

Draft 1

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_draft1 = """DRAFT AGREEMENT\
[The Parties to this Agreement,\
Pp1 Being Parties to the United Nations Framework Convention on Climate Change, herein\
Convention,\
Pp2 Pursuant to the Durban Platform for Enhanced Action established by decision 1/CP.1\
Parties to the Convention at its seventeenth session,\
Pp3\
In pursuit of the objective of the Convention, and being guided by its principles, inc\
equity and common but differentiated responsibilities and respective capabilities, in t\
national circumstances,\
Pp4 Also recognizing the need for an effective and progressive response to the urgent t\
on the basis of the best available scientific knowledge,\
Pp5 Recognizing the specific needs and special circumstances and situations of develop\
all those that, as provided for in the Convention, are particularly vulnerable to the a\
change,\
Pp6\
Taking account of the specific needs of developing country Parties, especially those t\
vulnerable to climate-related events, and are most capacity constrained,\
Pp7 Also taking account of the specific needs and special situations of the least deve\
specific circumstances of small island developing States,\
Pp8 Emphasizing the intrinsic relationship that climate change actions, responses and \
access to sustainable development and eradication of poverty,\
Pp9 Recognizing the fundamental priority of safeguarding food security and ending hung\
vulnerabilities of food production systems to the adverse impacts of climate change,\
Pp10\
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Taking into account the imperatives of a just transition of the workforce and the creation of quality jobs in accordance with nationally defined development priorities,\

Pp11 Acknowledging that climate change is a common concern to humankind, Parties should, consistent with their national circumstances, strengthen their governance of policies and taking action to address climate change, promote, respect and take into account their obligations on human rights,\

Pp12 Also acknowledging the importance for Parties, when taking action to address climate change, to respect and consider, in accordance with their respective obligations, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations, the right to development, as well as gender equality, empowerment of women and intergenerational equity,\

Pp13 Also recognizing the importance of the conservation and enhancement, as appropriate, of ecosystems, including forests, mountains, and oceans, and of greenhouse gases referred to in the Convention,\

Pp14 Noting the importance of ensuring the integrity of all ecosystems, including oceans and forests, and of biodiversity, recognized by some cultures as Mother Earth, when taking action to address climate change,\

Pp15 Affirming the importance of education, training, public awareness, public participation, 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,\

Pp16 Recognizing that sustainable lifestyles and sustainable patterns of consumption and production, and countries taking the lead, play an important role in addressing climate change,\

Have agreed as follows:\

Article 1\

For the purpose of this Agreement, the definitions contained in Article 1 of the Convention shall apply, as modified in COP 21 - Draft text agenda item 4 (b) - version 2\

17 of 27\

1. "Convention" means the United Nations Framework Convention on Climate Change, adopted at the Conference of the Parties on 12 May 1992;\

2. "Conference of the Parties" means the Conference of the Parties to the Convention;\

3. Party means a Party to this Agreement.\

Article 2\

1. The purpose of this Agreement is to further implement the objective of the Convention, to hold the increase in the global average temperature well below 2 °C above pre-industrial levels, through enhanced action, cooperation and support, in the context of sustainable development and efforts to eradicate poverty, so as to:\

(a) Hold the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5 °C, recognizing that this would significantly reduce the risks and impacts of climate change;\

(b) Increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;\

(d) Make finance flows consistent with a pathway towards such low greenhouse gas emissions development, in the context of sustainable development and efforts to eradicate poverty.\

2. This Agreement [will be implemented on the basis of] [reflects] equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, and the need for a global response.\

Article 2bis\

Option 1:\

All Parties shall undertake efforts defined in Articles 3, 4, 6, 7, 8 and 9 progressively towards the purpose of this Agreement as set out in Article 2, while recognizing that enhanced support to developing country Parties will allow for higher ambition in their actions. Over time efforts of all Parties shall progress taking into account Parties different national circumstances and stages of development.\

Option 2:\

1. All Parties shall regularly prepare and communicate their nationally determined contributions for the purpose of this Agreement as set out in its Article 2, recognizing that the ambition of the Parties in relation to their contributions will depend on the extent of support they receive.

2. Subsequent nationally determined contributions should be informed by the results of the global stock take defined in Article 10, and represent a progression taking into account Parties' common but differentiated responsibilities and respective capabilities, in light of different national circumstances.

