



**QUNO**

Quaker United Nations Office

# A Negotiator's Toolkit

Engaging busy Ministries with concise  
arguments for urgent climate action

*edited by Lindsey Fielder Cook  
and Isobel Edwards*

May 2018  
*Second edition*

# Acknowledgements

This publication seeks to support climate negotiators in their work to engage busy Ministries with reasons for urgent, rights-based climate action. It offers concise, expert arguments referenced to published literature in ten climate related sectors.

Ministers and other decision makers face competing demands and priorities, but they may also be more receptive to one argument over another. One person may better respond to economic concerns, for example, another to scientific findings.

We hope this publication will help negotiators engage with colleagues back home on why urgent, rights-based climate action is critical to the long-term well-being and stability of their countries.

This publication was inspired by a side event in May 2017, at the climate change conference in Bonn, Germany. The event was co-hosted by QUNO, Brahma Kumaris and Newcastle University. This second edition includes additional information and references.

This remains a working document, and comments are welcome.

Lindsey Fielder Cook  
QUNO Representative for Climate Change  
[lfcook@quno.ch](mailto:lfcook@quno.ch)



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# The Climate Science Argument

This summary identifies scientific reasons for urgent action. It is based on the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report, on reports issued by the UNFCCC, related articles, and in collaboration with side event presenter IPCC author Professor Monika Rhein (Bremen University).

## *Where are we now?*

- Between 1880 and 2012, the global average surface temperature warmed to 0.85°C above preindustrial levels.<sup>1</sup> In 2016, this average reached 1.1°C above preindustrial levels.<sup>2</sup>
- 2017 was the second hottest year since 1880, when global measurements first became possible.<sup>3</sup> 2016 was the hottest.<sup>4</sup>
- Greenhouse gas (GHG) emissions remain the highest in human history. The annual growth of atmospheric (airborne) carbon dioxide in 2016 was well above the 2007-2016 average.<sup>5</sup> The concentration levels of carbon dioxide, methane, and nitrous oxide in Earth's atmosphere are unprecedented in (at least) the last 800,000 years.<sup>6</sup>
- Global emissions from fossil fuels and industry are increasing: 36.2 ± 2 GtCO<sub>2</sub> in 2016, 62% over 1990. The projection for 2017, 36.8 ± 2 GtCO<sub>2</sub>, is 2.0% higher than 2016.<sup>7</sup>
- Our current GHG emission rate is near the highest emissions scenario of the 5<sup>th</sup> Assessment Report (RCP 8.5)<sup>8</sup>, leading to a global average surface temperature rise of approximately 4.8°C by 2100, compared to pre-industrial levels.<sup>9</sup>
- Temperatures can rise higher after 2100. The more carbon we burn, the more surface temperatures will increase.<sup>10 11</sup>
- About 2/3 of the carbon dioxide emission quota consistent with a 2°C temperature limit has already been consumed. The total quota will likely be exhausted in 30 years at the current emission rate.<sup>12</sup>
- The rate of global average surface temperature rise between the last ice age (20,000 to 10,000 years ago) and the current warming period was approximately 0.5°C to 1°C per 1,000 years.<sup>13 14</sup> Without urgent emissions cuts we could warm +3°C in less than 100 years.

## *Why is this happening?*

- Since the 1950s<sup>15</sup>, human activities have been the dominant cause of observed warming. These activities include fossil fuel extraction and burning, black carbon, deforestation and forest degradation, intensive and animal agriculture, industry, transport, buildings<sup>16</sup>, and increasingly hydrofluorocarbons. Thus, the term “anthropogenic climate change.”
- Economic and population growth continue to be the most important drivers of increases in carbon dioxide emissions from fossil fuel combustion.<sup>17</sup>

## *How does this affect the ecosystems on which our lives depend?*

- The oceans have absorbed more than 90% of the energy accumulated between 1971 and 2010, and about 30% of the emitted anthropogenic carbon dioxide. This causes ocean acidification which threatens marine ecosystems<sup>18</sup>, on which livelihoods depend.

- The ocean's oxygen content (globally) declined by 2% in the last 50 years.<sup>19</sup> Increased carbon dioxide and warming oceans led to the greatest marine extinction, 252 million years ago.<sup>20</sup>
- The Arctic is experiencing the fastest rate of warming. This results in the melting of ice sheets, which raise sea levels, and the melting of permafrost, which releases carbon dioxide and methane. The Greenland ice sheet is predicted to melt completely with 1.6 degrees global warming.<sup>21</sup>
- Due to our human activities, the Earth is also experiencing environmental crises in land use change, soil erosion, chemical pollution (especially nitrogen), and the highest species extinction rate in our human history.<sup>22</sup>
- Current GHG emission levels, unless substantially reduced, will undermine our water resources and our ability to grow food and work outdoors<sup>23</sup>, threatening the collapse of ecosystems and the long-term survival of our current human civilization.

