



**LEAVES, A Newsletter of the
INTERNATIONAL
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International Environment Forum A Baha'i inspired organization addressing
the environment and sustainable development

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From the Editor, Request for information for upcoming newsletters

This newsletter is an opportunity for IEF members to share their experiences, activities, and initiatives that are taking place at the community level on environment, climate change and sustainability. All members are welcome to contribute information about related activities, upcoming conferences, news from like-minded organizations, recommended websites, book reviews, etc. Please send information to newsletter@ief.org

Please share the *Leaves* newsletter and IEF membership information with family, friends, and associates and encourage interested persons to consider becoming a member of the IEF.

BIC/IEF Contributions to Talanoa Dialogue

<https://iefworld.org/Talanoa2>

Bonn, Germany, 6 May 2018

The Fijian presidency of COP23 under the UN Framework Convention on Climate Change launched the Talanoa Dialogue, named for a Fijian tradition of trust building through storytelling, to prepare governments for increasing ambition in their greenhouse gas reductions before COP24. The International Environment Forum submitted a first written contribution in March 2018: <https://iefworld.org/Talanoa1>. Face-to-face dialogues were then organized at the Bonn Climate Change Conference on 6 May 2018, with seven dialogues in circles each consisting of 30 state party representatives, with 5 representatives of other stakeholders in rotation each addressing one of three questions: Where are we? Where do we want to go? How do we get there? Each participant was given 3 minutes to tell a story, and could then take part in the following discussion. The stories were intended to be positive and encouraging, inspiring others to increase their ambition. The Talanoa Dialogue brought an example of constructive consultation sharing a diversity of perspectives and experience in support of a formal diplomatic negotiating process. Two IEF members participated in these dialogues.



Photo by [IISD/ENB | Kiara Worth](#)

The Bahá'í International Community, represented in the UNFCCC by the National Spiritual Assembly of the Bahá'ís of the United States, in partnership with the IEF, was accepted to participate in one of the dialogues on the question "How do we get there?" with IEF President Arthur Dahl as the representative. The following is the story shared in the dialogue in Bonn.

Story by Arthur Dahl representing BIC/IEF

My story is about faith-based organizations in the Bahá'í International Community, represented in the UNFCCC by the Bahá'ís of the United States, that are working around the world to build resilient communities and stimulate social action at the grassroots.

The International Environment Forum is a Bahá'í-inspired professional organization with members in over 70 countries including Fiji. Our members have worked for a decade developing educational materials on climate change and community resilience that incorporate interfaith, intercultural and indigenous perspectives, and empower local involvement and action. These are implemented on line, in local communities and, for example, in a national programme in Vanuatu. This experience could easily be replicated.

In many countries, political leaders do not want to get too far ahead of public opinion, and will only raise their ambitions if they know that they have public understanding and support. Informing the public about the science of climate change is not sufficient to change attitudes or behaviour if it is not coupled with messages with ethical, moral or spiritual content that trigger an emotional involvement and motivation to change. This requires public education that reaches wider constituencies beyond those already concerned about climate change. Religious communities and their faith-based organizations are already heavily involved in education, and can spread climate messages linked to their spiritual teachings, as in the Pope's Encyclical, the Islamic Declaration on Climate Change, and Bahá'í International Community statements on the topic. Indigenous communities, with deeply-held values and concern about climate change affecting their future, can also be assisted to share relevant climate messages.

Governments and the UNFCCC can identify such potential additional partners in public education about climate change and the need for action. These organizations and communities have strong ethical frameworks and public trust. They may need assistance to understand the science of climate change in culturally relevant ways, so that they can relate this to their own values and develop educational programmes to build motivation for change in individual lifestyles and consumption patterns, in support of government ambition. Our Bahá'í experience can serve as a model for similar action in other communities and countries.

We encourage governments to partner with the many faith-based, civil society and indigenous groups in their country to expand educational outreach on climate change, combining science and ethics, to build wide support for their enhanced commitments under the Paris Agreement.