Article 3\

1. In order to achieve the long-term global temperature goal set in Article 2 of this Agreement, Parties shall peak the peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will occur at different times for developing country Parties, and to undertake rapid reductions thereafter towards reaching climate change emissions neutrality in the second half of the century on the basis of equity and guidance for sustainable development and poverty eradication.\

2. Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve and shall pursue domestic measures to do so.\

3. Developed country Parties should continue to take the lead. Each Party that has previously communicated absolute economy-wide emission reduction or limitation targets should continue to do so and aim to do so over time in light of different national circumstances and stages of development.

4. Support shall be provided to developing country Parties for the implementation of this Article, in paragraph 3, in accordance with Articles 6, 7 and 8 of this Agreement, recognizing that the needs of developing country Parties will allow for higher ambition in their actions.\

5. The least developed countries [and small island developing States][and African States] shall, at their discretion, including information on strategies, plans and actions for low carbon development.

6. Each Party's successive contribution should represent a progression beyond the Party's previous contribution, reflecting its highest possible ambition.\

7. In communicating their contribution, all Parties shall provide the information necessary for transparency and understanding in accordance with decision X/CP.21 and any decisions of the Conference of the Parties to the Agreement.\

8. Parties shall communicate an contribution every five years in accordance with decision X/CP.21, with the Conference of the Parties serving as the meeting of the Parties to the Agreement being held in parallel with the global stock take referred to in Article 10.\

9. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall determine timeframes for contributions no later than at its first session.\

10. A Party may at any time adjust its existing contribution with a view to enhancing its level of ambition.

11. The contribution communicated by Parties shall be recorded in a public registry maintained by the secretariat.

12. Parties shall account for their contribution. In accounting for their contribution, Parties shall provide transparency, accuracy, completeness, comparability and consistency, and ensure the availability of data for accounting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Agreement.\

13. In the context of their contribution, when recognizing and implementing mitigation actions with respect to greenhouse gas emissions and removals, Parties should take into account, as appropriate, existing methodologies under the Convention in light of the provisions of paragraph 12 of this Article.\

14. Parties shall take into consideration in the implementation of this Agreement the needs of the economies most affected by the impacts of response measures, particularly developing countries.

15. Parties agree to enhance actions under this Agreement, including by strengthening and improving the modalities and procedures for enhancing those arrangements. To this end, the Conference of the Parties serving as the meeting of the Parties to the Agreement shall establish a cooperative approach to address the adverse impacts of the implementation of response measures on developing country Parties.

decision -/CP.21.\

16. Parties, including regional economic integration organizations and their member States, shall, by an agreement to act under Article 3, paragraph 2, jointly, shall notify the secretariat of the Agreement, including the emission level allocated to each Party within the relevant time period, and the Parties their own. The secretariat shall in turn inform the Parties and signatories to the Convention of the agreement.\

17. In the event of failure by the Parties to such an agreement, each party to that agreement shall maintain its emission level as set out in that agreement in accordance with paragraph 14 of this Article and Article 11.\

18. If Parties acting jointly do so within the framework of, and together with, a regional economic integration organization that is itself a Party to this Agreement, each member State of that regional economic integration organization individually, and together with the regional economic integration organization, shall be responsible for its emission level set out in the agreement, in accordance with paragraph 16 in accordance with paragraph 14 of this Article and Articles 9 and 11.\

19. If Parties acting jointly do so within the framework of, and together with, a regional economic integration organization, any alteration in the composition of that organization shall not affect the agreement, and shall apply for the purpose of those commitments that are communicated subsequent to the alteration of the agreement.\

20. [Cooperation between Parties in the implementation of Article 3 includes approaches that promote sustainable development and environmental integrity and adaptation, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Agreement. Parties shall, where engaging on a voluntary basis in cooperative approaches, promote sustainable development and environmental integrity, and apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Agreement, and ensure transparency in the governance of the approaches.\

21. The use of internationally transferred emission reductions to achieve Article 3 under the Convention shall be voluntary and authorized by participating Parties.]\

22. All Parties should strive to formulate and communicate long-term low-greenhouse gas development strategies mindful of Article 2 of this Agreement taking into account Parties different development stages.\

Article 3 bis

1. Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases referred to in Article 4, paragraph 1(d), of the Convention.\

2. Parties may take action to implement and support, including by scaling up resources, positive incentives for reducing emissions from deforestation and forest degradation, and the conservation, sustainable management of forests and enhancement of forest carbon stocks in all countries; as well as alternative policy approaches, such as joint mitigation and adaptation, integral and sustainable management of forests; while reaffirming the importance of non-forest activities associated with such approaches; as set out in related guidance and decisions already adopted by the Conference of the Parties to the Convention.\