# The Economic Argument

This summary identifies why urgent, rights-based climate action makes good economic sense. It is based on a presentation by Yamide Dagnet of World Resources Institute (*The New Climate Economy project*), and related research.

*Why does urgent climate action make economic sense?*

- Seven of the ten costliest years since 1950 for global weather catastrophes occurred between 2000 and 2014.<sup>24</sup> The cumulative cost of weather and climate disasters in the USA alone was \$306.2 billion in 2017.<sup>25</sup>
- GHG emissions from oil, gas and the manufacturing of cement continue to rise, while emissions from coal are decreasing. In 2017, the emissions breakdown in the industry and energy sector was: coal (40%), oil (34%), gas (19%), cement (6%), flaring (1%).<sup>26</sup>
- Infrastructure construction is associated with more than 60% of the world's greenhouse gas emissions. This makes climate-smart, resilient infrastructure a critical tool for a more climate-resilient future, especially for the poorest and most vulnerable communities.<sup>27</sup>
- Climate-smart infrastructure means designing and building infrastructure with future climate projections in mind, instead of building infrastructure based on past

trends. Climate-smart design takes advantage of opportunities to reduce heat-trapping emissions and encourages innovative solutions to bring social, economic, health, and environmental benefits.<sup>28</sup>

- Climate-smart, resilient infrastructure underpins core economic activity, boosting growth and global demand and spurring innovation and efficiency.<sup>29</sup>
- The global South will account for roughly two-thirds of global infrastructure investment. Building climate-smart, resilient infrastructure is an excellent opportunity for developing countries to bypass inefficient and polluting systems.<sup>30</sup>

*The low-carbon transformation is already underway.*<sup>31</sup>

- After a decade of expansion, the amount of coal power under development saw a dramatic drop in 2016, mainly due to changes in China and India.<sup>32</sup>
- Renewable energy continues to get cheaper: solar and wind energy are now cost-competitive with fossil fuels in many regions.<sup>33</sup>

- The value of global fossil-fuel consumption subsidies in 2016 was estimated at around USD 260 billion. This estimate includes subsidies to fossil fuels that are consumed directly by end-users, or consumed as inputs to electricity generation.<sup>34</sup>
- Removing subsidies on fossil fuels will allow the development of an energy mix that reflects the true costs of each type of energy. It will also release fiscal resources that could be used to fund social protection, expanding access to affordable energy or promoting renewable energy.<sup>35</sup>
- The majority of proven coal, oil and gas reserves may be considered “unburnable” if global temperature increases are to be limited to 2° C. This could lead to “stranded carbon” investment assets which are no longer able to earn an economic return, as a result of changes associated with the transition to a low-carbon economy.<sup>36</sup>
- The Divest-Invest movement mobilizes private and public capital to speed the global energy transition from carbon intensive fossil fuels to clean, sustainable forms of energy compatible with a safe climate.<sup>37</sup> Fossil fuel divestment pledges now surpass USD 2.6 trillion.<sup>38</sup>

*Global economic paradigm and environmental damage*

- The prevailing economic model relies on a continual, exponential expansion of the economy. The global economy is almost five times the size it was half a century ago, and has already been accompanied by the degradation of an estimated 60% of the world's ecosystems. This economic growth is without historical precedent and is totally at odds with finite resources and the fragile ecology on which we depend for survival.<sup>39 40</sup>
- In order to achieve the aspirations of Agenda 2030, what is needed now is a dedicated initiative, backed (but not constrained) by national governments, to formulate a more relevant economic and development model or models.<sup>41</sup>
- Recently, the concept of a circular economy has gained traction as a solution that would ameliorate the burden on natural resources while still encouraging economic growth. The concept is simple: minimize the disposal of waste and the need for raw materials by keeping existing materials and assets in the production cycle.<sup>42</sup>

# The Food Security Argument

This summary outlines why urgent, rights-based climate action is critical for long term food security. It is based on a presentation by Teresa Anderson of ActionAid International, and related published research.

