio+20.

[C. Engaging major groups]

17. We underscore that a fundamental prerequisite for the achievement of sustainable development is broad public participation in decision-making. Sustainable development requires major groups – women, children and youth, indigenous peoples, non-governmental organisations, local authorities, workers and trade unions, business and industry, the scientific and technological community, and farmers – to play a meaningful

role at all levels. It is important to enable all members of civil society to be actively engaged in sustainable development by incorporating their specific knowledge and practical know-how into national and local policy making. In this regard, we also acknowledge the role of national parliaments in furthering sustainable development.

Comment [GG4]: This paragraph is strongly supported by the Scientific and Technological Community Major Group.

18. We recognize that improved participation of civil society depends upon strengthening the right to access information and building civil society capacity to exercise this right. Technology is making it easier for Governments to share information with the public and for the public to hold decision makers accountable. In this regard, it is essential to work towards universal access to information and communications technologies, to strengthen the World Data System, to engage the scientific and technological community, and to use formal and informal learning facilities.

Comment [GG5]: See www.icsu-wds.org

D. Framework for action

24. We call for a global policy framework requiring all listed and large private companies to consider sustainability issues and to integrate sustainability information within the reporting cycle. **Unprecedented challenges require novel, innovative responses. Rio+20 must call for incentives and much enhanced public-private funding needed to strengthen national and international systems for engineering, technology, policy, economic and social innovation to achieve sustainable development.**

III. Green Economy in the context of sustainable development and poverty eradication

A. Framing the context of the green economy, challenges and opportunities

25. We are convinced that a green economy in the context of sustainable development and poverty eradication should contribute to meeting key goals – in particular the priorities of poverty eradication, food security, sound water management, universal access to modern energy services, sustainable cities, management of oceans and improving resilience and disaster preparedness, as well as public health, human resource development and sustained, inclusive and equitable growth that generates employment, including for youth. It should be based on the Rio principles, in particular the principle of common but differentiated responsibilities, and should be people-centred and inclusive, providing opportunities and benefits for all citizens and all countries

Comment [GG6]: Nine Policy Briefs prepared by the Global Change Research Programmes of ICSU cover most themes of this priority list and include a Policy Brief on Green Economy (see www.icsu.org/rio20)

B. Toolkits and experience sharing

32. We acknowledge that countries are still in the early stages of building green economies and can learn from one another. We note the positive experiences in developing a green economy in some countries, including developing countries. We recognize that a mix of policies and measures tailored to each country's needs and preferences will be needed. Policy options include, inter alia, regulatory, economic and fiscal instruments, investment in green infrastructure and in green R&D, financial incentives, subsidy reform, sustainable public procurement, information disclosure, and voluntary partnerships.

33. We support the creation of an international knowledge-sharing platform to facilitate countries' green economy policy design and implementation, including:

Comment [GG7]: The Scientific and Technological Community strongly supports this recommendation.

a menu of policy options;

a toolbox of good practices in applying green economy policies at regional, national and local levels;

a set of integrated science -based indicators to measure progress;

Comment [GG8]: What is required are new methodologies of measurement and the development of integrated indicators, with full involvement of the scientific community.

a directory of technical services, technology and financing that could assist developing countries.

The use of any given technology requires a thorough analysis of the technological and economical feasibility, as well as of the environmental impact, for implementing scientifically sound and efficiently engineered solutions.

34. We request the UN Secretary-General, in consultation with international organizations, relevant entities of the UN system and others, to establish such a platform.

35. We urge member States to make national presentations on their experiences in the appropriate institutional framework as described in Section IV below.

36. We also urge all major groups, particularly business and industry and the scientific and technological communities, to share their experiences in this regard. We recognize the crucial roles of the scientific and technological community in the work of the platform, such as ensuring that its work is based on the best available scientific knowledge and appropriate technologies.

Deleted: .

