

# Draft 2

December 12, 2017

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In [1]: import matplotlib.pyplot as plt
        %matplotlib inline
        plt.style.use('ggplot')
        from datascience import *
        import numpy as np
        from scipy.spatial.distance import cosine
        import gensim
        import nltk
        from string import punctuation
```

Using TensorFlow backend.

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In [2]: UN_draft2 = """A. DRAFT AGREEMENT
[The Parties to this Agreement,\
Pp1 Being Parties to the United Nations Framework Convention on Climate Change, herein
Convention,\
Pp2 In pursuit of the objective of the Convention, and being guided by its principles,
and common but differentiated responsibilities and respective capabilities, in the light
circumstances,2\
Pp3 Pursuant to the Durban Platform for Enhanced Action established by decision 1/CP.1
Parties to the Convention at its seventeenth session,\
Pp4 Recognizing the intrinsic relationship between climate change, poverty eradication
sustainable development, and reaffirming that responses to climate change should aim to
and concerns arising from the adverse impacts of response measures,\
Pp5 Taking account of the specific needs of developing country Parties, and especially
vulnerable to climate-related events,\
Pp6 Also taking account of the specific needs and special situations of the least devel
set out in Article 4, paragraph 9, of the Convention, and the specific circumstances of
States (SIDS),\
Pp7 Emphasizing the need to respond to the urgent threat of climate change on the basis
scientific knowledge, in particular, the assessment reports of the Intergovernmental Pa
Pp8 [Noting that the largest share of historical global emissions of greenhouse gases l
countries, that per capita emissions in developing countries are still relatively low a
emissions originating in developing countries will grow to meet their social and devel
Pp9 [Recognizing that Parties should take action to address climate change in accordanc
and emission trends, which will continue to evolve post-2020, ]\
Pp10 [Emphasizing the importance of Parties promoting, protecting and respecting all hu
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and the rights of indigenous peoples, migrants, children, persons with disabilities and other vulnerable groups, and the right to development, in accordance with their respective responsibilities, and promoting gender equality and the empowerment of women, when taking action to address climate change;\

Pp11 Noting the needs and integrity of terrestrial ecosystems, oceans and Mother Earth;\

Taking into account the imperatives of a just transition of the workforce and the creation of decent and quality jobs in accordance with nationally defined development priorities,;\

Pp13 Recognizing the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change,;\

Pp14 Also recognizing the importance of the conservation and enhancement, as appropriate, of ecosystems and biodiversity, including greenhouse gases referred to in Article 4, paragraph 1(d), of the Convention, including traditional knowledge,;\

Pp15 Affirming the importance of education, training, public awareness, public participation, access to information and cooperation at all levels on the matters addressed in this Agreement, and the importance of engagements of all levels of government and various actors, in accordance with the national legislations of Parties, in addressing climate change,;\

Have agreed as follows:\

Article 1 (DEFINITIONS)\

For the purposes of this Agreement, the definitions contained in Article 1 of the Convention shall apply;\

Article 2 (PURPOSE)\

1. The purpose of this Agreement is to [enhance the implementation of the Convention and to further implement the objective of the Convention set out in its Article 2 [through enhanced cooperation and support]] so as:\

(a) To hold the increase in the global average temperature to\

Option 1: below 2 °C above pre-industrial levels,;\

Option 2: well below 2°C above pre-industrial levels [and to [rapidly] scale up global efforts to limit the temperature increase to below 1.5 °C] [,while recognizing that in some regions and vulnerable sectors high risks are projected even for warming above 1.5 °C],;\

Option 3: below 1.5°C above pre-industrial levels,;\

taking into account the best available science, equity, sustainable development, the need to protect ecosystems, food security and the availability of means of implementation, by ensuring deep reductions in greenhouse gas [net] emissions;\

(b) To increase their ability to adapt to the adverse impacts of climate change [and to reduce the impacts of the implementation of response measures and to loss and damage];;\

(c) To pursue sustainable development in a manner that fosters climate resilience and reduces greenhouse gas emissions, and that does not threaten food production and distribution;\

(d) To make finance flows consistent with a pathway towards low-emission and climate-resilient sustainable development, in the context of sustainable development priorities and efforts to eradicate poverty;\

2. [This Agreement will be implemented on the basis of equity and in accordance with the common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, on the basis of respect for human rights.]\

Article 2bis (GENERAL)\

Option 1:\

1. [All Parties shall undertake efforts defined in Articles 3, 4, 6, 7, 8 and 9 towards achieving the purpose of this Agreement as set out in its Article 2, and communicate such efforts in accordance with the provisions of this Agreement. Over time such efforts will represent a progression taking into account Parties' national circumstances and development stages while recognizing that the extent of the efforts to be undertaken by each country Parties will depend on the extent of support they receive.]\

2. Subsequent efforts will be informed by the results of the global stocktake as defined in Article 13;\

a progression taking into account Parties common but differentiated responsibilities and in light of different national circumstances.]\

Option 2:\

1. [All Parties [shall] regularly prepare, communicate [and implement] [intended] national [contributions][components] [on [mitigation] and adaptation] [undertakings in adaptation of implementation]3\

[towards achieving the [purpose of this Agreement as set out in Article 2 of the Convention][objective of the Convention as set out in its Article 2],] [in accordance with Article 2] in accordance with the provisions of this Agreement, including the specific provisions relating to adaptation and means of implementation.]\

2. Each Party's [intended] nationally determined contribution will represent a progression in light of Parties' common but differentiated responsibilities and commitments under the Convention.\

3. The extent to which developing country Parties will effectively implement this Agreement shall be determined by the effective implementation by developed country Parties of their commitments on the provision of financial resources, technology development and transfer and capacity-building.\

4. Successive [intended] nationally determined contributions will be [informed by the results of the global stocktake as defined in Article 10 of the Convention] and communicated before the start of the previous [intended] nationally determined contribution by the Party concerned.]\