*Why is urgent climate action necessary to feed our current and future generations?*

- Through its impacts on agriculture, livelihoods and infrastructure, climate change threatens all dimensions of food security.<sup>43</sup>
- With the current average global temperature rise of 1°C, we experience 0-2% crop yield reductions every decade, or 14% by the end of this century.<sup>44</sup>
- With an average 2°C-2.7°C rise (at least 3-4°C locally in many areas), effects on crops would include widespread reduction of agricultural productivity and substantial risks to global food production and security. Such risks would be greatest for tropical countries.<sup>45</sup>
- With an average 4°C rise (at least 5-7°C locally in many areas), there are relatively few studies. However, it may be impossible for many countries to adapt above a 4°C or 5°C temperature rise.<sup>46</sup>

- By concentrating on changes in climate mean (averages), the full impacts of climate change on biological and human systems are probably being seriously underestimated for all regions worldwide.<sup>47</sup>

- In 2015-2016, 30% of the Earth's land area experienced drought (El Niño effect included), 14% of which was severe drought.<sup>48</sup>

*Climate change threatens our ability to grow and harvest our food*

- Rising temperatures affect the water cycle,<sup>49 50</sup> which can result in droughts, late rains and low rainfall; heavy rains, floods and cyclones; and false starts to rainy seasons.
- Temperature rises change the geographical adaptation of crops, which may need to shift to different production areas, within or across national boundaries.<sup>51</sup>
- Rising temperatures result in loss of land for cultivation. A one metre rise in sea level<sup>52</sup> would result<sup>53</sup>, for example, in a loss of up to 15% of

agricultural land in Egypt, 16% loss of national rice production in Bangladesh, and tens of thousands of hectares of lost agricultural land in China and Vietnam.

- Rising temperatures result in reduced fish yields due to ocean acidification and fish migration.<sup>54</sup> Worldwide, reduced crop and fish yields result in a loss of food security and livelihoods, in rising food prices, and more frequent, widespread and severe hunger emergencies.

- Human food and nutrition depend on biodiversity—both the agrobiodiversity of food species and the diversity of flora and fauna (soil organisms, pollinators, predators of pest species).<sup>55</sup>

- Crop pollination and seed setting stages are very temperature-sensitive.<sup>56</sup> 87 of the world's leading crops depend on insect pollination, with many dependent on just 1 or 2 species of bees.<sup>57</sup> Rising temperatures can disrupt the synchronisation of plant flowering and pollinator activity.

*GHG emissions*

- The global food system is responsible for up to one-third of GHG emissions. Packaging, storage and transport of food, and fertilizer manufacture, are all responsible, especially in developed countries, but food production *per se* is the greatest contributor.<sup>58</sup>

- Without urgent climate action, we risk a dangerous reliance on bioenergy with carbon capture and storage (BECCS) to meet the Paris agreement goal of staying under 1.5°C or 2°C.<sup>59</sup>

- Bioenergy production from biomass raises profound questions about carbon neutrality, land availability, competition with food production, and competing demands for bioenergy from the transport, heating, and industrial sectors. The logistics of collating and transporting vast quantities of bioenergy—equivalent to up to half of the total global primary energy consumption—are seldom addressed.<sup>60</sup>

# The Human Rights Argument

This summary outlines how urgent, rights-based action can protect people's lives, health, food and homes. It is based on a presentation by Benjamin Schachter of the Office of the High Commissioner for Human Rights, and related articles.

*How does climate change affect human rights?*

- Rising global temperatures threaten the effective enjoyment of human rights, including the right to life, the right to adequate food, the right to the enjoyment of the highest attainable standard of physical and mental health, the right to adequate housing, the right to self-determination, the rights to safe drinking water and sanitation, and the right to development.<sup>61</sup>

*What human rights obligations are triggered by the impacts of climate change?*

- Since human activities are responsible for most causes of current climate warming and its causes, and the limited time to act<sup>62,63</sup> is known to us, our choices now will define the ability of our children and all future generations to live on this planet.
- States and enterprises have moral and legal responsibilities to take effective actions to prevent the harmful human rights impacts of climate change.<sup>64</sup>

- International law entails obligations to act cooperatively to protect and advance fundamental human rights, including in the context of climate change and its effects on people's ability to exercise such rights.<sup>65</sup>

- Through the widespread ratification of international human rights treaties, States have committed to respect, protect and fulfil the human rights of all persons. The Paris Agreement and the 2030 Agenda for Sustainable Development highlight that this commitment extends to respecting, promoting and considering human rights in climate action.<sup>66</sup>

- Urgent, ambitious and rights-based climate action is the right thing to do legally, morally, and ethically because those who contributed the least to climate change are those who suffer the most. The consequences of our inaction now will fall hardest on children and future generations, especially on children already in vulnerable situations (children with disabilities, who are indigenous, who are girls, who are poor).<sup>67</sup>

*What is 'rights-based' climate action, and how does it make climate action more effective?*

- Incorporating human rights in climate policies and actions is known as a rights-based approach. If a human rights based approach is adopted from the outset, climate action can help improve lives and realise rights.<sup>68</sup>

- Integrating a rights-based approach to local, national and international policies promotes policy coherence, legitimacy and sustainable outcomes.<sup>69</sup> This is a "win-win" action.