40. We strongly encourage business and industry – organized by industrial sectors - and scientists and engineers, cooperating across countries and in

consultation with governments, workers and trade unions and other stakeholders – to develop green economy roadmaps for their respective sectors, with concrete goals and benchmarks of progress, including for net creation of jobs. **New scientifically sound integrated indicators should be developed to monitor progress towards sustainable development and a green economy.**

C. Framework for action

42. We realize that to make significant progress towards building green economies will require new investments, new skills formation, technology development, transfer and access, and capacity building in all countries. We acknowledge the particular need to provide support to developing countries in this regard and agree:

- a) To provide new, additional and scaled up sources of financing to developing countries;
- b) To launch an international process to promote the role of innovative instruments of finance for building green economies;
- c) To gradually eliminate subsidies that have considerable negative effects on the environment and are incompatible with sustainable development, complemented with measures to protect poor and vulnerable groups;
- d) To facilitate international collaborative research on green technologies **and green economy models and practices**, involving developing countries, ensuring the technologies **and knowledge** so developed remain in the public domain and are accessible to developing countries at affordable **prices**;
- e) To encourage creation of Centres of Excellence as nodal points for green technology R&D;
- f) To support developing countries' scientists and engineers and scientific and engineering institutions to foster their efforts to develop green local technologies, **as well as green economic models and land-water management systems**, and use traditional knowledge;
- g) To establish a capacity development scheme to provide country-specific advice and, where appropriate, region and sector-specific advice to all interested countries and to assist them in accessing available funds.

Comment [GG9]: We suggest to improve this alinea (d), together with alinea (f) , to focus in a balanced way on both strengthening technology development and integrated research on green economy challenges.

Deleted:

IV. Institutional framework for sustainable development

C. UNEP, etc.

52. We stress the need for a regular review of the state of the planet and the Earth's carrying capacity and request the Secretary-General to coordinate the preparation of such a review in consultation with relevant international organizations and the UN **system**.

Comment [GG10]: ICSU strongly supports "a regular review of the state of the planet" and that it needs to be prepared in consultation with relevant international organizations such as ICSU, and the UN system.

53. We call for the scientific and engineering basis for decision making to be strengthened across the UN system and recognise that the interface between science and policy-making should be enhanced.

Comment [GG11]: Also this paragraph is strongly supported by the Scientific and Technological Community. However, both paragraphs require to be improved/strengthened language

53bis. The Rio+20 conference agrees to launch a process to develop a new contract between science, engineering and society to deliver the knowledge necessary for a sustainable future. There should be a better exchange and application of existing knowledge and technology towards solutions, and support for globally coordinated research initiatives on sustainable development challenges, as well as technological innovation. Policies and decision making should be based on the best available natural science, social science, economic science, up-to-date engineering criteria and appropriate technology and they must benefit from scientific advances and engineering, technological, economic and social innovation. Efforts to improve the institutional framework for sustainable development at all levels, and international environmental governance institutions, must therefore include strengthening of science and policy links, and strengthening science, engineering and technology capacity within all institutions.

D. Regional, national, local

60. We call for the strengthening of existing regional and sub-regional mechanisms, including the regional commissions, in promoting sustainable development through capacity building, exchange of information and experiences and providing expertise.

60 bis. We call for the science and engineering base of decision making to be strengthened at regional, national and local levels, including through the creation or enhancement of specific interface mechanisms between science and policy-making.

61. We underline the need for more coherent and integrated planning and decision-making at the national level. We therefore call on countries to establish and strengthen, as appropriate, national sustainable development councils to enable them to coordinate, consolidate and ensure the mainstreaming of cross-cutting issues in the highest decision-making bodies, with the integration and full participation of all stakeholders.

V. Framework for action and follow-up

A. Priority/key/thematic/cross-sectoral issues and areas

63. We recognize that progress in implementation requires attention to a number of sectoral and cross-sectoral priority areas as well as to the linkage among different sectors. We also recognize that assessing progress in these areas can benefit from defining aspirational goals, targets and indicators, as appropriate.

[Noting the special challenges associated with ensuring integration amongst the sectors/themes covered below, we reiterate the need to strengthen, as appropriate national sustainable development councils, and commit to establishing or strengthening sub-national processes, such as landscape planning processes, that ensure integration across such thematic areas as food, water, forestry and energy](#)

We therefore commit to the following actions:

Food security

64. We reaffirm the right to food and call upon all States to prioritize sustainable intensification of food production through increased investment in local food production, improved access to local and global agri-food markets, and reduced waste throughout the supply chain, with special attention to women, smallholders, youth, and indigenous farmers. We are committed to ensuring proper nutrition for our people, [including both addressing under-nutrition and significantly reducing over-consumption.](#)

65. We call for more transparent and open trading systems and, where appropriate, practices that contribute to the stability of food prices and domestic markets; ensure access to land, water and other resources; and support social protection programmes.

66. We further support initiatives at all levels that improve access to information, enhance interactions among farmers and experts through education, [extension services and diverse forms of farmer advisories](#), and increase the use of appropriate technologies for sustainable agriculture.