IEF RESOURCES on climate change education referred to in the story

Courses on the Scientific and Spiritual Dimensions of Climate change

English: <https://iefworld.org/ssdcc0.html>

French: <https://iefworld.org/ccFr0>

Spanish: <https://iefworld.org/fl/ccSp.pdf>

Climate Change Disaster Risk Reduction in Vanuatu (case study): <https://iefworld.org/elcvanuatucc>

IEF Contributions to COP21 on resilience, accountability and education: <https://iefworld.org/cop21>

Story of IEF governing board member Sylvia Karlsson-Vinkhuyzen representing Wageningen University



Photo by IISD/ENB | Kiara Worth

IEF governing board member Sylvia Karlsson-Vinkhuyzen also participated in the Talanoa Dialogue representing Wageningen University where she teaches. She was in a circle addressing the question "Where are we?" She has a particular interest in the effectiveness of intergovernmental processes and holding

governments accountable for what they agree to. The following is her story.

This is the story of a species with a unique capacity for science and morality that inhabits a beautiful blue planet. As a result of a tumultuous history its members are divided into some 200 countries. These countries are finding more and more reasons to unite to address common challenges. The changing climate is one example. After many years of struggle they agreed on an accord with a common objective. Joy and celebrations! In this accord countries accepted to do their very best to address climate change. As was their habit – however – they did not want to prescribe how much each country should do.

So to make sure that the total contributions are sufficient to reach their common objective they created a mechanism of global reflection on past action every five years. Each country then has to consider the outcome of this when deciding how much they will do next. This is a collective accountability mechanism. Accountability can be defined as being about telling a story, based on some obligation and with some consequences.

We are now in a trial run of this mechanism. This we know. But we do not know how obligatory story telling at global level can have sufficient national consequences. We can develop two sets of questions to find out.

First, how do we tell our stories and reflect on them at the global level?

- How do we create an environment of amity and trust for sharing stories of both failure and success for mutual learning?*
- How earnest and uplifting can we make our collective deliberations based on these stories?*

Second, how do we bring the global reflection home to our countries?

- How open and timely are our national climate planning cycles to consider the outcome of the global reflection?*
- How much do parliamentarians and other domestic actors support considering national responsibilities in light of a global perspective? And how can these actors hold the government to account for its climate policy?*

Even more relevant is: how do we hold ourselves to account? Do we regularly look ourselves in the mirror, reflect on our own actions and compare those to our ethical standards? And if we find a mismatch do we strengthen our pledge to do our best to support the Paris Agreement?

Finally, do we go home from here and have uplifting and meaningful conversations with our family members, co-workers, friends and strangers to accompany others towards such self-reflection? Then we can say this process is about facilitative accountability.

The Fiji-inspired Talanoa Dialogue is quite close to the Bahá'í concept of consultation in a constructive spirit of sharing diverse experiences in support of decision-making, explicitly asking for respectful and constructive interactions, building empathy and trust as the objective and avoiding naming and shaming. In a reflection session on the Dialogue on 8 May all countries expressed appreciation for the approach and several pointed out how it added emotional aspects and values as important. As one delegate said: "We went into the dialogue knowing and came out understanding." Some governments made proposals to continue the Talanoa Dialogue process beyond COP24, but in this year there is strong encouragement to organize Talanoa Dialogues at national and local levels. You all might explore if there are opportunities where you are to participate.

The Importance of Education for Social Change: A Statement by the International Environment Forum for the Talanoa Dialogue

<http://wilmetteinstitute.org/the-importance-of-education-for-social-change-a-statement-by-the-international-environment-forum-for-the-talanoa-dialogue/>



April 28, 2018_by Christine Muller

The Wilmette Institute and two of its courses are mentioned by the Bahá'í-inspired International Environment Forum (IEF) in its eleven-paragraph contribution to the Talanoa Dialogue. The Talanoa Dialogue, launched at the UN Climate Change Conference (COP23) in Bonn, Germany, in November 2017, will provide helpful input to the December 2018 Climate Conference in Poland (COP24) (more on that below).

After pointing out that it has “worked for more than twenty years to bring science, ethics, and spirituality together” to bear on the problem of global warming, the IEF asserts that it has created “comprehensive online courses on Climate Change and on Sustainable Development offered annually by the Wilmette Institute. These online courses have included participants from many countries including Afghanistan, Cameroon, Laos, Pakistan, the Philippines, and Singapore. Such initiatives would be easy to scale up with other partners.” “One important objective of these courses,” the IEF statement explains, is to impart basic knowledge about climate change and how it exacerbates many other environmental and social problems. But, as social science confirms, knowledge is only an essential prerequisite, not the decisive factor in motivation for action. People often despair when they are confronted with the immensity of the climate crisis and the seemingly insurmountable efforts needed to mitigate it. Despair results in a paralysis of will, if not denial. From the beginning[,] therefore, these courses have included a spiritual dimension from an interfaith perspective and discussed the ethical imperative for climate action and sustainable development. The faith perspective connects climate action with people’s hearts, with their values and world view. It touches people’s core, so that the motivation for action becomes strong and enduring. It also opens up a vision of a just, sustainable, and peaceful world, a goal worthy of effort and sacrifice. . .