Article 3 (MITIGATION)\

{Collective long-term goal}\

1. Option 1: Parties collectively aim to reach the global temperature goal referred to in Article 2, paragraph 1, by limiting the global average temperature increase to 1.5°C above pre-industrial levels, recognizing that peaking of global greenhouse gas emissions as soon as possible, recognizing that peaking for developed countries will be longer for developing countries; rapid reduction of 43 per cent [7095 per cent] below 2010 levels by 2050; toward achieving net zero greenhouse gas emissions [by the end][after the middle] of the century] informed by best available science, on the basis of equity and in the context of sustainable development and poverty eradication.\

Option 2: Parties collectively aim to reach the global temperature goal referred to in Article 2, paragraph 1, by limiting the global average temperature increase to 1.5°C above pre-industrial levels, recognizing that peaking of global greenhouse gas emissions as soon as possible, recognizing that peaking for developed countries will be longer for developing countries; rapid reduction of 43 per cent [7095 per cent] below 2010 levels by 2050; toward achieving net zero greenhouse gas emissions [by the end][after the middle] of the century] informed by best available science, on the basis of equity and in the context of sustainable development and poverty eradication.\

{Individual efforts}\

2. Each Party shall regularly prepare, communicate [and maintain] [successive] ###4\ and [shall][should][other]\

[take appropriate domestic measures] [have in place][identify and] [pursue] [implement] [national policies] [nationally determined] policies or other measures] [designed to] [implement][achieve] [the implementation of] its ###].\

{Differentiated efforts}\

Option 1:\

3. In accordance with Article 4, paragraph 2, of the Convention, developed country Parties included in Annex I shall undertake quantified economy-wide absolute emission reduction commitments/targets, which are comparable, measurable, reportable and verifiable, cover all sectors and are implemented domestically without any conditions.\

3bis. In accordance with Article 4, paragraphs 1, 3, 4, 5 and 7, of the Convention, developing country Parties shall undertake diversified enhanced mitigation actions/efforts in a measurable, reportable, verifiable and transparent manner, in the context of sustainable development and supported and enabled by the provision of adequate financial resources, technology and capacity-building by developed country Parties.\

Option 2:\

3. Each Party that has previously communicated absolute economy wide emissions reduction

should continue to do so and all Parties should aim to do so over time.\

3bis. Developed country Parties should continue to take the lead.\

4. LDCs [and SIDS][and African states] may communicate their ### at their discretion, including their strategies, plans and actions for low greenhouse gas development, reflecting their specific circumstances.\

5. Option 1: Developed country Parties and other developed Parties included in Annex I [and other Parties with the capacity to do so] shall provide new and additional financial resources and capacity-building to meet the agreed full costs incurred by developing country Parties in fulfilling their obligations under this Article.\

Option 2: Developing country Parties7\

are eligible for support in the implementation of this Article.\

Option 3: The extent to which developing country Parties will effectively implement their commitments will depend on the effective implementation by developed country Parties of their commitments to provide financial resources, transfer of technology and capacity-building.\

{Progression/ambition}\

6. Each Party's successive ### [shall][should][will] represent a progression beyond the previous one, which shall reflect its highest possible ambition [based on common but differentiated responsibilities and respective capabilities, in light of different national circumstances].\

{Information}\

7. [In communicating their ###, all Parties shall provide the information necessary for a full understanding in accordance with decision 1/CP.21 and any subsequent decisions of the Conference of the Parties]\

{Timing}\

8. Parties shall communicate an ### every five years in accordance with decisions of the Conference of the Parties, taking into account the outcomes of the global stock take referred to in Article 10.\

9. The CMA shall decide on common timeframes for ####, no later than its [X] session.\

{Adjustments}\

10. A Party may at any time adjust its existing ### with a view to enhancing its level of ambition, including with the simplified adjustment procedure referred to in Article 19, paragraph 3).\

{Housing}\

11. The ### communicated by Parties shall be recorded [in an online registry maintained by the secretariat or in Annex [X] to this Agreement].\

{Accounting}\

12. Parties shall [track progress towards][account for] their ###. In [tracking progress towards] their ###, Parties shall promote environmental integrity, transparency, accuracy, completeness, consistency, and ensure the avoidance of double counting, in accordance with guidance and methods developed by the CMA.\

{Methods and guidance}\

13. In the context of their ###, when recognizing and implementing mitigation actions with respect to greenhouse gas emissions and removals, Parties [may draw from and build on] [shall take into account] the best available science, methods and guidance, under the Convention and from the IPCC as adopted by the COP.\

{Response measures}\

[Preamble: Parties acknowledge the importance of cooperation, including around economic diversification, to reduce the adverse impacts of the implementation of response measures.]\

14. [Parties shall give full consideration to what actions are necessary under this Agreement to address the needs and concerns of developing country Parties arising from the impact of the implementation of response measures, including in terms of economic diversification, and taking into consideration that economic and social and economic development are the first and overriding priorities of developing countries]\

15. Parties agree to enhance actions under this Agreement, including through strengthening existing arrangements, and to adopt modalities and procedures for enhancing those arrangements.\

shall establish a cooperative mechanism to address the adverse impacts of the implementation of measures on developing country Parties, as included in decision -/CP.21.]\

Parties, including regional economic integration organisations and their member States, shall agree to [implement their ###s jointly] [act under Article 3, paragraph 2, jointly] in accordance with the terms of the agreement, including the emission level allocated to each Party with respect to each period, at the time when they communicate their ###s. The secretariat shall in turn inform the Parties signatories to the Convention of the terms of this Agreement.\

17. [In the event of failure by the] [Each] Part[y] [ies] to such an agreement [to achieve its commitment as a party to that agreement] shall be responsible for its emission level as set out in that agreement and in paragraph [14] above and Articles [9] and [11].\