Article 3 ter

1. [A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development in developing country Parties] is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to the Agreement, and shall be supervised by the Conference of the Parties serving as the meeting of the Parties to the Agreement, and shall:

- (a) Promote the mitigation of greenhouse gas emissions [in developing country Parties] and support sustainable development;\

- (b) Incentivise and facilitate participation in the mitigation of greenhouse gas emissions by entities authorized by a Party;\

(c) Contribute to the reduction of emission levels in the [developing country] host Party from mitigation activities resulting in emission reductions that can also be used by and for its ###;\

(d) Promote a net contribution to the mitigation of greenhouse gas emissions;\

2. Emission reductions resulting from this mechanism shall not be used to demonstrate achievement of its ###, if used by another Party to demonstrate achievement of its ###.\

3. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall ensure that the proceeds from activities under the mechanism are used to cover administrative expenses of developing country Parties that are particularly vulnerable to the adverse effects of climate change and the costs of adaptation.\

4. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall develop procedures for this mechanism at its first session.]\

5. [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 Conference of the Parties serving as the meeting of the Parties to the Agreement, shall be supervised by a body designated by the Conference of the Parties to the Agreement, and shall aim to:\

(a) Enhance mitigation and adaptation ambition and the provision or mobilization of public and private resources for 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 mitigation and adaptation actions by public and private entities acting authorized by a Party;\

(c) Support implementation of the joint mitigation and adaptation approach for the integrated 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.\

6. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall develop procedures for the mechanism at its first session.]\

Article 4\

1. Parties hereby establish the global goal of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development in the context of the temperature goal referred to in Article 2.\

2. Parties recognize that adaptation is a global challenge faced by all with local, sub-national, national and international dimensions, and that it is a key component of and makes a contribution to the response to climate change to protect people, livelihoods and ecosystems, taking into account the immediate needs of those developing country Parties that are particularly vulnerable.\

3. Adaptation efforts of developing country Parties shall be recognized, in accordance with the guidance adopted by the Conference of the Parties serving as the meeting of the Parties to the Agreement at its first session.\

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

Parties acknowledge that adaptation action should follow a country-driven, gender-responsive and 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, including indigenous peoples and local knowledge systems, with a view to integrating adaptation action with socioeconomic and environmental policies and actions, where appropriate.\

6. Parties recognize the importance of support for and international cooperation on adaptation, taking into account the importance of taking into account the needs of those developing country Parties that are particularly vulnerable, and recognizing the particular vulnerabilities of the least developed countries and small island developing States.

7. Parties should strengthen their cooperation on 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 measures that relate to science, planning, policies and implementation in relation to 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 system and early warning systems, in a manner that informs climate services and support;

(d) Assisting developing country Parties in identifying effective adaptation practices, assessing adaptation priorities, support provided and received for adaptation actions and efforts, and challenges, and sharing in a manner consistent with encouraging good practices;

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

8. United Nations specialized organizations and agencies are encouraged to support the implementation of the actions referred to in paragraph 7 of this Article, taking into account the specific needs of those Parties of this Article.

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

(a) The implementation of adaptation actions, undertakings and/or efforts;

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

(c) The 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 evaluating and learning from adaptation plans, policies, programmes and/or actions;

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

10. Each Party shall, as appropriate, submit an adaptation communication, which may include information on needs, plans and actions, without creating any additional burden for developing country Parties.

11. The adaptation communication referred to in paragraph 10 of this Article shall be updated independently, or as a component of or in conjunction with other communications, including the national adaptation plan, or a communication as referred to in Article 3, paragraph 2 [and 2 bis.], and/or other relevant information.

12. The adaptation communication referred to in paragraph 10 of this Article shall be made available to the public.

13. Developing country Parties shall receive continuous and enhanced international support for the implementation of paragraphs 9, 10 and 11 of this Article, in accordance with the provisions of Article 12.

14. The global stocktake referred to in Article 10 shall:

(a) Recognize and enhance the implementation of adaptation action on the basis of the information contained in the communication referred to in paragraph 10 of this Article;

(b) Assess the adequacy and effectiveness of support provided for adaptation;

(c) Review the overall progress made in achieving the global goal referred to in paragraph 1 of Article 5.

Option 1:

4.

Parties recognize the importance of averting, minimizing and addressing loss and damage, including adverse effects of climate change, including extreme events and slow onset events, and development in reducing the risk of loss and damage.