Participants in the Wilmette Institute courses **Climate Change** and **Sustainable Development and the Prosperity of Humankind** have been reaching out to their local communities to find ways to integrate climate change awareness in their community activities. With the inclusion of their actions in the IEF’s statement, they can inspire others in their educational efforts to build momentum to effectively address climate change and to build a spiritual and environmentally sustainable civilization.



“All these courses,” the IEF concludes, aim to elevate the level of knowledge, capacity, and motivation to take effective climate action among increasing numbers of people and to empower them to become strong protagonists of sustainable development. Governments should reach out to the many partners in faith-based organizations, indigenous communities and civil society who can help to spread values-based education about the science and ethics of climate change. This can inspire positive action in communities to begin the transformation to a carbon-neutral sustainable society from the bottom up, while

encouraging ambitious climate leadership from their governments.

What Is the Talanoa Dialogue? Talanoa is a Pacific Island tradition:

Talanoa is a traditional word used in Fiji and across the Pacific to reflect a process of inclusive, participatory and transparent dialogue. The purpose of Talanoa is to share stories, build empathy and to make wise decisions for the collective good. The process of Talanoa involves the sharing of ideas, skills and experience through storytelling.

During the process, participants build trust and advance knowledge through empathy and understanding. Blaming others and making critical observations are inconsistent with building mutual trust and respect, and therefore inconsistent with the Talanoa concept. Talanoa fosters stability and inclusiveness in dialogue by creating a safe space that embraces mutual respect for a platform for decision making for a greater good.



Everyone in Talanoa Dialogue is encouraged to participate: people representing businesses, investors, cities, and regions, as well as those in civil society. The method of the Talanoa Dialogue builds unity, trust, and a foundation for effective action. It shares some elements of Bahá’í consultation.

The stories, positive experiences, and ideas shared will be summarized and submitted in a statement for the political leaders at the COP24.

The Significance of the Talanoa Dialogue. The international community is ready to take stronger action on climate change, but there are many road blocks. At the 2015 Climate Change Conference in Paris, 195 nations committed to specific goals to reduce their carbon emissions. But, even if fully implemented, these Nationally Determined Contributions are expected to still bring us to a 3°C warming compared to pre-industrial times, a scenario we must absolutely avoid if we want to assure a human civilization in the future. These Nationally Determined Contributions must be significantly strengthened. At the end of this year, the world's political leaders will discuss the strengthening of these goals at the UN Climate Change Conference (COP24) in Katowice, Poland.

The statement of the International Environment Forum that refers to the Wilmette Institute's courses is one of many contributions to the Talanoa Dialogue that will be included in a summary statement provided to the political leaders at the COP24 in Poland later this year.



Humans and Island Environments

16 – 20 April 2018, Honolulu, Hawai'i

IEF members Tara Palembe of the UK and Falkland Islands (and previously of Saint Helena), and Arthur Dahl, who worked for many years in the Pacific Islands, were among 200 participants in the 7th International Conference on Environmental Future: Humans and Island Environments, in Honolulu, Hawai'i, on 16-20 April 2018

(<http://manoa.hawaii.edu/7ICEF/>). Arthur presented a keynote paper previously commissioned for the conference

on "Island Conservation Issues in International Conventions and Agreements" published in *Environmental Conservation* 44(3):267-285, September 2017, theme issue on Humans and Island Environments, doi:10.1017/S0376892917000224. The conference provided an opportunity to explore people and their interactions with island environments from the many different perspectives of the natural and social sciences and arts. The impacts of climate change on islands and the threats to their human populations were a major theme, like a tragedy being played out in slow motion. Two films were projected, one on the experience of a village in Vanuatu with climate change, the other the film of a poetic dance performance at the Bergen International Festival called "*Moana: The Rising of the Sea*", reflecting the feelings of those losing their land, their country and their culture as the sea level rises. Pictures from the conference can be seen at <http://yabaha.net/dahl/travel/t2018/Honolulu/Honolulu.html>.