[We call for special measures and mechanisms to ensure food security while also addressing energy security, fibre production, climate change adaptation, and reducing the greenhouse gas and environmental footprint of agriculture. This could include landscape approaches at sub-national levels and information systems that integrate sectoral data, amongst others .](#)

Water

67. We underline the importance of the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights. Furthermore, we highlight the critical importance of water resources for sustainable development, including poverty and hunger eradication, public health, food security, hydropower, agriculture and rural development. Human water security should not be at the expense of ecosystem integrity to ensure the base for ecosystem services and resilience.

68. We recognize the necessity of setting goals for wastewater management, including reducing water pollution from households, industrial and agricultural sources and promoting water efficiency, wastewater treatment and the use of wastewater as a resource, particularly in expanding urban areas.

69. We renew our commitment made in the Johannesburg Plan of Implementation (JPOI) regarding the development and implementation of integrated water resources management and water efficiency plans. We recognise also the need to emphasize implementation and the achievement of tangible goals over the next decade. We reaffirm our commitment to the 2005-2015 International Decade for Action “Water for Life”. We encourage cooperation initiatives for water resources management in particular through capacity development, exchange of experiences, best practices and lessons learned, as well as sharing appropriate environmentally sound technologies and know-how.

Energy

70. We propose to build on the Sustainable Energy for All initiative launched by the Secretary-General, with the goals of providing universal access to a basic minimum level of modern energy services for both consumption and production uses by 2030; improving energy efficiency at all levels with a view to doubling the rate of improvement by 2030; and doubling the share of renewable **and clean** energy in the global energy mix by 2030 through promoting the development and use of renewable energy sources and technologies in all countries. **End-use efficiency, power-plant efficiency, biomass, biofuels, nuclear and carbon capture and storage need to contribute.** Hydro and wind power are suited to be deployed for the long term. Energy storage technologies are key to the management of intermittent renewable energy sources. Carbon capture and storage (CCS) is being developed and **demonstrated at large scale.** These global objectives imply vigorous and transformational change in individual countries and could be achieved by association of countries through joint market instruments such as feeding tariffs,

trading of certificates and standards. We call for provision of adequate financial resources, of sufficient quality and delivered in a timely manner, to developing countries for providing efficient and wider use of energy sources.

71. We call for countries to work towards low-carbon development. We encourage more widespread use of energy planning tools to implement targets and timelines to achieve these objectives as well as to provide a robust framework for donors and partners to coordinate their development cooperation efforts.

Deleted: agree that each country should work for

Cities

72. We commit to promote an integrated and holistic approach to planning and building sustainable cities, recognizing the sustainability challenges within, as well as the regional and global linkages and impacts of, cities. We commit to support local authorities, efficient transportation and communication networks, greener buildings and an efficient human settlements and service delivery system, improved air and water quality, reduced waste, improved disaster preparedness and response and increased climate resilience. We encourage scientific and engineering studies aiming at providing guidance to sustainable urban development, through better understanding of the linkages between cities and their resource basis, through better understanding of the inter-linkages of different sectors and components within cities, and through building and sharing knowledge of innovative urban practices.

Deleted: to

Green jobs-social inclusion

74. We also recognize that significant job creation opportunities can be availed through investments in public works for restoration and enhancement of natural capital, sustainable land and water management practices, family farming, ecological farming, organic production systems, sustainable forest management, rational use of biodiversity for economic purposes, and new markets linked to renewable and clean energy sources.

Oceans and Seas, SIDS

83. We note that despite agreement to restore global fish stocks to sustainable levels by 2015, many stocks continue to be depleted unsustainably. We call upon States to re-commit to maintaining or restoring depleted fish stocks to sustainable levels and to further commit to implementing science based management plans to rebuild stocks by 2015.

Natural disasters

87. We reiterate the call for disaster risk reduction to continue to be addressed in the context of sustainable development and placed within the post-2015 development agenda. We call for increased coordination among [local](#), national, regional and international levels for [robust and sustainable management of environmental risks and emergencies](#), including [disaster prevention measures](#), improved forecasting and early warning systems, emergency responses, and early recovery. [We also call for closer coordination between disaster risk management and development efforts](#), including adoption of a post “Hyogo Framework” and its integration into development policy.”