18. If Parties [implementing their ###s jointly] [acting jointly] do so in the framework of, and together with, a regional economic integration organization which is itself a Party to this Agreement, or a regional economic integration organization individually, and together with the regional economic integration organization shall[, in the event of failure to achieve the common ###s,] be responsible for its emission level set out in the agreement notified under paragraph (1) in accordance with paragraph [14] above and Articles [9] and [11].\

19. If Parties [implementing] [acting] jointly do so in the framework of, and together with, a regional economic integration organization, any alteration in the composition of the organization shall not affect the agreement. The agreement shall only apply for the purposes of those ###s that are communicated subsequent to the communication of the {Cooperative approaches}\

20. [Parties shall, where engaging on a voluntary basis in cooperative approaches that contribute to the achievement of internationally transferred mitigation outcomes towards ###, promote sustainable development, enhance environmental integrity and apply robust accounting to ensure, inter alia, the avoidance of double counting in accordance with guidance adopted by the CMA.]\

{Long-term strategies}\

21. All Parties should voluntarily formulate and communicate long-term low-emission development strategies [Article 3 bis] (REDD-PLUS)\

1. Parties are encouraged to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases in accordance with Article 4 paragraph 1(d) of the Convention.\

2. Parties are encouraged to incentivize, [including by scaling up resources] the reduction of greenhouse gas emissions from deforestation and forest degradation and to promote the conservation and sustainable management of forests, including enhancement of forest carbon stocks in developing countries, while enhancing the non-carbon benefits of forests. Parties shall support alternative policy approaches, such as joint mitigation and adaption approaches, to achieve sustainable management of forests, including alleviating poverty and building ecosystems resilience in accordance with previous COP decisions related to forests.\

[Article 3 ter] (MECHANISM TO SUPPORT SUSTAINABLE DEVELOPMENT)\

{Proposed Mechanism 1}\

1. [A mechanism to support sustainable development [in developing country Parties] is hereby established. The authority and guidance of the CMA, shall be supervised by a body designated by the Parties.]\

(a) Promote sustainable development [in developing country Parties];\

(b) Incentivise and facilitate participation in mitigation action by public and private entities, taking into account the responsibility of a Party;\

(c) Enhance mitigation ambition by [developing country] Parties [, by incentivising support for climate action, beyond their ###];\

(d) Deliver, where desired by participating Parties, a net decrease in, or avoidance of, greenhouse gas emissions;\

(e) Assist Parties [with a ### reflecting an absolute target in relation to a base year] to achieve their targets through the use of mitigation outcomes from mitigation activities [in developing countries];\

(f) Ensure environmental integrity, including by ensuring that such mitigation shall not result in any net increase in greenhouse gas emissions;\

once, in accordance with guidance adopted by the CMA pursuant to Article [3, paragraph 2. [The CMA shall ensure that a share of the proceeds from activities under the mechanism shall be used to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.]\

3. [The CMA shall adopt modalities and procedures for this mechanism at its first session.]\

{Proposed Mechanism 2}

1. [A mechanism is hereby established to support holistic and integrated approaches to sustainable development, in harmony with nature, to be available to assist [developing country] Parties in fulfilling their obligations in a balanced manner, mitigation, adaptation, provision of finance, technology transfer and capacity building. The mechanism shall be under the authority and guidance of the CMA, shall be supervised by the CMA, and shall aim to:]\

- (a) Enhance mitigation and adaptation ambition and the provision or mobilization of public and private finance, technology transfer and capacity building, in an integrated manner for climate action;]\
- (b) Enhance non-market-based approaches and enable participation in joint cost-effective adaptation actions by public and private entities acting under the responsibility of a government;]\
- (c) Support the implementation of the joint mitigation and adaptation approach for the sustainable management of forests as an alternative policy approach to results-based payments;]\
- (d) Fully respect mitigation contributions of participating Parties to ensure that the integrity of the climate system is not undermined.]\

2. The CMA shall adopt modalities and procedures for the mechanism at its first session.]\

Article 4 (ADAPTATION)\

1. Parties hereby establish the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, [in accordance with the objective, principles and provisions of the Convention, including common but differentiated responsibilities and respective capabilities,] with a view to achieving sustainable development [and ensuring adaptation in the context of the goal of holding the increase in global average temperature below [2 degrees C][[2 or] 1.5 degrees C referred to in Article 2] and to ensuring that adaptation does not undermine sustainable development.]\

2. Parties recognize that adaptation is a global challenge faced by all with local, sub-regional, regional and international dimensions, and that it is a key component of and contribution to the long-term sustainable development and climate change to protect people, livelihoods and ecosystems, taking into account the needs of those developing countries that are particularly vulnerable.]\

3. Adaptation efforts of developing countries shall be recognized, in accordance with the Convention, by the CMA at its first session.]\

4. Parties recognize the need for adaptation regardless of the level of mitigation reached and that greater adaptation can reduce the need for additional adaptation efforts, [and] that greater adaptation can reduce adaptation costs[ and that greater rates and magnitude of climate change increase the risk of exceeding adaptation limits].]\

5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive and people-centred, fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge and local knowledge systems, with a view to integrating adaptation into relevant sectoral and environmental policies and actions, where appropriate.]\

6. Parties recognize the importance of support and international cooperation for adaptation, including the importance of taking into account the needs of those developing countries that are particularly vulnerable, [and, recognizing the particular vulnerabilities of the least developed countries (LDCs) and small island developing States (SIDS)].]\

7. Parties should strengthen their cooperation for enhancing action on adaptation, taking into account the Adaptation Framework, including with regard to:]\

- (a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, on the following:]\



relate to the science, planning, policies and implementation of adaptation actions;\

