United Nations
Climate Change Secretariat

CLIMATE ACTION NOW

SUMMARY FOR POLICYMAKERS 2018

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CONVENTION ON CLIMATE CHANGE

FOREWORD

The Paris Climate Change Agreement, the Marrakech Partnership for Global Climate Action and the Sustainable Development Goals together represent the enablers to take us on the path toward a more sustainable, resilient and low-emissions world to prevent our planet's temperature from reaching disastrous levels.

To create the change needed toward a more sustainable, resilient and low-emission future, it is critical that policies are put in place now so technologies can develop, mature, become commercialized and deployed at scale, and economic actors can move faster towards a low-emission and sustainable world.

For businesses, cities and organizations to do this, effective climate leadership is essential. The world's citizens can begin and continue to implement actions and demonstrate progress; however, a much greater scale and speed is now required. This 2018 Summary for Policymakers shows that policy solutions exist, but more are needed. The summary confronts the challenges that policymakers face, while providing examples from around the world that show how these challenges can be overcome.

Synergies need to happen such as technological innovation working together with new business models and finance mechanisms; businesses, stakeholders and governments must find opportunities to integrate each other into their processes; and everyone needs to start using the 'new oil', that of data & information, as the new power for future economies.

This is why the Paris Agreement includes an effective engine of cooperation and co-ordination across national and international efforts to raise the global climate response rapidly, linking economic activity, emissions and the impacts of climate change in a coherent system of action.

The critical temperature goal—limiting the global rise as close as possible to 1.5°C and well below 2°C—reflects not just a scientific reality but also a vision of the future we want, because it compels us to rethink the way we produce, use and consume energy, how we manufacture and build, and how we manage our land and ecosystems.

The clear message in this summary is that cooperation, partnerships and integration across local, regional, national and international climate policy is critical to set up frameworks for businesses and stakeholders to be inspired by. National and international policy needs to set the direction and tone of action.

My thanks go to the Marrakech Partnership for Global Climate Action for ensuring that this essential area of effective policymaking is kept as the main focus of all nations heading in to COP24 in Katowice, Poland.

I am sure it will help Poland, as President of this year's UN Climate Change Conference, in its objective to lead the negotiations towards another significant milestone and to build a grand coalition of climate actors to fulfil the goals of the Paris Agreement.

Ms. Patricia Espinosa,
Executive Secretary of the United Nations Framework Convention on Climate Change

BY THE HIGH-LEVEL CHAMPIONS
H.E. MR. INIA SERUIRATU
AND H.E. MR. TOMASZ CHRUSZCZOW

FOREWORD

This year has been the year of the Talanoa Dialogue. The Talanoa dialogue which took place during the climate conference in Bonn, May 2018, strengthened the process of increased co-operation and integration between Parties and stakeholders. It demonstrated the positive will for inclusivity through the exchange of ideas in support of the global effort to increase ambition to achieve the long-term goals of the Paris Agreement

This inclusive, constructive and facilitative process was the first of its kind and served the purpose of building a clearer picture of where we are and where we need to go. This Summary for Policymakers (SPM) is another such tool along that path toward spurring climate action and exploring policy options that governments can adopt in specific areas to drive and enhance climate action.

We have taken efforts to promote regional technical expert meetings in the Global South in recognition of the need to boost across these geographies. Drawing from thematic and regional meetings and recommendations emanating from the technical examination process for consideration by ministers, the SPM showcases key areas of synergies and co-operation. In particular, it presents opportunities in the areas of waste-to-energy, the circular economy and planning for adaptation to the adverse impacts of climate change for vulnerable communities and ecosystems. The technical examination process under the United Nations Framework Convention on Climate Change, set in the broader context, is an important platform for Parties to explore policy options that governments can adopt in specific areas to enhance climate action.

The Marrakech Partnership for Global Climate Action is encouraging activities that galvanize immediate climate actions in the period between now and 2020. These activities support the realization and overachievement of Nationally Determined Contributions under the Paris Climate Change Agreement and spur new climate actions in areas of untapped mitigation and adaptation potential. This would be necessary to achieve the more ambitious target of containing global temperature increase to within 1.5°C. The science is telling us that the impacts from a 2°C increase compared to a 1.5°C increase will be significant and this difference has severe implications on the lives and sustainable development of our vulnerable developing regions.