Option 2:

1. Parties recognize the importance of averting, minimizing and addressing loss and damage,

adverse effects of climate change, including extreme events and slow onset events, and development in reducing the risk of loss and damage.\

2. Accordingly, Parties, in the context of international cooperation and solidarity[, and in accordance with the principle and provisions of the Convention, including common but differentiated responsibilities and capabilities] shall, as appropriate, enhance and, where needed, develop and implement action to reduce the risk of loss and damage associated with the adverse effects of climate change, including as the following:\

- (a) Early warning systems;\
- (b) Slow onset events, including those that may involve irreversible and permanent loss;\
- (c) Comprehensive risk assessment and management;\
- (d) Risk insurance facilities, climate risk pooling and other insurance solutions;\
- (e) Non-economic losses;\
- (f) Climate change induced displacement, migration and planned relocation.\

3. Parties shall enhance action and support, on a cooperative and facilitative basis, to reduce the risk of loss and damage associated with the adverse effects of climate change, and in a manner that does not increase the risk of loss and damage for liability or compensation nor prejudice existing rights under international law.5\

4. Option 1:\

An international mechanism to address loss and damage is hereby defined under this Agreement. The mechanism shall be bound by the principles and provisions of the Convention.\

The international mechanism on loss and damage shall draw upon, further develop and elaborate the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, in accordance with relevant COP decisions, including the development of modalities and procedures for the mechanism's operation and support. It can involve, as appropriate, existing bodies and expert groups under the Convention, as well as relevant organizations and expert bodies outside the Convention, and be informed by relevant scientific and technical information on international law.\

Option 2:\

The Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, as established in accordance with the Convention, shall serve this Agreement.\

Parties shall continue to implement the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, in accordance with decisions 3/CP.18 and 2/CP.20. It shall be supported, as appropriate, in order to avert, minimize and address loss and damage associated with the adverse effects of climate change.\

5. The [Warsaw International Mechanism, as referred to in paragraph 4 above,][international mechanism, as referred to in paragraph 4 above,] shall promote and support the development and implementation of action to address loss and damage associated with the adverse effects of climate change in particular in developing countries.\

Article 6\

1. Developed country Parties shall provide [new,] [additional,] [adequate,] [predictable,] [timely,] 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.\

2. Developed country Parties should take the lead in mobilizing and facilitating the mobilization of finance from a wide variety of sources, instruments and channels, noting the significant role of the private sector and shared effort by all Parties, through a variety of actions, including, inter alia, the development of enabling environments, supporting country-driven strategies, and taking into account the needs and capacities of developing country Parties.3. The provision and mobilization of climate finance to enhance adaptation action in developing country Parties shall represent a progression beyond the current level of USD \$100 billion per year, which is to be mobilized by developed country Parties, in the context of meaningful mitigation action and transparency on implementation, towards achieving short-term goals for adaptation.

quantified goals for the post 2020 period to be periodically established and reviewed by the Parties serving as the meeting of the Parties to the Agreement, in the context of the global stocktake referred to in Article 10.\

4. Parties should integrate climate considerations, including resilience, into international and national policies and plans.\

5. The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, including least developed countries, small island developing States and African States], considering the role of grant-based resources for adaptation.\

6. To enhance predictability, developed country Parties shall biennially communicate qualitative information related to paragraphs 1 and 2 of this Article, as applicable, on the use of public financial resources to be provided to developing country Parties, taking into account the global stocktake referred to in Article 10.\

7. The global stocktake referred to in Article 10 shall take into account the relevant information provided by developed country Parties, including Agreement bodies, on efforts related to climate finance.\

8. Transparent, complete, consistent, comparable, and accurate information on support provided, mobilized through public interventions and received shall biennially be reported by developed country Parties in accordance with the modalities, procedures and guidelines to be adopted by the Parties serving as the meeting of the Parties to the Agreement, at its first session of the second work programme paragraph 8.\

9. The Financial Mechanism of the Convention, including its operating entities, shall serve as the financial mechanism of this Agreement.\

10. The institutions serving this Agreement, including the operating entities of the Financial Mechanism, shall ensure efficient access to financial resources through simplified approval procedures and streamlined support for developing country Parties[, in particular for LDCs, SIDS and African States], in line with their national climate strategies and plans.\

Article 7\

1. Parties, noting the importance of technology for the implementation of mitigation and adaptation measures under this Agreement and recognizing existing technology deployment and dissemination efforts, shall cooperate on technology development and transfer.\

2. Parties share a long-term vision on the importance of fully realizing technology development and transfer in 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 Technology 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 paragraph 2 of this Article.\