- Based on the experience of the countries that have adopted constitutional rights to a healthy environment, recognition of the right has proved to have real advantages. It has raised the profile and importance of environmental protection and provided a basis for the enactment of stronger environmental laws. When applied by the judiciary, it has helped to provide a safety net to protect against gaps in statutory laws and created opportunities for better access to justice.<sup>70</sup>

*Human rights law demands we address the human impacts of rising temperatures*

- Unless the world's governments make urgent and ambitious emissions reductions, all the human rights safeguards in the world will not be enough to prevent grievous denials of human rights on a staggering scale. What is at stake for many people, especially in sub-Saharan Africa, low-lying areas and many small island developing states, is often their very existence.<sup>71</sup>

- Lack of resources (financial, human, technical and political) and failure to act in the face of preventable harm (starvation, drowning, diseases, displacement and death), reflects a lack of compassion, solidarity and commitment that must be addressed globally.<sup>72</sup>

- Environmental rights are enshrined in over 100 constitutions, yet in 2017, almost four people a week were killed defending their right to a clean and healthy environment.<sup>73</sup>

# The Peace & Conflict Argument

This summary explores how urgent, rights-based action can help sustain peace and avoid contributing to violent conflict. It is based on a presentation by Lindsey Fielder Cook at the Quaker United Nations Office, and on related research.

- Climate change is a direct threat in itself and a multiplier of many other threats—from poverty to displacement to conflict.<sup>74</sup>

- Urgent climate action is critical for sustaining peace. Worsening climate conditions directly threaten the realization of the Sustainable Development Goals (SDGs), and with them the conditions for peaceful societies.<sup>75</sup>

## *Climate change and conflict*

- “The impact of climate change on water and land, already visible in regions across the globe, will place increasing pressure on resource availability. To the extent that these changes will render vulnerable populations more vulnerable, especially those that rely on agriculture, it can prolong existing conflicts and hinder post-conflict reconstruction.”—(Dr. Elisabeth Gilmore, *pers. comm.*, 2017)
- Over the long term, climate change will result in more disruption, more instability and more displacement as impacts intensify.<sup>76</sup> There is an

emerging global consensus that climate change will stress economic, social, and political systems that underpin each nation state.<sup>77</sup>

- “Reducing greenhouse gases as rapidly as possible is probably the most urgent global disaster risk treatments. It is core to achieving the global targets in the Sendai Framework and of course to the Paris Agreement and the Sustainable Development Goals more broadly.”—(Robert Glasser, 2017)<sup>78</sup>

The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks.<sup>79</sup>

- “Rising global temperatures, changing precipitation patterns, climbing sea levels and more extreme weather events will intensify the challenges of global instability, hunger, poverty and conflict,” former Secretary of Defense Chuck Hagel said in a statement announcing the US Defense Department’s 2014 Climate Change Adaptation Roadmap.<sup>80</sup>

## *Prevention of violent conflict*

- Conflict in itself is not negative.<sup>81</sup> Conflict becomes destructive when root causes are not addressed, including a breakdown of communication among groups, damaging social relations and exacerbating tensions that can lead to violence.

- Prevention of destructive conflict around natural resources, including escalation to violence, can be understood as a process of peacebuilding—creating the personal and institutional capacities needed to handle conflict constructively and addressing the root causes that lead to destructive conflict such as inequality and marginalisation.<sup>82</sup>

- Addressing conflict over resources constructively not only helps to prevent violence but can also facilitate wider social change, building sustainable peace by bridging divides and changing attitudes between groups.<sup>83</sup>

- The extent to which these changes are likely to lead to destructive conflict will often depend on the capacity

of individuals, communities and institutions to respond to them in a positive way.<sup>84</sup>

## *Four approaches are critical:*

- Urgent, rights-based and appropriate burden-sharing climate action to reduce human created GHG emissions. The best way to diminish the threats posed by climate-fragility risks is to mitigate climate change.<sup>85</sup>

- Strong institutions. Where institutions and governments are unable to manage the stress, or absorb the shocks of a changing climate, the risks to the stability of states and societies will increase.<sup>86</sup>

- Rights-based approaches. Local, national and international policies that include a rights-based approach promote policy coherence, legitimacy and sustainable outcomes.<sup>87</sup>

- Adequate resources must be channelled into adaptation, water security and food security to ensure migration doesn’t become the only option for those affected by climate change.<sup>88</sup>

# The Gender Argument

This summary outlines the importance of gender-sensitive policies in urgent climate action. It is based on published research collated by Isobel Edwards, at the Quaker United Nations Office.