Organized by the Foundation for Environmental Conservation (FEC), East-West Center, the University of Hawai'i at Mānoa, University of Hawai'i Sea Grant College Program, and the Hawai'i Institute of Marine Biology the 7th International Conference on Environmental Future (7ICEF) advanced the global and multi-disciplinary conversation around environmental futures with a specific focus in 2018 on 'Humans and Island Environments'. The conference was held from the 16 – 20 April 2018 in Honolulu, Hawai'i, at the East-West Center's Hawai'i Imin International Conference Center.

The 7ICEF aimed to provide a forum for discussion and debate on the current and future issues surrounding island environments, bringing together islanders, researchers, managers, and NGOs from a broad array of disciplines and fields. The underlying questions are:

1. How have islands aided our understanding of human-environment interactions?
2. What are the latest directions in island biological and cultural conservation?
3. Where should island conservation efforts be focused? and
4. What conservation lessons do islands have for the rest of the world?

In advance of the conference, a review article for each of 18 conference themes has been published in the journal *Environmental Conservation*. These papers were presented at the conference together with other related talks, and there was dedicated time in each themed session for discussions, and question and answers. The final day of the conference involved workshop sessions and a webcast panel discussion bringing together some of the unifying themes and messages.

7ICEF is a partnership of the Foundation for Environmental Conservation, Newcastle University Institute for Sustainability, East-West Center, and the University of Hawai'i at Mānoa, Hawai'i Institute of Marine Biology, University of Hawai'i Sea Grant College Program, Center for Pacific Islands Studies, Pacific Science Association, Pacific Islands Climate Science Center. and the Water Research Resources Center. For more information please email icef7@foundationforec.org.

The **Foundation for Environmental Conservation** (FEC) takes a global and holistic approach to improving the understanding of all issues related to the conservation of the environment. To this end, it owns the journal Environmental Conservation and organises the International Conferences on Environmental Future. The Foundation is based in Switzerland, where it was founded in 1975, and is non-profit and tax-exempt by authority of the Council of State of the Republic and Canton of Vaud and is perpetually under Swiss Federal Government surveillance by the Department of the Interior, Berne.

Contact the Foundation: The Foundation for Environmental Conservation, 1 Rue de l'Avenir, 1110 Morges Switzerland, Fax: +41(0)21 86666616, Email: polunin@btinternet.com

Honolulu Botanical Garden

We spent a morning climbing trails in the Honolulu Botanical Garden to enjoy decorative and economically useful plants from around the world.



IEF member Tara Palembe (center); YongLong Lu (Chinese Academy of Sciences) and Ilan Kelman (right); Gudrun Petursdottir (Iceland, second from left)

ICEF Conference

The conference was held at the East-West Center, with both plenary and parallel sessions. Arthur Dahl gave the keynote in the session on Island Conservation Issues in International Conventions and Agreements, followed by a number of other papers.



Session rooms; the closing panel

After devastating hurricane, community unites in reconstruction



BWNS To read the story online or view more photos, visit news.bahai.org.

ROSEAU, Dominica, 13 April 2018, (BWNS) — Hurricane Maria, a Category 5 storm, was one of the most severe Atlantic hurricanes on record. When it swept through the Caribbean some seven months ago, the destruction it left in its wake was staggering—homes destroyed, agricultural fields ruined, and communities decimated. International media coverage at the time rightfully focused on the loss and tragedy that the people of the islands had suffered.

But in the months since, another story has unfolded in the Caribbean—one that is hopeful, positive, and not commonly told. It is the story of communities, throughout

the islands, that have discovered in tragedy the power of unity, cooperation, and collective action to rebuild the physical environment and strengthen the social and spiritual connections that bind neighbors together. It is these connections that are essential for resilience in times of trial.

When natural disasters strike, communities that are united in their efforts “are more capable of taking meaningful and effective steps to respond and recover,” wrote the Baha’i International Community. The island of Dominica is one such example. Though relatively small in size, the local Baha’i communities on the island saw themselves not as helpless victims, but as protagonists in the transformation of their physical and social environments.

In the Kalinago territory of Dominica, a primarily rural and indigenous region that was particularly hard hit by Hurricane Maria, aid was slow to reach the area in the storm’s aftermath, with food, water, and other supplies that were earmarked for the region never making it out of Roseau, the capital city.