4. Accelerating, encouraging and enabling innovation is critical for an effective, long-term response to climate change and promoting economic growth and sustainable development. Such efforts shall be appropriate, supported, including through financial means by the Technology Mechanism and the Financial Mechanism of the Convention, for collaborative approaches to research and development, including access to technology, in particular for early stages of the technology cycle, to developing countries.\

5. The Technology Mechanism shall serve this Agreement.\

6. Developed country Parties shall provide support, including financial support, for technology development and transfer under this Article, including for strengthening cooperative action on technology development and transfer. The global stocktake referred to in Article 10 shall take into account available information by developed country Parties, including Agreement bodies on efforts related to support on technology development and transfer under this Article 8\

1. Capacity-building under this Agreement should enhance the capacity and ability of developing countries, in particular countries with the least capacity, such as least developed countries and small island developing States and African States [in accordance with the principles and provisions of the Convention], to take climate change action, including, inter alia, to implement adaptation and mitigation actions, promote technology development, dissemination and deployment, access to climate finance, relevant education, training and public awareness, and the transparent, timely and accurate communication of information.\

2. Capacity-building should be country-driven, based on and responsive to national needs, and the ownership of Parties, including at the national, subnational and local levels. Capacity-building should be based on lessons learned, including those from capacity-building activities under the Convention, and be an effective, iterative process that is participatory, cross-cutting 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, through regional, bilateral and multilateral approaches, shall regularly communicate on these actions. Developed country Parties should regularly communicate progress made in capacity-building plans, policies, actions or measures to implement this Agreement.\

5. Capacity-building activities shall be enhanced through appropriate institutional arrangements for the implementation of this Agreement, including the appropriate institutional arrangements under the Convention that serve this Agreement. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall at its first session take an initial decision on the institutional arrangements for the implementation of Article 8 bis.\

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

Article 9\

1. Option 1: A robust transparency framework covering both action and support, differentiated by developed and developing countries, building on the arrangements under the Convention, related decisions and mechanisms established by the Cancun Agreements (decision 1/CP.16), applicable to all Parties, with flexibility to developing countries is hereby established.\

Option 2: A unified and robust transparency framework, covering both action and support, with flexibility to take into account Parties differing capacities, and applicable to all Parties.\

Option 3: Building on existing arrangements under the Convention, a transparency framework for action and support that takes into account Parties different capacities and is applicable to all Parties.\

2. The transparency framework shall provide flexibility in the implementation of the provisions of the Convention for developing country Parties in the light of their capacities. The modalities, procedures and mechanisms in paragraph 8 of this Article shall reflect such flexibility.\

3. The transparency framework shall recognize the special circumstances of the least developed countries, small island developing States, and be implemented in a facilitative, non-intrusive, non-punitive manner, respecting national sovereignty, and avoid placing undue burden on Parties.\

4. The purpose of the framework for transparency of action is:\

(a) To provide a clear understanding of climate change actions in the light of the objectives of the Convention as set out in its Article 2;\

(b) To provide a clear understanding of the anthropogenic emissions by sources and removals estimated at the individual Parties;\

(c) To facilitate understanding of global aggregate emissions and removals to inform the global stocktake under Article 10;\

(d) To ensure clarity and tracking of progress made towards the long-term goal and achieving individual

mitigation ### under Article 3;\

(e) To provide clarity on Parties adaptation actions under Article 4, including good practices, needs and gaps.\

5. The purpose of the framework for transparency of support is:\

(a) To provide a clear understanding of the support provided and received by relevant Parties in the context of climate change actions under Articles 3 and 4;\

(b) To achieve, to the extent possible, a full overview of aggregate financial support provided and received in the global stocktake under Article 10;\

(c) To ensure clarity and tracking of progress made in providing support in accordance with Articles 6, 7 and 8;\

(d) To ensure clarity and tracking of support needed and received by developing country Parties in accordance with Articles 6, 7 and 8;\

(e) To ensure the avoidance of double counting of financial resources provided.\

6. Each Party shall regularly provide the following information in accordance with guidance in paragraph 8 of this Article:\

(a) Its national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases;\

(b) Projections of anthropogenic emissions by sources and removals by sinks of greenhouse gases;\

(c) Progress made towards achieving its respective mitigation ### under Article 3 including information specific to the type of ###;\

(d) Climate change impacts and actions taken to build resilience and reduce vulnerability, including adaptation actions under Article 4;\

(e) Support provided and received, as relevant, including specific information required in paragraphs 6.14, 7 and 8.\