## *The gender gap*

- Climate change affects everyone. However, women and men may experience the impacts of climate change differently, with women often disproportionately affected.<sup>89</sup>
- This is because women, compared to men, often have limited access to resources, less access to justice, limited mobility, and limited voice in shaping decisions and in influencing policy.<sup>90</sup>

## *The impacts of climate change on women worldwide*

- Women tend to be poorer than men and experience higher poverty rates than men with the same characteristics.<sup>91</sup>
- Poor women in developing countries are often the most vulnerable<sup>92</sup> to climate impacts, with women and children 14 times more likely to die during natural disasters<sup>93</sup>, which are becoming more common as global temperatures rise.

- The impact of a storm, flood, drought or earthquake is more than twice as significant for poor people than anyone else. The poorest people are more likely to live in fragile housing in disaster-prone areas, and work in sectors susceptible to extreme weather events, like farming and agriculture.<sup>94</sup>
- Climate change has a greater impact on those most reliant on natural resources for their livelihoods.<sup>95</sup> Women, on average, make up 43%<sup>96</sup> of the agricultural labour force in developing countries, and around 50% in sub-Saharan Africa.<sup>97</sup>
- Informal sector jobs are often the worst hit—and slowest to recover—when disasters strike. A disproportionately large number of women work in the informal sector.<sup>98</sup>
- Climate change is also likely to cause an increase in health problems in affected societies, due to disruptions to food and water supplies as well as an increase in chances of a natural disaster.<sup>99</sup> It is likely that women's unpaid care work will increase further as climate change symptoms worsen.<sup>100</sup>

## *Gender balance for more effective and sustainable climate action*

- It has been demonstrated that policies and interventions accounting for gender differences have better chances of sustained and successful impact.<sup>101</sup>
- Building effective responses to climate change requires an understanding of how gender equality affects access to, and control of, institutional structures; social, cultural and formal networks; and decision-making processes.<sup>102</sup>

## *Gender balance in the UNFCCC process*

- As of 2015, only 12% of federal environment ministries globally were headed by women, limiting women's participation in these processes.<sup>103</sup> Female representation at COP20 was nearly 36% of all national delegates, and 26% of all Heads of Delegations.<sup>104</sup> At COP21, the Gender Composition report<sup>105</sup> showed those numbers dropped to 32% and 20% respectively.
- Of the three Conventions to evolve from the Earth Summit in 1992, the UNFCCC was the only one that lacked

mandates on women's rights and gender equality from the outset.<sup>106</sup>

- Decisions at COP20 mandated the *Lima Work Programme on Gender*, which aims at gender parity in participation and a gender-based approach in terms of vulnerability and adaptation to climate change, mitigation and the development and transfer of technologies.<sup>107</sup>
- The Lima Work Programme on Gender was reviewed at COP22<sup>108</sup> and the commitments in the programme were continued by developing a Gender Action Plan for a gender-appropriate climate policy within the next three years.
- At COP23 in 2017<sup>109</sup>, the first UN Climate Gender Action Plan was adopted, to highlight the role of women in climate action<sup>110</sup> and advance gender-responsive climate policy work.
- In March 2018, the Committee on the Elimination of Discrimination Against Women adopted the first general recommendation by a human rights treaty-body that focused on disaster risk reduction and climate change and the disproportionate impact these issues will have on women and girls.<sup>111</sup>



# The Civil Society Argument

This summary outlines how working partnerships between civil society and government can lead to more effective climate action. It is based on a presentation by Dr. Katharine Rietig of Newcastle University (UK), and related research.

*Partnerships between governments and civil society can lead to more successful climate action*

- Governments and civil society (non-state actors) could work more effectively and meaningfully together to implement climate action.<sup>112</sup>

- Working with civil society can mean that government policies work better to meet the needs of the general population, meaning these policies have more legitimacy and support from citizens.<sup>113 114</sup>

*Civil society participation in resource management*

- When civil society groups and local communities are not able to have a voice in resource management or hold decision makers accountable, implementation of good policy frameworks often remains limited. This can result in management rules and practices that are unclear, contradictory or perceived as illegitimate by certain groups.<sup>115</sup>

- Community involvement in decision making around natural resources is key to building peaceful, equitable and effective management. To make this involvement possible, the power dynamics between local communities and higher-level decision makers, as well as the dynamics between and within communities, need to be recognised and addressed.<sup>116</sup>

*What is gained?*

- Civil society can play the following roles in global environmental governance: (1) collecting, disseminating, and analyzing information; (2) providing input to agenda-setting and policy development processes; (3) performing operational functions; (4) assessing environmental conditions and monitoring compliance with environmental agreements; and (5) advocating environmental justice.<sup>117</sup>