(b) Strengthening institutional arrangements, including those under the Convention, to facilitate the exchange of relevant information and knowledge and the provision of technical support and guidance;\

(c) Strengthening scientific knowledge on climate, including research, systematic observation, monitoring, early warning systems, in a manner that informs climate services and support;\

(d) Assisting developing country Parties [[and other countries] in need] to identify existing and emerging good practices, adaptation needs, priorities, support provided and received for adaptation actions, and challenges and gaps, in a manner consistent with encouraging good practices;\

(e) Improving the effectiveness and durability of adaptation actions.\

8. Encourages United Nations specialized organizations and agencies to support the effective implementation of the actions referred to in paragraph 7 of this Article, taking into account the provisions of this Article.\

9. Each Party shall, as appropriate, engage in the implementation of adaptation planning and action, including the development or enhancement of relevant plans, policies and/or contributions;\

(a) Implementation of adaptation actions, undertakings and/or efforts;\

(b) The process to formulate and implement national adaptation plans;\

(c) Assessment of climate change impacts and vulnerability, with a view to formulating and implementing determined prioritized actions, taking into account vulnerable people, places and ecosystems;\

(d) Monitoring and evaluation and learning from adaptation plans, policies, programmes and/or actions;\

(e) Building resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources.\

10. Each Party shall, as appropriate, submit an adaptation communication, which may include information on adaptation needs, plans and actions.\

11. The adaptation communication referred to in paragraph 10 of this Article shall be updated, revised, or updated independently, or as a component of or in conjunction with other communications, including the adaptation plan, a[n intended] nationally determined contribution referred to in Article 2, paragraph 1, of this Agreement, and/or a national communication.\

12. Developing country Parties [[and other countries ]in need] shall receive continuous support for the implementation of paragraphs 9 to 11 of this Article, in accordance with the provisions of Articles 6, 7 and 8 of this Agreement.\

13. There shall be a global stocktake on adaptation every 5 years, consistent with the provisions of Article 10, and guided by modalities to be adopted by the CMA at its first session, with a view to:\

(a) Recognizing and enhancing the implementation of adaptation action based on the adaptation communication referred to in paragraph 10 of this Article;\

(b) Assessing the adequacy and effectiveness of support for adaptation;\

(c) Reviewing the overall progress in achieving the global goal on adaptation referred to in Article 2, paragraph 1, of this Agreement.\

Article 58\

(LOSS AND DAMAGE)\

Option I: The following text to be included as Article 5 (Loss and Damage)\

Option II: The following text to be part of Article 4 alongside adaptation provision\

1. [The Warsaw International Mechanism for Loss and Damage associated with Climate Change impacts shall be established under the authority and guidance of the CMA and supported through the Warsaw International Mechanism of the Convention.\

2. Upon the completion of its review at the twenty-second session of the COP,9\

the Warsaw International Mechanism shall be subject to the authority and guidance of the CMA and supported through the Warsaw International Mechanism of the Convention.\

3. A climate change displacement coordination facility shall be established under the authority and guidance of the CMA to help coordinate efforts to address climate change induced displacement.\

planned relocation.\

4. A process to develop approaches to address irreversible and permanent damage resulting from climate change will be initiated under the [Warsaw International Mechanism] [CMA] with a view to completing this process within four years.]\

Article 6 (FINANCE)\

{Directional goal}\

1. Developed country Parties shall provide [new,] [additional,] [adequate,] [predictable,] [additional] and [scaled-up] financial resources to assist developing country Parties with respect to adaptation. Other Parties may on a voluntary, complementary basis, provide resources to assist developing countries, including through South-South cooperation initiatives.\

{Mobilization}\

2. Option 1: All Parties shall take action to mobilize, and/or facilitate the mobilisation of a wide variety of sources, public and private, bilateral and multilateral, including additional, through facilitative policy frameworks, in line with their respective and evolving responsibilities, with developed country Parties taking the lead, noting the significant role of public and private, in need support in order to take action.]\

Option 2: Developed country Parties and other Parties included in Annex II to the Convention shall provide financial resources beyond their previous efforts, supporting country-driven strategies and policies, to meet the needs and priorities of developing country Parties.\

Option 3: As part of a shared effort, led by developed country Parties, Parties should support the mobilization of climate finance from a wide variety of sources, instruments and channels, public and private, bilateral, multilateral, domestic, and international.\

{Mainstreaming}\

3. [Parties should integrate climate considerations, including resilience, into international climate change negotiations]\

{Scale}\

4. Option 1: The mobilization of climate finance [shall][should] be scaled up in a predictable and transparent manner [beyond previous efforts] [from USD 100 billion per year] from 2020[, recognizing the role of the Green Climate Fund in the scaling up of financial resources for the implementation of the Paris Agreement] as other multilateral mechanisms and other efforts].\

Option 2: The provision and mobilization of financial resources by developed country Parties and other developed Parties included in Annex II shall represent a progression beyond their previous efforts, following identified pathways to annual expected levels of available resources towards achieving the Paris Agreement quantified goals for the post 2020 period to be periodically established and reviewed. The provision of financial resources should be scaled up from a floor of US\$100 billion per year, including a clear burden-sharing approach, taking into account the needs and priorities identified by developing country Parties in the context of contributing to the Paris Agreement, for the purpose as defined in Article 2 of this Agreement. It shall take into account an equitable distribution of financial resources and a gender-sensitive approach, and include the implementation of the Paris Agreement Convention.\

Option 3: As part of a shared mobilization effort Parties should, in accordance with the Paris Agreement, support the scale and effectiveness of climate finance by: mobilizing climate finance from a wide variety of sources and channels; provide, when in a position to do so, support to developing countries in accessing climate finance; appropriately prioritize support; improve enabling environments; integrate climate considerations into international development assistance; and reduce international support for high-emission activities.\