We look forward to the 2018 High-Level Event in Poland, to further strengthen engagement on the implementation of adaptation and mitigation policy options and actions and to learn about new or strengthened voluntary efforts, initiatives and coalitions. We encourage you all to collaboratively increase our pre-2020 ambition and foster the nexus between climate action, disaster risk management and the sustainable development goals. By doing this we will be laying a strong foundation for more ambitious post-2020 action and will help put us on a pathway towards reaching a net-zero emissions and resilient society by this mid-century.

We would like to recognize the many experts from various organizations, different sectors and from regions around the world who openly shared their experiences, technologies and innovative approaches in the various technical meetings and events. Your contributions have resulted in this rich source of information and we hope that the messages in this Summary for Policymakers will spur Parties into seeking out partnerships with the various non-Party stakeholders all for the purpose of accelerating climate action and increasing ambition.

H.E. Mr. Inia Seruiratu
Fiji Minister for Agriculture, Rural & Maritime Development, and National Disaster Management

H.E. Mr. Tomasz Chruszczow
Special Envoy for Climate Change from the Ministry of Environment in Poland

PURPOSE OF THE SUMMARY FOR POLICYMAKERS

This Summary for Policymakers is mandated by the Paris Agreement to provide Parties with information on specific policies, practices and actions representing best practices and with the potential to be scalable and replicable.

Under the UNFCCC's "technical examination process" (TEP) begun in 2014, Technical Expert Meetings (TEMs) on various themes are held annually during the climate change conferences in Bonn. They highlight for policymakers the "what, why and how" of pre-2020 climate action. The TEMs give Party and non-Party stakeholders a recurring venue to identify successful areas of innovation in: technology, business models and financial mechanisms. In 2018, the Talanoa Dialogue also brought forward many examples of innovation in these and other areas, such as policy developments

Starting from 2018, regional TEMs were held in Africa, Latin America and Caribbean and Asia-Pacific regions to complement the TEM sessions held in Bonn. These meetings also inform this Summary for Policymakers.

THE DOCUMENT:

Showcases good practices and policies that integrate adaptation and mitigation actions with the principles, priorities and objectives of the Sendai Framework, the United Nations Sustainable Development Goals and other applicable national and international frameworks.

Presents technologies and actions that can be scaled and replicated by Parties and other stakeholders to improve industrial energy efficiency, waste-to-energy and the circular economy and plan for adaptation to the adverse impacts of climate change for vulnerable groups, communities and ecosystems.

Identifies common challenges to mitigation and adaptation action confronted by Parties, subnational actors, civil society organizations and other stakeholders.

Highlights actions policymakers can take to increase the rate of and ambition in implementation of adaptation and mitigation actions.

KEY MESSAGES TO POLICYMAKERS

TECHNICAL INNOVATION NEEDS TO WORK TOGETHER WITH INNOVATIVE BUSINESS MODELS AND FINANCING MECHANISMS AND IN THE RIGHT POLICY FRAMEWORK

- Technical innovation has an important contribution to make to adaptation to climate change and to the transformational changes needed in material and energy efficiency.
- Innovative business models are already being implemented that give value to materials across the life cycle of products and improve productivity of businesses. These business models need to be expanded and to be supported by the right policy framework.
- Public finance can provide the right conditions for private financing to reach the scale needed by, for example, reducing investment risk.
- Governments can help scale greenhouse gas mitigation by introducing a mix of policy instruments to support circular economy strategies and technologies, ensuring predictability for investors and coherent policies across sectors.
- Integrating gender into adaptation planning must include not only consultative processes but also mechanisms that ensure equal access to resources, such as finance.

OPPORTUNITIES FOR INTEGRATION EXIST AT ALL LEVELS

- New business cases can be identified by involving a range of stakeholders and looking beyond traditional sector boundaries.
- Parties are increasingly recognizing that involving local communities and vulnerable groups into adaptation planning brings benefits in terms of enhanced understanding of local conditions and increased buy in to any actions.
- The involvement of local stakeholders in planning and implementing technology transfer helps tailor to local conditions and build acceptance. Accompanying technology transfer with capacity building is important for sustainability of solutions and realizing wider social benefits.
- Implementing a circular economy will bring huge benefits in material and energy efficiency and reduce damaging health, social and environmental impacts along the value chain. Engagement of the consumer in the process will be crucial to achieving the behavioral changes that will also be needed.
- Nature based solutions and eco-system based adaptation are both built upon already existing natural systems. This can bring multiple benefits in terms of adaptation and mitigation and protecting human and natural systems.