- When governments engage with the interests of civil society, they can increase legitimacy and accountability of their policies without imposing pre-determined policies on their population.<sup>118</sup>

- Once the policies are clear, the implementation of policies can benefit from civil society inclusion and civil society can provide input, knowledge and experience from past implementation in various regions.<sup>119</sup>

- Environmental non-governmental organizations (NGOs) often have greater capacity than governments on areas of compliance and concerns. Also, the NGO network across sectors can facilitate implementation and can increase support for a policy.<sup>120</sup>

- It is critical that the climate policies are of benefit to the local communities, in order for them to help implement, support and ultimately ensure success of those actions.<sup>121</sup>

*Positive examples*

- One of the most important roles that civil society can play in global environmental governance is to provide up-to-date information on critical issues, helping to fill research and analytical gaps.<sup>122</sup>

- Governments often turn to NGOs to fill research gaps and facilitate effective

decision-making. Certain NGOs, such as the World Resources Institute (WRI) and the World Conservation Union (IUCN), have crafted their mandates around the role of information provider. These groups are dedicated to the production of accurate, up-to-date research and data on the most pressing environmental issues.<sup>123</sup>

- The Global Environment Outlook (GEO) of UNEP and the recently launched<sup>124</sup> UN Millennium Ecosystem Assessment are examples of formalized non-governmental assessment processes and inter-organizational networking.<sup>125</sup> Global system assessment is integrated with local environmental reporting. NGOs and other non-state actors such as academic and research institutions are the main contributors, providing reports and data analysis.<sup>126</sup>

- At the core of these processes lies a global network of collaborating groups responsible for regional inputs. Global system assessment is integrated with local environmental reporting. NGOs and other non-state actors such as academic and research institutions are the main contributors, providing reports and data analysis.<sup>127</sup>

# The Ethical Argument

This summary outlines the ethical and moral reasons for urgent climate action. It is based on a presentation by Maureen Goodman of the Brahma Kumaris Environment Initiative, and related reports and statements.

*What is an ethical framework for urgent action?*

- There are two key ethical, or moral, perspectives: responsibility towards the people of the Earth at this present moment, and our responsibility toward future generations.<sup>128</sup>
- We know our human activities and behaviours are driving current climate change, so we have an ethical duty, or moral obligation, to act urgently to protect all living species from a rate of global temperature rise that would lead to profound suffering and loss, transforming the environment and human civilization as we know it.<sup>129</sup>
- “Protecting our environment is an urgent moral imperative and a sacred duty for all people of faith and people of conscience.”—(Former UNSG Ban Ki-moon, 2015)<sup>130</sup>

*An ethical approach to political engagement*

- The current dominant world view has taken us to the current state of the Earth and it needs to transform.<sup>131</sup>

- “The deep psychic change needed to withdraw us from the fascination of the industrial world, and the deceptive gifts that it gives us, is too difficult for simply the avoidance of its difficulties or the attractions of its benefits. Eventually only our sense of the sacred will save us.”—(Thomas Berry, 2003, UNEP)<sup>132</sup>
- A transformation is needed in our behaviours, lifestyles, and our political and economic systems, to live more sustainably and fairly, and to flourish on the Earth.<sup>133</sup>
- “Ours can be the first generation to succeed in ending poverty; just as we are the last to have a chance of saving the planet...The future of humanity and of our planet lies in our hands... We have mapped the road to sustainable development; it will be for all of us to ensure that the journey is irreversible.”<sup>134</sup>
- An awareness of caring for the Earth can bring greater clarity in support of political decisions for the greater good. This awareness can help decision makers to move beyond short-term political interests or economic considerations, and to prioritize long-

term policies which are accountable to present and future generations.<sup>135</sup>

*A call to those with a voice*

- To collectively progress towards achieving the objectives of the Paris Agreement, Parties can protect and promote the rights of specific groups that are particularly exposed to the impacts of climate change, including the poorest, women, Indigenous peoples, children and migrants.<sup>136</sup>
- As those most vulnerable to anthropogenic climate change have contributed the least to the current crisis, those who have contributed the most have a responsibility to protect them.<sup>137</sup>
- Catastrophic anthropogenic climate change is not inevitable if we, the family of humanity, choose to act now. This challenge is a call to conscience, recognizing a personal and collective responsibility to ensure the poorest and most vulnerable peoples now, and all our future generations, do not suffer because of our actions.<sup>138</sup>