{Balance mitigation adaptation}\

5. The provision of scaled-up financial resources should aim to achieve a balance between supporting mitigation, taking into account country-driven strategies, and the priorities and needs of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change, such as LDCs, SIDS, and Africa], considering the need for public and grant-based resources for



{Loss and damage}\

6. The CMA shall ensure that adequate support is available to the International Mechanism for Loss and Damage as defined in Article (XX), as well as to promote and support the development and implementation of approaches to address irreversible and permanent damage resulting from human-induced climate change.

{Communication}\

7. Option 1: [Developed country] Parties [and other developed Parties included in Annex II] shall [periodically][biennially] communicate [relevant, indicative] information on [the [provision and implementation] of [financial resources][support to developing countries], including quantitative and qualitative information on the] projected [efforts to mobilize [and attract] climate finance][financial resources to be provided to developing country Parties].\

Option 2: Developed country Parties and other developed Parties included in Annex II shall communicate on the provision and mobilization of financial resources, including quantitative information on the projected levels of public financial resources to be provided to developing countries.

Option 3: Parties should periodically communicate relevant, indicative information about climate finance in paragraphs X-Y, as appropriate.\

{Stocktake}\

8. The stocktake shall take into account available information by [developed country] Parties and other Parties on efforts related to climate finance. {Note: Pending outcome of discussions on the stocktake}\

{MRV}\

9. Transparent, complete, consistent, comparable, and accurate information on support provided, mobilized through public interventions and received shall [regularly] be provided by [X] in accordance with the modalities, procedures and guidelines to be adopted at the next session, as stipulated in Article 9, paragraph 8. {Note: pending outcome of Article 9}\

{Financial Mechanism}\

10. The Financial Mechanism of the Convention, including its operating entities, shall be established as part of the mechanism of this Agreement. \

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11. The CMA shall provide guidance to the entities entrusted with the operation of the Financial Mechanism of the Convention on the policies, programme priorities and eligibility criteria related to the operation of the COP.\

{Access}\

12. The Financial Mechanism of the Convention, and its operating entities, serving the interests of all Parties, shall ensure efficient access to support for developing country Parties.\

Note: A joint submission was received from Turkey and Ukraine for Art 2.bis Parties wishing to have been recognized by the COP and other Parties that are undergoing the process of transitioning to a low-carbon economy have access to financial support, including for the transfer of technology, under the implementation of the policies and strategies in relation to climate change for action under the Convention. Article 7 (TECHNOLOGY DEVELOPMENT AND TRANSFER)\

1. All Parties[, in accordance with the principles and provisions of the Convention, in particular Article 11]], noting the importance of technology for the implementation of mitigation and adaptation under this Agreement and recognizing existing deployment and dissemination efforts, [shall promote cooperative action [to accelerate and upscale] [on] [technology development and transfer] and [shall] (a) [Improving endogenous capacities and enabling environments according to nationally determined priorities, in accordance with Article 4, paragraph 5, of the Convention];\

(b) [Addressing barriers [in accessing to][for] the transfer of safe, appropriate and environmentally sound technologies [by developing countries];]\

(c) Fostering cooperative approaches to research and development].\

2. Parties share a long-term vision on the importance of fully realizing technology development and transfer for sustainable development.

order to improve resilience to climate change and to reduce greenhouse gas emissions.\

3. A technology framework is hereby established to provide overarching guidance to the Mechanism in promoting and facilitating enhanced action on technology development and transfer to support the implementation of this Agreement, in pursuit of the long-term vision referred to in this Article.\

4. Accelerating, encouraging and enabling innovation is critical for an effective, long-term response to climate change and providing affordable and reliable energy access and promoting economic growth. Such effort shall be supported, as appropriate, by the Technology Mechanism and Financial Mechanism of the Convention, for research and development, collaborative approaches, and [meeting the countries' need for] [facilitating access to] technology, in particular for early stages of the technology transfer in developing countries.\

5. The Technology Mechanism shall serve this Agreement.\

6. Developing country Parties are eligible for support in the implementation of this Agreement.\

7. [In accordance with Article 4, paragraphs 3[ and 5][, 5 and 9], of the Convention,] Parties [and other Parties included in Annex II to the Convention] shall provide support to developing country Parties, for strengthening cooperative action on technology development and transfer and the implementation of the technology framework through the Technology Mechanism and the Financial Mechanism of the Convention. [The overall implementation of the commitments will be assessed periodically through a review in accordance with Article 10 of this Agreement.] Parties shall regularly communicate the progress of implementing the provision of support [in a measurable, reportable and verifiable manner] in accordance with Articles 6 and 9 of this Agreement).\

#### Article 8 (CAPACITY-BUILDING)\

1. Parties shall cooperate in taking measures, as appropriate, to enhance climate change awareness, public participation and public access to information, recognizing the importance of capacity-building, including, inter alia, to implement adaptation and mitigation actions, and facilitate technology dissemination and deployment, access to climate finance, relevant aspects of education and training, and the transparent, timely and accurate communication of information.\

2. Capacity-building should be country-driven, based on and responsive to national needs, and ownership of Parties, [in particular, for developing country Parties,] including at the local levels. Capacity-building should be guided by lessons learned, including those from activities under the Convention, and should be an effective, iterative process that is inclusive and gender-responsive.\

3. All Parties should cooperate to enhance the capacity of developing country Parties to implement this Agreement. Developed country Parties should enhance support for actions for capacity-building in developing countries.\