7. Option 1: The information provided by each Party as required under this Article shall be subject to expert review, in accordance with guidelines and procedures adopted by the Conference of the Parties at the meeting of the Parties to the Agreement, with additional flexibility to be given to least developed countries and small island developing States.\

The review shall provide a thorough, objective and comprehensive technical assessment of the implementation and achievement of its ### and other requirements of the Agreement, analyse the information which the Parties reporting is in line with the guidelines adopted by the Conference of the Parties at the meeting of the Parties to the Agreement, and identify any areas for improvement in reporting, capacity building, in consultation with the Party concerned. The technical expert review shall be conducted by an expert review team that shall produce a report, to be consulted on with the Party concerned, and the secretariat and consideration by the Conference of the Parties serving as the meeting of the Parties to the Agreement. The report shall identify any issues related to compliance in accordance with the Agreement. The multilateral and facilitative examination shall consider the information above.\

Option 2: All information provided by developed country Parties shall be reviewed through a transparent review process followed by a multilateral assessment process, and result in a conclusion on compliance. All information provided by developing country Parties should be analysed through a transparent analysis process followed by a multilateral facilitative sharing of views, and result in a conclusion in a manner that is nonintrusive, non-punitive and respectful of national sovereignty, accounting for support received from developed country Parties.\

8. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall, on the basis of building on experience from the arrangements related to transparency under the Convention, and in accordance with the provisions in this Article, adopt common modalities, procedures and guidelines, as well as arrangements for transparency of action and support.\

9. The transparency arrangements under the Convention, including national communication and consultation, biennial update reports, international assessment and review and international consultation,

form part of the experience drawn upon for the development of modalities, procedures and paragraph 8 of this Article.\

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

11. Developed country Parties shall provide support to developing country Parties in the implementation of paragraph 8 of this Article.\

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

Article 10\

1. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall review the implementation of this Agreement to assess the collective progress towards achieving the long-term goals of the Agreement and its long-term goals. It shall do so in a comprehensive and facilitative manner, taking into account the needs and priorities of developing countries, and in the light of the principles of equity and equity.\

2. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall convene a global stocktake in 2023 and every five years thereafter unless otherwise decided by the Conference of the Parties serving as the meeting of the Parties to the Agreement.\

3. The outcome of the stocktake shall guide and inform Parties in updating and enhancing their national contributions in a determined manner, their actions and support in accordance with the relevant provisions of the Agreement, as well as in enhancing international cooperation for climate action.\

Article 11\

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

The mechanism referred to in paragraph 1 of this Article shall consist of a committee of experts, which shall be independent and facilitative in nature and function in a manner that is transparent, non-adversarial and non-judicial. The committee shall pay particular attention to the respective national capabilities and circumstances of Parties.\

3. The committee shall operate under modalities and procedures adopted by the Conference of the Parties serving as the meeting of the Parties to the Agreement at its first session and report annually to the Conference of the Parties serving as the meeting of the Parties to the Agreement.\

Article 12\

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 Bureau of the Conference of the Parties representing a Party to the Convention but, at the same time, 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 Conference of the Parties serving as the meeting of the Parties to the Agreement shall review the implementation of this Agreement and shall make, within its mandate, the decisions necessary to promote its effective implementation. It shall perform the functions assigned to it by the Convention 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 Conference of the Parties serving as the meeting of the Parties to the Agreement.\

6. The first session of the Conference of the Parties serving as the meeting of the Parties to the Agreement shall be held in 2023.\

convened by the secretariat in conjunction with the first session of the Conference of the Parties after the date of entry into force of this Agreement. Subsequent ordinary sessions of the Conference of the Parties serving as the meeting of the Parties to the Agreement shall be held in conjunction with the first session of the Conference of the Parties, unless otherwise decided by the Conference of the Parties. \

7. Extraordinary sessions of the Conference of the Parties serving as the meeting of the Parties shall be held at such other times as may be deemed necessary by the Conference of the Parties, at the written request of any Party, provided that the request is supported by a majority of the Parties. \

8. The United Nations, its specialized agencies and the International Atomic Energy Agency, and any member thereof or observers thereto not party to the Convention, may be represented at the Conference of the Parties serving as the meeting of the Parties to the Agreement as observers. Any entity which is not a member of the United Nations, but which is a member of any specialized agency, whether national or international, governmental or non-governmental, which is covered by this Agreement and which has informed the secretariat of its wish to be represented at the Conference of the Parties serving as the meeting of the Parties to the Agreement as an observer, may be admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure referred to in paragraph 5 of this Article. \