*An ethical voice*

- Several Indigenous world views state that true human well-being depends on the quality of our connection to the Earth and our attitude towards our relationship with nature.<sup>139</sup>
- We fail to respect the integrity of eco-systems as designed by nature and made abundant for the well-being of all. Our lives are dependent on water, clean air, safe food and complex systems which sustain all of these.<sup>140</sup>
- Many polluting activities may appear financially lucrative, but they are destroying the ability of our children and all future generations...to live on this Earth.<sup>141</sup>
- Whatever we do, whatever place we are in, we should ask first not what shall I do, but what does this place, what does this Earth require of me? In other words, we are called not simply to action, but to service.<sup>142 143</sup>

# The Healthier World Argument

## *The importance of a vision*

- Transforming fear, anger, and confusion into compassion, clarity, and hope will inspire environmental action.<sup>144</sup>
- The 2030 Agenda for Sustainable Development calls for transformative policies to deliver on our collective promise to build a life of dignity for all on a cleaner, greener planet.<sup>145</sup>
- The Paris Agreement provides an international framework for action in which Parties to the Agreement agree to aim for net zero carbon emissions shortly after mid-century.<sup>146</sup>
- The solutions to the negative effects of climate change are also the paths to a safer, healthier, cleaner and more prosperous future for all. However, for such a future to become reality, citizens in all countries, at all levels of government, society and enterprise, need to understand and be involved.<sup>147</sup>
- Many initiatives that reduce GHG emissions have benefits that go beyond contributing to climate change mitigation. Reducing air pollution

from emissions of fossil fuels and the accompanying health and environmental impacts is the most obvious co-benefit, but there are many other areas, including resource efficiency, economic security, sustainability of ecosystems or increased economic dynamism where positive impacts can be expected.<sup>148</sup>

- Benefits in addition to reduced risks from air pollution-related diseases from transport, housing, and energy systems as well as health benefits from healthier lifestyles (e.g. more physical activity) and diets. Harnessing climate change actions for health benefits can play a transformative role in the climate debate—strengthening public and policymaker will for action.<sup>149</sup>

- All the necessary technologies and all the necessary policies to reach zero carbon emissions are proven and waiting to go.<sup>150</sup> Providing clear evidence of existing workable solutions empowers citizens and policy-makers to act.<sup>151</sup>

- There are huge opportunities for near-term, rapid, and deep reductions today at little to modest costs, such

This argument is often forgotten in the fearful narrative of climate change, yet it is potentially the most powerful motivator for change. The following is based on reports by the United Nations, the European Union, the Centre for Alternative Technology, and related articles.

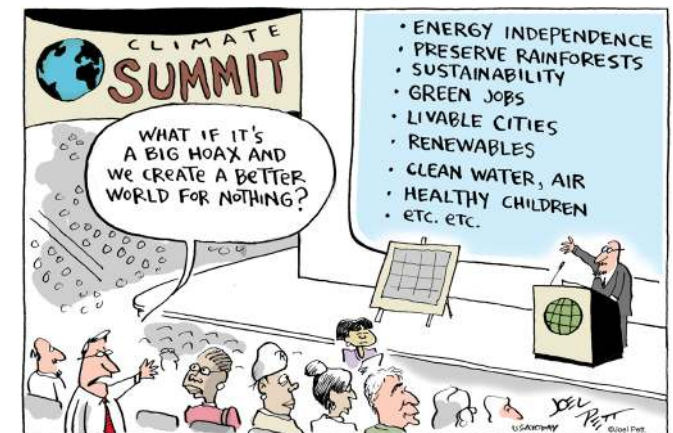
as improving energy efficiency, encouraging low-carbon behaviours, and continued deployment of renewable energy technologies.<sup>152</sup>

- Done right, the energy transition can generate funds to help deliver public services. Changing our approach to the production and ownership of energy—who generates it, and who profits—could have many wider benefits, including that communities could benefit financially from local renewable energy projects.<sup>153</sup>

- Transformative agricultural approaches include agroecology, which recognizes the contributions of small-scale farmers and provides a framework for integrating local and scientific innovation systems and mitigating the negative environmental effects of industrial agriculture.<sup>154 155 156</sup>

- Isolated, stressful, consumer-focused lifestyles can be replaced by a sense of connection with community and nature, delivering enormous benefits in physical and psychological well-being.<sup>157</sup>

- “Effective climate change responses can be a way to build a richer, more resilient, fundamentally more vibrant world. Access to low-carbon energy can improve health and livelihoods, while also protecting the climate.”—(Katharine Mach, pers. comm., IPCC AR5 Working II Technical Support Unit, 2017)



Joel Pett (2009)<sup>158</sup>

# Urgent Mitigation Policy

Urgent, rights-based climate action is essential to help stem global rising global temperatures. But what kind of climate action? This summary identifies research focused on transforming human activities at the root cause of climate change and many other environmental crises, while also highlighting concerns.