4. All Parties enhancing the capacity of developing country Parties to implement this Agreement shall, through regional, bilateral and multilateral approaches, shall regularly communicate on these activities and capacity-building. Developing country Parties shall regularly communicate progress made in implementing capacity-building plans, policies, actions or measures to implement this Agreement. {Not to be included in the final version of the Agreement}\

5. Capacity-building activities shall be enhanced through appropriate institutional arrangements for the implementation of this Agreement, including the appropriate institutional arrangements of the Convention that serve this Agreement [to the extent that they serve this Agreement]. The Parties shall decide on the initial institutional arrangements for capacity-building at its first session.\

#### Article 8 bis\

Parties shall cooperate in taking measures, as appropriate, to enhance climate change awareness, public participation and public access to information, recognizing the importance of capacity-building, with respect to enhancing actions under this Agreement.\

#### Article 9 (TRANSPARENCY)\



expert review, in accordance with guidelines and procedures adopted by the CMA, with a view to be given to LDCs and SIDS.\

The review shall provide a thorough, objective and comprehensive technical assessment of the implementation and achievement of its nationally determined mitigation {insert the relevant outcome of Article 3.2} and other requirements of the Agreement, analyze the extent to which the reporting is in line with the guidelines adopted by the CMA, and identify any areas for improvement and possible capacity building, in consultation with the Party concerned. The technical assessment shall be carried out by an expert review team that shall produce a report, to be consulted with the Party concerned, for publication by the secretariat and consideration by the CMA. The report shall identify areas of non-compliance in accordance with Article 11. A multilateral and facilitative examination shall be conducted on the information above.\

Option 2: All information provided by developed country Parties, and shall be reviewed through a technical review process followed by a multilateral assessment process, and result in a report on the consequences for compliance; All the information provided by developing country Parties shall be reviewed through a technical analysis process followed by a multilateral facilitative sharing of information and a report, in a manner that is nonintrusive, non-punitive and respectful of national sovereignty and level of support received from developed country Parties.\

8. The CMA shall, at its first session, building on experience from the arrangements under the Convention, and elaborating on the provisions in this Article, adopt common modalities and guidelines, as appropriate, for the transparency of action and support. {Placeholder to be developed on the outcomes of discussion on accounting}\

9. The transparency arrangements under the Convention, including national communication and biennial update reports, international assessment and review (IAR) and international cooperation (ICA), shall form part of the experience drawn upon for the development of modalities, and guidelines under paragraph 8 of this Article.\

10. Support shall be provided to developing countries for the implementation of paragraph 8.\

11. Developed country Parties shall provide support to developing country Parties in the implementation of this Article. {to be revised pending global solution in Article 6}\

12. Support shall also be provided for the building of transparency-related capacity on a continuous basis.\

#### Article 10 (GLOBAL STOCKTAKE)\

1. The CMA shall periodically take stock of the implementation of this Agreement to assess progress towards achieving the purpose of this Agreement and its long-term goals. It shall do so in a facilitative manner, considering mitigation, adaptation and the means of implementation, and the state of the best available science [and equity].\

2. The CMA shall undertake its first global stocktake in [2023][2024] and every five years or otherwise decided by the CMA.\

3. The outcome of the stocktake shall guide and inform Parties in updating and enhancing their nationally determined contributions, in accordance with the relevant provisions of this Agreement, and enhancing international cooperation for climate action.\

#### Article 11 (FACILITATING IMPLEMENTATION AND COMPLIANCE)\

1. A mechanism to facilitate implementation of [and promote compliance with] the provisions of this Agreement shall be hereby established.\

2. The mechanism referred to in paragraph 1 of this Article shall consist of a committee of experts, and be facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive. The committee shall pay particular attention to the respective national capabilities and circumstances of Parties. The committee shall operate under modalities and procedures adopted by the CMA at its first session, and report annually to the CMA.\

Article 12 (CMA)\

1. The Conference of the Parties, the supreme body of the Convention, shall serve as the meeting of the Parties to this Agreement.\
2. Parties to the Convention that are not Parties to this Agreement may participate as observers in any session of the Conference of the Parties serving as the meeting of the Parties to this Agreement. The Conference of the Parties serves as the meeting of the Parties to this Agreement, decisions shall be taken only by those that are Parties to this Agreement.\
3. When the Conference of the Parties serves as the meeting of the Parties to this Agreement, the member of the Bureau of the Conference of the Parties representing a Party to the Convention but, not a Party to this Agreement, shall be replaced by an additional member to be elected by and from among the Parties to this Agreement.\
4. The CMA shall keep under regular review the implementation of this Agreement and shall, in accordance with its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by this Agreement and shall:
  - (a) Establish such subsidiary bodies as deemed necessary for the implementation of this Agreement.
  - (b) Exercise such other functions as may be required for the implementation of this Agreement.
5. The rules of procedure of the Conference of the Parties and the financial procedures of the Convention shall be applied mutatis mutandis under this Agreement, except as may be otherwise decided by consensus by the CMA.\
6. The first session of the CMA shall be convened by the secretariat in conjunction with the first session of the Conference of the Parties that is scheduled after the date of entry into force of this Agreement. Subsequent ordinary sessions of the CMA shall be held in conjunction with ordinary sessions of the Conference of the Parties as decided by the CMA.\
7. Extraordinary sessions of the CMA shall be held at such other times as may be deemed necessary by the Parties at the written request of any Party, provided that, within six months of the request being received, the Parties by the secretariat, it is supported by at least one third of the Parties.\
8. The United Nations, its specialized agencies and the International Atomic Energy Agency and its member thereof or observers thereto not party to the Convention, may be represented at sessions of the CMA as observers. Any body or agency, whether national or international, governmental or non-governmental, qualified in matters covered by this Agreement and which has informed the secretariat of its interest in being represented at a session of the CMA as an observer, may be so admitted unless at least one Party objects at the present object. The admission and participation of observers shall be subject to the rules and procedures laid down in paragraph 5 of this Article.\