Recognizing the critical needs of their neighbors in the weeks following the storm, the Baha’is in the area were able to bring together community leaders, neighbors, friends, and others to consult on what they could do given the resources available to them. They decided to build several greenhouses to quickly re-establish food crops that had been decimated by the storm. Several residents offered their land to be used for the greenhouses where seeds could be planted and also plots of land where, later, the resulting seedlings could be transplanted.

“Building the greenhouses brought the community together in a profound way,” explained Siila Knight,

(BIC) in a [statement](#) published in May 2016.

“[E]xperience has shown that people can exhibit remarkable resilience, selflessness, resourcefulness, and creativity in such times.” a Baha’i from Barbados who visited Dominica to provide logistical support on behalf of the BIC. “Neighbors and friends joined together and worked from early morning until evening, bringing whatever materials they could spare or salvage and sawing planks from fallen coconut palms. After finishing their work for the evening, they would gather again for collective prayers.”

“It was very touching,” she continued. “Somehow everyone could feel the spiritual atmosphere while working together.”

Drawing on what was being learned in Kalinago, the Newtown neighborhood in Roseau also gathered to consult about how its inhabitants could take charge of the reconstruction efforts in their own community. On a Sunday in early January, dozens in the neighborhood discussed what needed to be done most urgently in the wake of the damage left by Hurricane Maria.

As residents consulted, there was hope present at the meeting in Newtown. Together they made plans to remove the logs and rubbish that were clogging the harbor and blocking access to the ocean, which is vital to their fishing community. Inspired by the work in the Kalinago territory, they decided that they could use some of the lumber retrieved from the bay to build a greenhouse where seeds could

be sprouted rapidly and distributed for planting at farms whose crops had been destroyed.

“I’ve seen how all of these efforts have given everyone hope,” said Ms. Knight, who has been involved in the reconstruction work taking place both communities. The community witnessed firsthand the power of consultation to solve difficult problems and foster a collective will for action.

By March, the Newtown neighborhood, with some financial and logistical assistance from the BIC, had made substantial progress in addressing those aspects of the reconstruction that were possible for the local inhabitants to carry out themselves. They also arranged for therapists to come to the community and provide counselling for those who had experienced tragic loss from the devastation of the hurricane.

Both communities quickly found that these projects provided not just practical assistance, but also a space for neighbors and friends to gather, reflect, pray, and study. In the Kalinago territory, the greenhouses became a collective rallying point. The community began to hold moral and spiritual education classes for children and young adolescents

on the site, as well as prayer gatherings open to all. They would set up an array of seats from sawn tree stumps.

At first, the only seeds they could obtain for the greenhouses were for bok choy, a vegetable unfamiliar to the people of the region. But they planted it anyway, and soon developed recipes for the leafy green that families shared with each other. Later they were able to plant additional crops such as pumpkins, beans, carrots, cabbages, lettuce, watermelon, chives, tomatoes, parsley, and okra.

In the months since the greenhouses were constructed, the seedlings grown there have been used to establish crops and provide food for the inhabitants of several villages in the region. The community has also worked to assist other endeavors, such as building a new roof for the community library and obtaining supplies for a few schools in the territory.

Voicing an opinion held by many, an inhabitant of a village the Kalinago territory shared: “What we have done together with the Baha’is—this is the first time that we have seen someone make a promise to help and actually fulfil it.”

“Economic Life: Reflections on the House of Justice Message of 1 March 2017”

IEF member Gregory Dahl, a retired economist with the International Monetary Fund, gave an excellent Wilmette Institute webinar, which can be viewed at <http://wilmetteinstitute.org/gregory-dahl-economic-life-reflections-on-the-house-of-justice-message-of-1-march-2017/>.

Sunday, April 22, 2018

Watch on YouTube: [Web Talk](#)

[View/Download PDF of Slide Show](#)

In their message to the Bahá’ís of the World of 1 March 2017, the Universal House of Justice calls on us to “examine the implications of the Revelation of Bahá’u’lláh for economic life” and to exert “strenuous effort... to put His teachings into effect *today*.” (Emphasis added) This Web talk will examine different aspects of this call in the context of concepts introduced by the House of Justice in earlier messages, such as the central role of community-building, the need for all—individuals, communities and institutions—to participate in the process, the importance of everyone acquiring knowledge and participating in its creation through action and reflection, and the need to ensure that the spiritual and material aspects of our lives are coherent.