DATA AND INFORMATION ARE REQUIRED TO IMPLEMENT ACTION

- Data and information about the impacts of climate change and the options for responding to those impacts are not widely available to investors, leading to investment decisions that are not optimal for the long term.
- To scale up mitigation from implementation of the circular economy and waste-to-energy, knowledge on waste quantities and characterization needs to be improved, as well as metrics to improve management and increase transfer of technology.
- The scientific community has a wealth of information that needs to be shared with Parties and non-Party stakeholders in a way that can be easily understood and acted upon quickly.
- Optimization of material flows in value chains will be greatly facilitated with an increasing use of digitization and real time tracking.

BENEFITS OF INTEGRATED PLANNING AND ACTION ON CLIMATE CHANGE

Integration of different actors and across regions bring benefits in enhancing action and enabling replication of best practices and proven policy approaches. It enables sharing of knowledge and transfer of technologies and brings efficiencies.

FOR IMPLEMENTATION OF CIRCULAR ECONOMIES AND INDUSTRIAL WASTE REUSE AND PREVENTION SOLUTIONS

In industry, the efficient use of energy and materials is essential to transform to a low carbon pathway. Circular economy principles aim to transform the business economy so that generation of waste is minimized and the value of products, materials and resources is maintained as long as possible. Deloitte estimated that circular economy measures have the potential to cut by 33% the emissions related to production of goods consumed in the EU.[1] A recent study by Climate KIC estimate that globally around 50% of the emissions from steel, aluminum, plastics and cement production can be mitigated through circular economy solutions.[2]

The transition to a circular economy will require rethinking options at every stage: extraction, production, consumption and waste management. The TEMs in 2018 examined two mitigation strategies in particular, waste-to-energy and supply chain redesign including industrial waste reuse and prevention.

Waste-to-energy is a process of generating energy in the form of electricity and/or heat from the primary treatment of waste. A number of new technologies, such as anaerobic digestion, pyrolysis and gasification are being deployed, which as well as producing energy provide the potential to recover useful products from the waste streams. Supply chain redesign refers to strategies that maximize reuse and recovery of materials and minimize waste. Strategies and solutions include improved demand forecasting, substitution of materials and products with more durable ones and improving use of secondary materials.

Both waste-to-energy and the circular economy bring other benefits as well as mitigation. Lowering pollution by moving from disposal to energy recovery brings clear health and environmental benefits. By reducing extraction of raw materials, the impacts of mining on humans and ecosystems are also reduced. An example of these multiple benefits is demonstrated in a technology transfer from Switzerland to Vietnam of a pyrolysis technology to use in coffee farming. Coffee husks are pyrolyzed and the heat is used to dry coffee cherries and the bi-product (a bio-char) is used to enhance soil reducing fertilizer use and irrigation.[3]

1 Eamonn Kelly and Kelly Marchese, 2016. Supply chains and value webs

2 Climate-KIC, 2018. Material Economics, The Circular Economy – A Powerful Force for Mitigation http://www.climate-kic.org/in-detail/transformative-innovation-for-prosperous-and-low-carbon-industry/

3 FCCC/TP/2018/2 "Mitigation benefits and co-benefits of policies, practices and actions for enhancing mitigation ambition: implementation of a circular economy with a focus on waste-to-energy technologies and industrial waste prevention and reuse solutions". Text box 2, page 10.

The challenge of transitioning to a circular economy is the need for an integrated view of the whole value chain. Too often each element of the supply chain has been viewed as separate and the incentives are not in place to encourage circular strategies. To be successful a range of stakeholders need to work together within the right incentive structure. Governments can set policies that encourage a circular approach. For example, France's Circular Economy Roadmap includes policy action to introduce tax breaks for companies in the fashion industry that re-use and re-cycle unsold products.[4] Portugal has allocated financing through the Environmental Funding Program for circular economy projects, with a budget in 2018 of 5 million euro.[5] Governments can also remove policies that prevent re-use of 'waste' materials easily. Collaboration, awareness raising and participation are seen in many policy packages as important for success of the circular economy. This is the case for Scotland's "Making things last: A strategy towards circular economy" which provides financial support to businesses and front runners and disseminates good practice.

Governments have supported waste-to-energy in several ways: incentives for investments in waste-to-energy plants; disincentives, such as landfill tax, to disposal as an alternative and through energy sector incentives favouring renewables. The European Renewable Directive for example includes biomass, landfill gas, sewage treatment plant gases and biogases as non-fossil sources.