Article 13 (SECRETARIAT)\

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of the CMA.
2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 10, paragraph 2, of the Convention on arrangements made for the functioning of the secretariat shall apply mutatis mutandis to the CMA. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under this Agreement.\

Article 14 (SBSTA AND SBI)\

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation (SBI) established by Articles 9 and 10 of the Convention shall serve, respectively, as the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. Sessions of the meetings of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement shall be held in conjunction with sessions of the Conference of the Parties, respectively, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation of the Convention.\

2. Parties to the Convention that are not Parties to this Agreement may participate as of any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies of this Agreement, decisions under this Agreement shall be taken only by those that are Parties to this Agreement.

3. When the subsidiary bodies established by Articles 9 and 10 of the Convention exercise their functions regard to matters concerning this Agreement, any member of the bureaux of those subsidiary bodies shall be a Party to the Convention but, at that time, not a Party to this Agreement, shall be eligible for election as a member to be elected by and from among the Parties to this Agreement.\

Article 15 (BODIES AND INSTITUTIONAL ARRANGEMENTS TO SERVE AGREEMENT)\

1. Subsidiary bodies or other institutional arrangements established by or under the Convention and referred to in this Agreement, shall serve this Agreement upon a decision of the CMA. They shall exercise the functions to be exercised by such bodies or arrangements.\

2. The CMA may provide further guidance to those subsidiary bodies and institutional arrangements as to the functions to be exercised by such bodies and institutional arrangements] [including for those subsidiary bodies and institutional arrangements nominated by Parties to the Convention that are not Parties to this Agreement to the extent that these bodies and institutional arrangements serve this Agreement].\

Article 16 (SIGNATURE AND INSTRUMENTS OF RATIFICATION, ACCEPTANCE, APPROVAL OR ACCESSION)\

1. This Agreement shall be open for signature and subject to ratification, acceptance or accession by regional economic integration organizations that are Parties to the Convention. It shall remain open for signature at the United Nations Headquarters in New York from 22 April 2016 to 21 April 2017. Thereafter, it shall be open for accession from the day following the date on which it is closed for signature. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.\

2. Any regional economic integration organization that becomes a Party to this Agreement shall, if it has member States being a Party shall be bound by all the obligations under this Agreement. If it has no member States, the organization and its member States shall decide on their respective responsibilities for the fulfilment of the obligations under this Agreement. In such cases, the organization and the member States shall exercise rights under this Agreement concurrently.\

3. In their instruments of ratification, acceptance, approval or accession, regional economic integration organizations shall declare the extent of their competence with respect to the matters covered by this Agreement. These organizations shall also inform the Depositary, who shall in turn inform the Parties, of any substantial modification in the extent of their competence.\

Article 18 (ENTRY INTO FORCE)\

1. This Agreement shall enter into force on the thirtieth day after the date on which a majority of the Parties to the Convention have deposited their instruments of ratification, acceptance, approval or accession, or on 1 January 2020, whichever is later.\

2. For each State or regional economic integration organization that ratifies, accepts or approves this Agreement or accedes thereto after the condition set out in paragraph 1 of this Article for entry into force, the Agreement shall enter into force on the thirtieth day after the date of deposit by that State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.\

3. For the purposes of paragraph 1 of this Article, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by its member States.\

Article 19 (AMENDMENTS)\

1. The provisions of Article 15 of the Convention on the adoption of amendments to the Convention shall apply mutatis mutandis to this Agreement.\

2. [Notwithstanding paragraph 1 of this Article, a Party may propose an adjustment [to the Convention] expressed by its [mitigation commitment] inscribed in] Annex [X] to this Agreement. A Party may propose an adjustment shall be communicated to the Parties by the secretariat at least three months before the meeting of the CMA at which it is proposed for adoption.]\



3. [An adjustment proposed by a Party [to enhance] the efforts expressed by its [mitigation] in Annex [X] to this Agreement shall be considered adopted by the CMA unless more than a majority of Parties present and voting object to its adoption. The adopted adjustment shall be communicated to the Depositary, who shall circulate it to all Parties, and it shall enter into force one year following the communication by the Depositary. Such adjustments shall be binding on all Parties.]

Article 20 (ANNEXES)\

1. Annexes to this Agreement shall form an integral part thereof and, unless otherwise indicated, a reference to this Agreement constitutes at the same time a reference to any annexes thereto of a procedural or administrative character\

The provisions of Article 16 of the Convention on the adoption and amendment of annexes shall apply mutatis mutandis to this Agreement.\

Article 21 (SETTLEMENT OF DISPUTES)\

The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this Agreement.\

Article 22 (VOTING)\

1. Each Party shall have one vote, except as provided in paragraph 2 of this Article.\

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Agreement. An organization shall not exercise its right to vote if any of its member States exercises its right.\

Article 23 (DEPOSITARY)\

The Secretary-General of the United Nations shall be the Depositary of this Agreement.\

Article 24 (RESERVATIONS)\

No reservations may be made to this Agreement.\

Article 25 (WITHDRAWAL)\

1. At any time after three years from the date on which this Agreement has entered into force, any Party may withdraw from this Agreement by giving written notification to the Depositary.\

2. Any such withdrawal shall take effect upon expiry of one year from the date of receipt of the notification of withdrawal, or on such later date as may be specified in the notification.\

3. Any Party that withdraws from the Convention shall be considered as also having withdrawn from this Agreement.\

Article 26 (LANGUAGES)\

The original of this Agreement, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