These concepts are radical and dramatically different from the usual concepts of development and social change. There is no mention in the 1 March 2017 message of economic theories or experts, nor of top-down initiatives or political movements. Although the realization of the Bahá’í World Commonwealth of the future will require new economic systems to ensure economic justice, the House of Justice indicates that its “eventual emergence” will depend on the efforts we make now. The call is for Bahá’ís to increasingly contribute to economic justice and social progress in their own lives and communities “using the opportunities their circumstances offer them”. This Web talk will explore some of the ways we might be able to respond to this call, drawing on a range of Bahá’í principles that appear relevant.

About Greg Dahl's Web Talk on "Economic Life: Reflections on the Universal House of Justice Message of March 1, 2017"

<http://wilmetteinstitute.org/our-email-box-about-greg-dahl-s-web-talk-on-economic-life-reflections-on-the-universal-house-of-justice-message-of-march-1-2017/> April 28, 2018

If you think economics is for the experts, you may change your mind when you listen to Gregory C. Dahl discuss the topic in his recent Web Talk "Economic Life: Reflection on the Universal House of Justice Message of March 1, 2017." One of his listeners, Karen Dingwell, had this to say about the talk: "My deep appreciation to the Institute Committee for providing such deepening opportunities. I began to take notes but was not quick enough. Does Mr. Dahl share his slide with those who request it or perhaps sends a transcript of his presentation, upon request?"

The answer to the first question is, yes, a recording of the talk and the slides are available on the Wilmette Institute's web page. As for the second question: Mr. Dahl has made available a link on his website to his article on the topic, "New Directions for Economics." that will appear in a forthcoming issue of the *Journal of Bahá'í Studies*. His summary of the forthcoming article is pretty much a summary of his Web Talk: Recent developments in both the Bahá'í community and the field of economics have opened up new vistas in the application of Bahá'í principles to economic questions, both in theory and in practice. The Bahá'í community has grown enough that the Universal House of Justice, in its 1 March 2017 message, has called on Bahá'ís to concern themselves increasingly with the inequalities in the world and to bring their personal lives and the actions of their Bahá'í communities more in line with the high moral standards and principles of compassion and service in the teachings of their Faith. At the same time, the economics profession is more open to new directions of thought and research following the financial crisis of 2007–08 and the subsequent global recession, which exposed the shortcomings of the macroeconomic models that the profession had spent the previous several decades constructing. Some of the fields that appear most fertile for the application of Bahá'í principles to current economic problems are reviewed in this article.

Greg divided his Web Talk into three parts:

- Some key concepts (mental frameworks or habits of thought, systems versus processes, and knowledge and learning).
- Some key concepts (Bahá'í context—Bahá'í teachings on economics and social action and learning about growth).
- The major letter from the Universal House of Justice, dated March 1, 2017.

Throughout his talk, Greg discussed many quotations from the Bahá'í writings (his PowerPoint made them quite accessible) and occasionally made reference to writers in the field of economics. The question-and-answer session after the talk was quite spirited and covered many aspects of economics. If you haven't yet read the March 1, 2017, letter or if you didn't know quite what to make of it, Greg's Web Talk will open the door to an increased understanding of a new phase of development in Bahá'í communities.



Gregory Dahl is author of *One World, One People: How Globalization is Shaping Our Future* (Bahá'í Publishing 2007), which is listed as recommended reading in the "What Bahá'ís Believe" section of bahai.org, as well as numerous articles. After studying economics at Harvard, he pursued a 27-year career as an economist and senior official of the International Monetary Fund (IMF), working with top-level government officials in different areas of the globe to try to resolve economic problems and promote development. He served as the resident representative of the IMF in Haïti, Sierra Leone, Bulgaria and Madagascar for a total of 10 years. His IMF position gave him first-hand experience with the practical dilemmas faced by leaders as well as their human and often moral shortcomings in dealing with those dilemmas. He is a second generation Bahá'í and has traveled and visited Bahá'í communities in over 100 countries. He served on the National Spiritual Assembly of Bulgaria for 10 years and as its secretary for 5 years, and has been a Deputy Trustee of Ḥuqúqu'lláh since 2008. He currently lives in the Czech Republic with his family.

Virginia IPL (Interfaith Power & Light) & Green Muslims share Ramadan Creation Care Calendar



This year, VA IPL was fortunate to collaborate with Green Muslims on a Ramadan Creation Care Calendar (pdf).