Climate change

88. We reaffirm that climate change is one of the greatest challenge of our time and express our deep concern [that levels of greenhouse gas emissions continue to increase](#). We are also deeply concerned that developing countries are particularly vulnerable to and are experiencing increased negative impacts from climate change, which is severely threatening [human security, including food security](#) and efforts to eradicate poverty. [We call for an increased focus on those hardest hit by climate change, in particular where the very existence of populations are threatened, including](#) on small island developing states. We welcome the outcome COP17 at Durban and look forward to the urgent implementation of all the agreements reached.

89. We [encourage initiatives and partnerships at all scales, including local, national and international](#), to address the interrelationship among water, energy, food, [health, biodiversity](#) and climate change in order to achieve synergies as well as to minimize conflicts among policy objectives, being particularly sensitive to impacts on vulnerable populations.

Forests and biodiversity

90. We support policy frameworks and market instruments that effectively slow, halt and reverse deforestation and forest degradation and promote the sustainable use and management of forests, as well as their conservation and

restoration. We call for the urgent implementation of the “Non-Legally Binding Instrument on all Types of Forests (NLBI)”.

91. We welcome the Nagoya Protocol adopted at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity. We support mainstreaming of biodiversity and ecosystem services in policies and decision-making processes at international, regional and national levels, and encourage investments in natural capital through appropriate incentives and policies, which support a sustainable and equitable use of biological diversity and ecosystems.

Deleted: d

Chemicals and waste

96. We commend the increased coordination and cooperation among the Basel Convention, the Rotterdam Convention and the Stockholm Convention on Persistent Organic Pollutants, and call for public-private partnerships aiming to enhance capacity and engineering for environmentally sound waste management. We also note with concern the emerging challenges of electronic waste and plastics in the marine environment, which should be addressed inter alia through appropriate programmes and environmentally sound engineering for material and energy recovery.

B. Accelerating and measuring progress

109. We also propose that progress towards these Goals should be measured by appropriate indicators and evaluated by specific targets to be achieved possibly by 2030, and request the Secretary-General for proposals in this regard.

Comment [GG12]: In our view, this whole section needs significant improvement/strengthening the call for developing new (parameters and methodologies) measurements and integrated indicators, going beyond GDP..

110. We resolve to strengthen the capacity of all countries to collect and analyze data and information needed to support the monitoring of progress towards the Sustainable Development Goals, with due attention to the development of systematic long-term observations and socio-economic data collection. We request the Secretary-General, with the support of interested donors, the UN system, international organizations and other entities, to promote a global partnership in this regard.

Deleted: .

111. We also recognize the limitations of GDP as a measure of well-being. We agree to further develop and strengthen science-based indicators complementing GDP that integrate economic, social and environmental dimensions in a balanced manner. We request the Secretary-General to establish a process in consultation with the UN system and other relevant organizations.

Comment [GG13]: We fully support further development of INTEGRATED Indicators and the recommendation for the SG to establish a “process”.

C. Means of implementation

[Science and Technology]

118. We reaffirm the commitments related to science and technology contained in the Rio Declaration on Environment and Development, Agenda 21 and in the outcomes of other major United Nations Summits and Conferences.

118bis. We affirm that a strong science-base underlying integrated decision-making for sustainable development at all levels is of fundamental importance. All domains of science, engineering and technology should be involved as they have a fundamental role to play in developing systems of knowledge, defining targets, implementing solutions and monitoring for integrated social, economic and environmental challenges of sustainable development.

119. We recognize the importance of strengthening the scientific, **engineering**, technological and innovation capacities of countries to promote sustainable development.

120. We agree to strengthen international cooperation conducive to investment and technology transfer, development and diffusion.

120bis. We agree [to launch an inclusive process to establish] to support the establishment of a global mechanism for the sciences on sustainable development challenges, tasked to foster and coordinate international scientific collaboration (North-South, South-South and triangular cooperation), including to promote and coordinate integrated research, as well as capacity-building in developing countries. This should build on existing international scientific cooperation bodies and programmes from inside and outside the UN system.

Deleted:

120ter. We also call for significantly increased large- scale public and private investment at all levels in solution oriented science , clean technology, and innovation for a sustainable future. At the global level, the “mechanism for science on sustainable development should play a pivotal role of coordinating fund raising.

Capacity Building

123. We urge the participation and representation of scientists and engineers from developing countries in processes related to global environmental and sustainable development assessment to strengthen scientific and engineering capacities in these countries.

Trade

126. We support the eventual phase out of market distorting and environmentally harmful subsidies that impede the transition to sustainable development, including those on greenhouse gas emitter fuels, agriculture and fisheries, with safeguards to protect vulnerable groups.