Article 13\

1. The secretariat established by Article 8 of the Convention shall serve as the secretariat of this Agreement. \

2. Article 8, paragraph 2, of the Convention on the functions of the secretariat, and Article 10 of the Convention on arrangements made for the functioning of the secretariat shall apply mutatis mutandis to this Agreement. The secretariat shall, in addition, exercise the functions assigned to it under Article 13 of the Convention. \

Article 14

1. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation established by Articles 9 and 10 of the Convention shall serve, respectively, as the subsidiary bodies for Scientific and Technological Advice and the Subsidiary Body for Implementation of this Agreement. The Convention relating to the functioning of these two bodies shall apply mutatis mutandis to 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 the meetings of the Conference of the Parties. \

2. Parties to the Convention that are not Parties to this Agreement may participate as observers in any session of the subsidiary bodies. When the subsidiary bodies serve as the subsidiary bodies for 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 functions assigned to them by the Convention regarding matters concerning this Agreement, any member of the bureaux of those subsidiary bodies who is not 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\

1. Subsidiary bodies or other institutional arrangements established by or under the Convention shall serve this Agreement upon a decision of the Conference of the Parties serving as the meeting of the Parties to the Agreement. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall specify the functions to be exercised by such bodies. \

2. The Conference of the Parties serving as the meeting of the Parties to the Agreement shall provide guidance to those subsidiary bodies and institutional arrangements. \

Article 16\

1. This Agreement shall be open for signature and subject to ratification, acceptance or accession by States and 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, in addition to its member States being a Party, shall be bound by all the obligations under this Agreement. Regional economic integration organizations with one or more member States that are Parties to this Agreement shall, in addition to 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. A substantial modification in the extent of their competence.

Article 18\

1. This Agreement shall enter into force on the thirtieth day after the date on which a sufficient number of Parties to the Convention which accounted in total for at least an estimated [55][70] percent of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession, but not earlier than 1 January 2020].

2. Solely for the limited purpose of paragraph 1 of this Article, "total global greenhouse gas emissions" shall mean the most up-to-date amount communicated under the Convention on or before the date of adoption of this Agreement by the Parties to the Convention.

3. For each State or regional economic integration organization that ratifies, accepts, approves or accedes thereto after the condition set out in paragraph 1 of this Article for entry into force of this 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.

4. 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\

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

Article 20\

1. Annexes to this Agreement shall form an integral part thereof and, unless otherwise provided, a reference to this Agreement constitutes at the same time a reference to any annexes thereto. Such annexes shall be restricted to lists, forms and any other material of a descriptive nature that is of a technical, scientific, procedural or administrative character.

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

Article 21\

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

Article 22\

1. Each Party shall have one vote, except as provided for 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\

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

Article 24\
 No reservations may be made to this Agreement.\

Article 25\
 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\
 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 [23]: from nltk.tokenize import sent_tokenize
```

```
In [24]: 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 [25]: words_UN_draft1 = UN_draft1.split()
        lost_damage_UN_draft1=Table().with_columns('United Nations Draft 1',words_UN_draft1)
        lost_damage_UN_draft1
```

```
Out[25]: United Nations Draft 1
        "DRAFT
        AGREEMENT[The
        Parties
        to
        this
        Agreement,Pp1
        Being
        Parties
        to
        the
        ... (7448 rows omitted)
```

```
In [38]: new_UN_draft1=[fast_tokenize(UN_draft1)]
        new_UN_draft1
```

```
Out[38]: [['DRAFT',
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```


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```

```
In [27]: model = gensim.models.Word2Vec(new_UN_draft1, size=100, window=5, min_count=1, sg=0, a
```

```
In [28]: model.most_similar(positive=['Parties'], negative=['shall'])
```

```
Out[28]: [('solutionse', 0.2967906594276428),
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```

```

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In [29]: model.most_similar(positive=['Parties'], negative=['should'])

Out[29]: [('underthe', 0.31416600942611694),
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In [30]: model.most_similar(positive=['Parties'], negative=['financial'])

Out[30]: [('perform', 0.2825096547603607),
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('decent', 0.267913818359375),
('Recognize', 0.2577438950538635),
('receive', 0.25266432762145996),
('actionsb', 0.23636193573474884),
('shallform', 0.22736886143684387),
('countries4', 0.22133800387382507),
('services', 0.2165687084197998),
('goal', 0.21585479378700256)]

In [31]: UN_draft1_tokens = [token for token,weight in model.most_similar(positive=['Parties'])