*“The most effective long-term solutions are not always the most obvious, nor the most complex.”—P. Hawken<sup>159</sup> The most effective short and long-term actions include:<sup>160</sup>*

- Rapid reduction of fossil fuel extraction and combustion<sup>161</sup>
- Sustainable economic and development models<sup>162</sup>
- Refrigerant management<sup>163</sup>
- Onshore wind turbines<sup>164</sup>
- Reduced food waste<sup>165</sup>
- A plant-rich diet<sup>166</sup>
- Restoration of tropical forests<sup>167 168</sup>
- Educating girls<sup>169</sup>
- Family planning<sup>170</sup>
- Energy efficiency<sup>171</sup>
- Rooftop solar<sup>172</sup>
- Solar farms<sup>173</sup>
- Sustainable agriculture practices<sup>174</sup>
- Restoration of temperate forests<sup>175</sup>
- Protection of peatland areas<sup>176</sup>
- Sustainable transport<sup>177</sup>
- Tropical staple tree regeneration<sup>178</sup>
- Afforestation<sup>179</sup>
- Clean cooking stoves<sup>180</sup>
- Offshore wind turbines<sup>181</sup>

- Solutions are not solely technological, they are also ecological, economic and social<sup>182</sup> actions which can lead to regenerative economic outcomes.<sup>183</sup> In all actions, it is critical to prioritize social inclusion and environmental protection in economic and development paradigms.<sup>184</sup>

- Humanity also needs to control the loss of forests, while stopping soil degradation. Restoring soil carbon levels should be included in the criteria for agriculture management.<sup>185</sup>

- The role of natural climate solutions have been underestimated. These include conservation, restoration, and improved land management actions that increase carbon storage and/or avoid greenhouse gas emissions across global forests, wetlands, grasslands, and agricultural lands, and can provide 37% of cost-effective CO<sub>2</sub> mitigation needed through 2030 for a >66% chance of holding warming to below 2 °C.<sup>186</sup>

- Behaviour, lifestyle and culture have a considerable influence on energy use and associated emissions, with high

mitigation potential...Emissions can be substantially lowered through changes in consumption patterns, adoption of energy savings measures, dietary change and reduction in food wastes.<sup>187</sup>

- Renewable energies (RE) are competing with fossil fuel industries that are subsidised both directly (government incentives) and indirectly (by not punishing polluters). REs generally receive fewer subsidies and less preferential political treatment. Increased government investment in clean energy—in the form of subsidies, loan assistance, and research and development—is needed.<sup>188</sup>

- The global movement for fossil fuel divestment engages institutions to move funds out of oil, coal and gas companies. Active institutions include universities, religious institutions, pension funds, local authorities and charitable foundations.<sup>189</sup>

*When climate action fails to address root causes of climate change*

- There is a danger that technological innovation today looks for solutions that help avoid the change needed. We need to change social, economic, political,

institutional, and legal areas if we are to tackle the roots of the problems we face.<sup>190</sup>

- Negative emission technologies (NETs) may have a useful role to play but, on the basis of current information, not at the levels required to compensate for inadequate mitigation measures.<sup>191</sup> Relying on NETs to compensate for failures to adequately mitigate emissions may have serious implications for future generations.<sup>192</sup>

- Although bio-energy and carbon capture storage (BECCS) is subject to scientific and political uncertainties, it dominates the scenario landscape. Its land-use impacts could include terrestrial species losses equivalent to, at least, a 2.8°C temperature rise, leading to difficult trade-offs between biodiversity loss and temperature rise. There is little robust analysis of the trade-offs between large-scale deployment of BECCS (and all negative-emission technologies) and the SDGs.<sup>193</sup>

- Avoiding efforts to address the root causes of climate change, and focusing on end-of pipe geoengineering technologies, is a political choice. It says that it is more acceptable to risk irreparable harm to our planet than alter the dominant economic system.<sup>194</sup>

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QUNO offices:

*In Geneva:*

13 Avenue du Mervelet  
1209 Geneva  
Switzerland

Tel: +41 22 748 4800  
Fax: +41 22 748 4819  
quno@quno.ch

*In New York:*

777 UN Plaza  
New York, NY 10017  
United States

Tel: +1 212 682 2745  
Fax: +1 212 983 0034  
qunony@afsc.org



@QuakerUNOffice / [www.quno.org](http://www.quno.org)

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Suggested citation: QUNO (2018), A Negotiator’s Toolkit,  
Second edition, (Quaker United Nations Office, Geneva).