New partnerships are being formed to implement circular economy principles. Arvind implemented a public private partnership water recycling program at Ahmedabad, treating waste water from the municipality for use in production. Similarly, the twin issues of increasing costs to dispose of municipal wastes and the cost of fuels for cement production has led to an increase in co-processing of industrial and municipal waste in Morocco and China.[6] At the domestic level there are several programmes for the promotion of biogas plants, with the biogas being used for cooking or other domestic uses. Nepal has more than 330,000 such plants.[7] Integration across supply chains also brings changes in business models. Suez has moved from a traditional waste collector and disposer to a solutions provider, with key performance indicators related to resource efficiency and waste prevention.[8]

Improved knowledge sharing, tailored to local conditions, helps enable replication of successful examples of material and energy efficiency. In waste-to-energy for example, different feedstocks, climate and scale are all important considerations in determining the success of different technologies. Smaller economies, such as Small Island Developing States, face challenges as most waste-to-energy technologies are focused on larger scale. At the same time, there is still the need and scope for innovation on material efficiency. Some innovation concentrates on product/process design to avoid losses in the supply chain and enable recycling. Other innovation radically changes the way we do things or the materials we use. Bamboo pipelines are being produced in China to replace the use of steel, concrete or plastic pipes.[9]

4 See https://www.ecotextile.com/2018042523440/fashion-retail-news/france-proposes-law-to-tackle-unsold-clothing-problem.html and https://www.businessoffashion.com/articles/news-bites/what-should-french-fashion-do-with-its-unsold-clothing.
5 FCCC/TP/2018/2 Text box 7, page 21.
6 FCCC/TP/2018/2 Text box 3, page 13.
7 Nicolae Scarlat, Jean-Francois Dallemand, Fernando Fahl, March 2018 Biogas: developments and perspectives in Europe
8 FCCC/TP/2018/2 Text box 4, page 19.
9 FCCC/TP/2018/2 Text box 5, page 19.

FOR ADAPTATION PLANNING FOR VULNERABLE GROUPS, COMMUNITIES AND ECOSYSTEMS

Climate change adaptation responds to the goals and objectives of the Paris Agreement, the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals. Engagement of vulnerable groups is crucial to effective adaptation planning. In many regions, women and indigenous groups lack the agency and resources to adapt. In addition, these groups are often extremely vulnerable to climate change impacts.

Although vulnerable to the impacts of climate change, women and indigenous groups have the potential to strengthen local adaptation actions. For example, in the Pacific women are often responsible for water collection giving them first-hand knowledge of the local water systems. Indigenous people are also important to ecosystem-based adaptation to the impacts of climate change in agriculture, by bringing local knowledge on successful techniques to preserve land and water. In addition to bringing knowledge, participatory planning can also bring benefits in terms of behavioral change in individuals and communities. However, it also needs to be carried out in a way that is culturally-sensitive and gives every group a chance to be heard. The participatory planning process in 20 districts of Botswana successfully allowed district specific issues to be discussed in the context of the national level framework for adaptation.[10]

The benefits of local community involvement in adaptation planning are strengthened even further by integration between the local and the national level. In the Philippines, there is a clear mandate for creating climate change actions plans for a government agency but also strong collaboration between that agency and local government. Adaptation planning is also strengthened by engagement of businesses, but in many countries this involvement is limited for a number of reasons including the perceived lack of a clear business cases in many instances.

To step up adaptation, more co-operation on capacity building and on providing scalable, accessible and affordable technologies is needed. Such co-operation can clearly bring benefits. Engineers and governments working together on beach erosion on the West Coast of Jamaica have been able to achieve a substantial reduction in that erosion with a solution that breaks water along the shoreline.[11]

Finance is a key part in realizing the actions needed to develop and implement adaptation plans. The GCF offers developing countries up to 3 million USD for the formulation of national adaptation plans. The objective of these grants is to catalyze larger investments from other public and private sector investors. Antigua and Barbuda are using GCF funds in part for projects which plan to mainstream and integrate climate change into the financial sector through insurance, financial preparedness plans and more.[12] However, there still remains a gap in many financial institutions on their understanding of the impacts of climate change on private sector investments and the need to shift investments to more resilient actions and assets. In addition, the business case for some adaptation actions is weak and climate finance can play a part in covering extra costs for longer term gains.

10 FCCC/TP/2018/3: "Opportunities and options for adaptation planning for vulnerable groups, communities and ecosystems"
11 FCCC/TP/2018/3
12 FCCC/TP/2018/3

OVERCOMING OBSTACLES TO ACTION

This section summarizes the challenges to action leading to low carbon and climate-resilient development and options to overcome them.