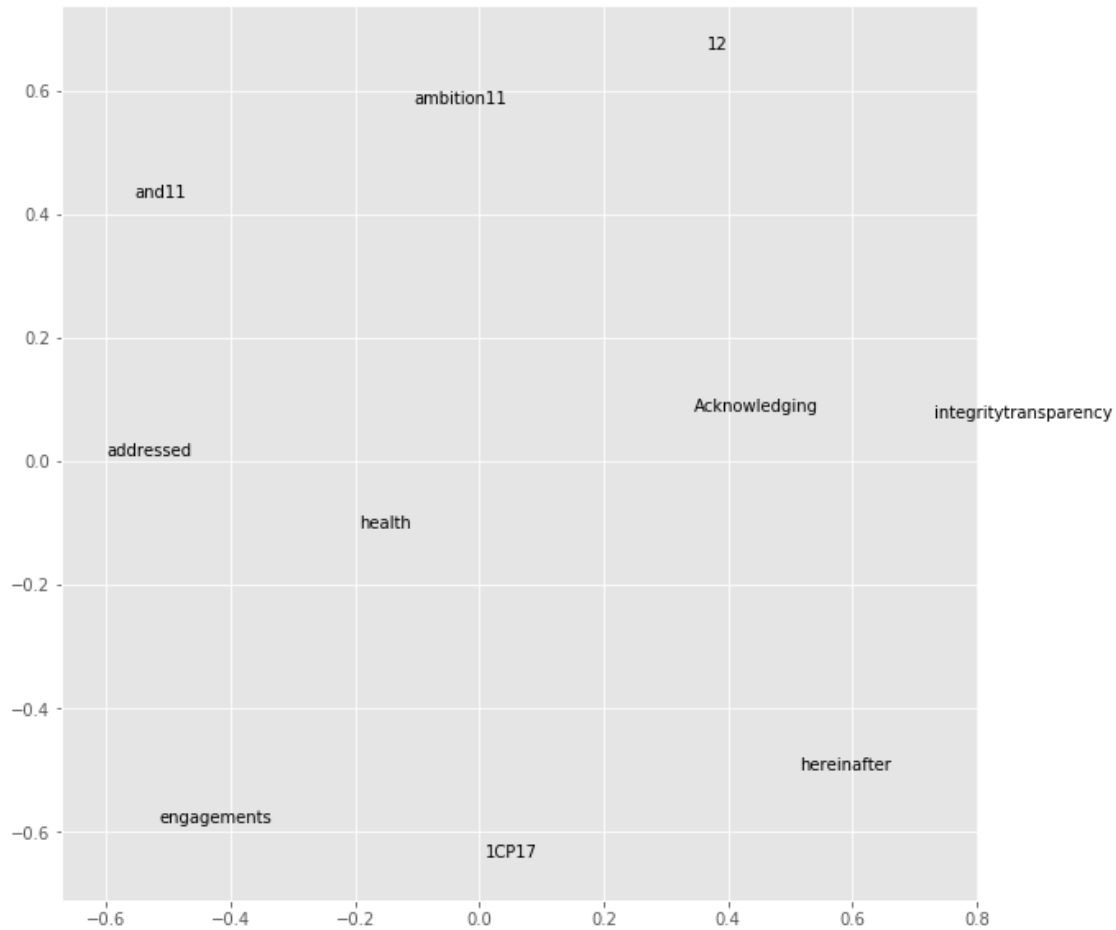
In [33]: vectors = [model[word] for word in UN_draft1_tokens]

In [34]: from sklearn.metrics import pairwise
dist_matrix = pairwise.pairwise_distances(vectors, metric='cosine')

In [35]: from sklearn.manifold import MDS
mds = MDS(n_components = 2, dissimilarity='precomputed')
embeddings = mds.fit_transform(dist_matrix)

In [37]: _, ax = plt.subplots(figsize=(10,10))
ax.scatter(embeddings[:,0], embeddings[:,1], alpha=0)
for i in range(len(vectors)):
    ax.annotate(UN_draft1_tokens[i], ((embeddings[i,0], embeddings[i,1])))

```



```
In [40]: words = UN_draft1.split()
lost_damage=Table().with_columns('Draft 1',words)
total_table_final=lost_damage.group('Draft 1').sort('count', descending=True)
total_table_final
```

```
Out[40]: Draft 1 | count
the          | 559
of           | 428
and          | 325
to           | 258
Parties      | 178
in           | 149
shall        | 116
as           | 104
this         | 102
by           | 85
... (1810 rows omitted)
```