```
In [22]: from nltk.tokenize import sent_tokenize
```

```
In [23]: def fast_tokenize(text):
```

```
    # Iterate through text removing punctuation characters
    no_punct = "".join([char for char in text if char not in punctuation])

    # Split text over whitespace into list of words
    tokens = no_punct.split()

    return tokens
```

```
In [36]: words_UN_draft2 = UN_draft2.split()
        lost_damage_UN_draft2=Table().with_columns('United Nations Draft 2',words_UN_draft2)
        lost_damage_UN_draft2
```

Out[36]: United Nations Draft 2

```
A.  
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In [37]: new\_UN\_draft2\_=fast\_tokenize(UN\_draft2)  
new\_UN\_draft2\_

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'will',  
'depend',  
'on',  
'the',  
'extent',  
'of',  
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'they',  
'receive2',  
'Subsequent',  
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'by',  
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'of',  
'the',  
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'in',  
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'into',

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'responsibilities',  
'and',  
'respective',  
'capabilitiesin',  
'light',  
'of',  
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'21',  
'All',  
'Parties',  
'shall',  
'regularly',  
'prepare',  
'communicate',  
'and',  
'implement',  
'intended',  
'nationally',  
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'on',  
'mitigation',  
'and',  
'adaptation',  
'undertakings',  
'in',  
'adaptation',  
'planning',  
'and',  
'means',  
'of',  
'implementation3towards',  
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'this',  
'Agreement',  
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'set',  
'out',  
'in',

'Article',  
'2',  
'of',  
'the',  
'Conventionobjective',  
'of',  
'the',  
'Convention',  
'as',  
'set',  
'out',  
'in',  
'its',  
'Article',  
'2',  
'in',  
'accordance',  
'with',  
'Article',  
'4',  
'of',  
'the',  
'Convention',  
'inaccordance',  
'with',  
'the',  
'provisions',  
'of',  
'this',  
'Agreement',  
'including',  
'the',  
'specific',  
'provisions',  
'related',  
'to',  
'mitigation',  
'andadaptation',  
'and',  
'means',  
'of',  
'implementation2',  
'Each',  
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'nationally',  
'determined',  
'contribution',

'will',  
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'a',  
'progression',  
'in',  
'the',  
'light',  
'of',  
'Partiesdifferentiated',  
'responsibilities',  
'and',  
'commitments',  
'under',  
'the',  
'Convention3',  
'The',  
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'which',  
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'Parties',  
'will',  
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'implement',  
'this',  
'Agreement',  
'will',  
'depend',  
'on',  
'theeffective',  
'implementation',  
'by',  
'developed',  
'country',  
'Parties',  
'of',  
'their',  
'commitments',  
'on',  
'the',  
'provision',  
'of',  
'financetechnology',  
'development',  
'and',  
'transfer',  
'and',

```
'capacitybuilding4',  
'Successive',  
'intended',  
'nationally',  
'determined',  
'contributions',  
'will',  
'be',  
...]
```

```
In [39]: new_UN_draft2=[new_UN_draft2_]
```

```
In [40]: model = gensim.models.Word2Vec(new_UN_draft2, size=100, window=5, min_count=1, sg=0, a
```

```
In [41]: model.most_similar(positive=['Parties'], negative=['shall'])
```

```
Out[41]: [('levelsOption', 0.3519841432571411),  
          ('Adaptation', 0.31466883420944214),  
          ('flows', 0.2929728925228119),  
          ('developedcountries', 0.2673737108707428),  
          ('vulnerabilities', 0.22656044363975525),  
          ('depend', 0.21446290612220764),  
          ('changePp14', 0.21337243914604187),  
          ('Agreements', 0.20732036232948303),  
          ('globalaverage', 0.20580831170082092),  
          ('Assessing', 0.20006036758422852)]
```

```
In [42]: model.most_similar(positive=['Parties'], negative=['should'])
```

```
Out[42]: [('identified', 0.33863621950149536),  
          ('ending', 0.31090471148490906),  
          ('DEVELOPMENTProposed', 0.30523881316185),  
          ('thatregional', 0.2719852030277252),  
          ('cent7095', 0.246707022190094),  
          ('measuresPp5', 0.24333970248699188),  
          ('principle', 0.24280330538749695),  
          ('GLOBAL', 0.23549741506576538),  
          ('expected', 0.23427700996398926),  
          ('middle', 0.23365730047225952)]
```

```
In [43]: model.most_similar(positive=['Parties'], negative=['financial'])
```

```
Out[43]: [('shortterm', 0.35652273893356323),  
          ('traditional', 0.2800828814506531),  
          ('enhancement', 0.2666763663291931),  
          ('Pp10', 0.24448275566101074),  
          ('andDamage', 0.2410147488117218),  
          ('poverty2', 0.23994851112365723),  
          ('GENERALOption', 0.2315927892923355),
```

```

('communicating', 0.22701922059059143),
('assistance', 0.22367385029792786),
('Subsequentordinary', 0.2190702259540558)]

In [46]: UN_draft2_tokens = [token for token, weight in model.most_similar(positive=['Parties'])

In [48]: vectors = [model[word] for word in UN_draft2_tokens]

In [49]: from sklearn.metrics import pairwise
dist_matrix = pairwise.pairwise_distances(vectors, metric='cosine')

In [50]: from sklearn.manifold import MDS
mds = MDS(n_components = 2, dissimilarity='precomputed')
embeddings = mds.fit_transform(dist_matrix)

In [52]: _, ax = plt.subplots(figsize=(10,10))
ax.scatter(embeddings[:,0], embeddings[:,1], alpha=0)
for i in range(len(vectors)):
    ax.annotate(UN_draft2_tokens[i], ((embeddings[i,0], embeddings[i,1])))

```