1. LACK OF CO-ORDINATION AND COHERENCE

- Involve women and vulnerable communities in adaptation planning in an inclusive participatory approach.
- Accompany technology transfer with capacity building and tailoring to local context.
- Develop inclusive business models to protect livelihood of vulnerable communities.
- Collaborate to design innovative products, processes and business models to increase energy and material efficiency and improve resilience.
- Increase security of feedstock through cleaner waste streams including a good collection system.
- Look for synergies and symbiosis across sectors to provide incentives to implement re-use, recycling or waste-to-energy.

For example, a UNIDO industrial waste-to-energy initiative in Lao PDR includes technology demonstration based on technologies that are common in Thailand and Vietnam.[13] The demonstrations are set up to involve local stakeholders and to highlight the economic, social and environmental co-benefits. This South-South co-operation helps ensure suitability of the technology to the country context.

2. POLICY FRAMEWORKS NOT OPTIMIZED

- Introduce a mix of policy instruments to support circular economy strategies and waste-to-energy technologies and screen all policies to ensure there are no disincentives.
- Integrate national and local approaches to adaptation.
- Plan for the impact on the work force of new business models and enable capacity building and retraining.
- Encourage investment in research and development for innovative solutions.
- Create demand side efficiency to change consumption patterns.

For example, in many countries waste pickers rely on existing disposal practices for their income. Recognizing this at an early stage and investing in capacity building to enable them to work on upstream recycling will reduce potentially negative social impacts.[14]

13 Brahmanand Mohanty, UNIDO, 2018, available at https://unfccc.int/playground-20/level-2/level-3/tems-m-event-2018
14 FCCC/TP/2018/2 Page 35.

3. INFORMATION AND DATA TOO LIMITED OR NOT REACHING THE RIGHT ACTORS

- Increase communication on the urgency of adaptation and on the solutions available.
- Disseminate case study based learning and knowledge.
- Improve data on waste quantities and characterization.
- Translate scientific information to make it actionable

For example, the Climate Technology Center and Network (CTCN) is working with Jakarta to implement a hydrodynamic model. This hydrodynamic model will help Jakarta to evaluate different engineering interventions to reduce flood risk and protect food and water supply during natural disasters. At the same time, they are holding workshops that help local inhabitants to understand how the model functions.[15]

4. FINANCE NOT AVAILABLE OR NOT ACCESSIBLE

- Develop more financing instruments that look to long-term rather than short-term gains.
- Invest in pilot and demonstration projects.
- Use public funding to leverage private sector financing.
- Develop innovative financing for small scale decentralized investments.
- Raise awareness in the financial sector on the risks and opportunities of climate change and of the circular economy.

For example, the Biovalor project in Uruguay responds to the need for proper treatment of waste from slaughterhouses and feedlots by supporting investments in anaerobic digestion. A condition of the project is that the beneficiaries must provide co-financing.[16]

15 FCCC/TP/2018/3
16 FCCC/TP/2018/2 Text box 2, page 10.

RESOURCES, SUPPORT AND OPPORTUNITIES

This section summarizes resources, support and opportunities for action towards low carbon and climate-resilient development, as well as technologies that can be scaled up and replicated.

PLAN COLLABORATIVELY, BRING TOGETHER RELEVANT ACTORS, ENCOURAGE COHERENCE OF ACTIONS AND MAKE EFFICIENT USE OF AVAILABLE CAPACITIES

- Create a participatory planning process for adaptation in which vulnerable groups and communities can contribute fully.
- Create an enabling environment in which stakeholders from different sectors can work together to identify synergies to build and strengthen action.
- Build cross-disciplinary links and partnerships to bring new ideas and solutions.

PURSUE LONG-TERM PLANNING FOR SOLUTIONS THAT IMPROVE RESILIENCE AND BRING ENERGY AND MATERIAL EFFICIENCY

- Invest in the development and implementation of innovative technologies and solutions.
- Set the incentives to design products taking a life-cycle view.
- Build capacity for new skills in changing industries and emerging new sectors.
- Harness the power of consumers and local communities to effect the changes in behavior that will be needed over the long term.

USE EXISTING TECHNOLOGIES TO THE FULL

- Make greater use of information technology to track and optimize material flows.
- Design and fund technology transfer activities so that they are tailored to local conditions and include capacity building to make them sustainable.
- Align financing mechanisms and policy incentives to ensure technology implementation, taking into account local conditions.

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