Please share this link and contact information with your networks!

<http://vaip.org/wp-content/uploads/2018/04/2018-VA-Ramadan-Calendar-v3.pdf>

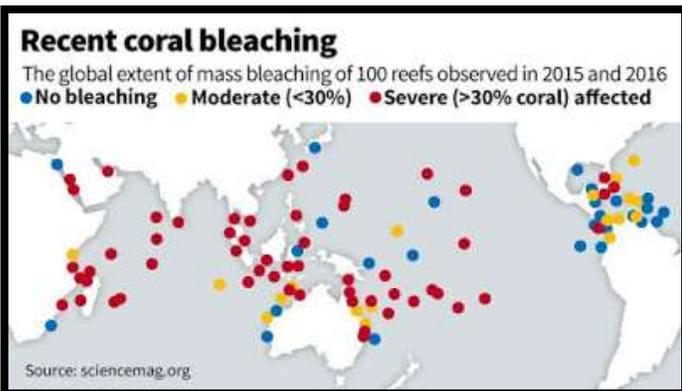
or contact **Green Muslims** <contact@greenmuslims.org>

What goes up must come down: It's time for a carbon drawdown budget

http://www.climatecodered.org/2018/05/what-goes-up-must-come-down-its-time.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+ClimateCodeRed+%28climate+code+red%29

10 May 2018

What goes up must come down: It's time for a carbon drawdown budget



by David Spratt

There is no carbon budget left for 1.5°C climate warming target, which means that to achieve this outcome every tonne of emissions must be matched by a tonne of drawdown of atmospheric carbon from now on. For that reason, carbon budgets and emissions target should be complemented by a **carbon drawdown budget** and target.

That's the proposal made by Breakthrough, the Melbourne-based National Centre for Climate

Restoration, to the Victorian climate change targets 2021-2030 expert panel, last week.

In the submission, Breakthrough established that:

- 1.5°C of climate warming is not safe;
- There is no carbon budget remaining for 1.5°C, so **“What goes up must come down”**;
- “Overshoot” in emission reduction scenarios should be minimised in extent and duration to avoid tipping points that may be irreversible on human time-frames.

Here's the story in more detail.

1. 1.5°C of climate warming is not safe

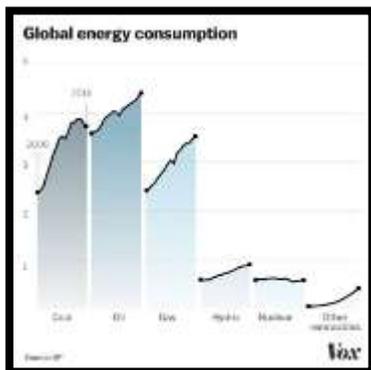
The Paris Agreement has a policy goal of 1.5–2°C, but even 1.5°C is far from safe and is not a satisfactory target:

- In 2015, researchers looked at the damage to system elements — including water security, staple crops, land, coral reefs, vegetation and UNESCO World Heritage sites — as the temperature increases. They found all the damage from climate change to vulnerable categories like coral reefs, freshwater availability and plant life could happen before 2°C warming is reached, and much of it before 1.5°C warming.
- In 2013, Australian scientists contributed to an important research paper which found that preserving more than 10% of coral reefs worldwide would require limiting warming to below 1.5°C. Recent research found that the surge in ocean warming around the Great Barrier Reef in 2016-17, which led to the loss of half of the 2015 reef area, has a 31% probability of occurring in any year at just the current level of warming. In other words, severe bleaching and coral loss is likely on average every 3–4 years at the present level of warming (1–1.1°C), whereas corals take 10–15 years to recover from such events.
- There is evidence that a 1.5°C global rise in temperature is likely to cause widespread thawing of continuous permafrost as far north as 60°N. At 1.5°C, the loss of permafrost area is estimated to be four million square kilometres.
- At 1.5°C, it is very likely that conclusions first aired in 2014 — that sections of the West Antarctic Ice Sheet (WAIS) have already passed their tipping points for a multi-metre sea-level rise — will have been confirmed. Four years ago scientists found that "the retreat of ice in the Amundsen Sea sector of WAIS was unstoppable, with major consequences – it will mean that sea levels will rise one metre worldwide... Its disappearance will likely trigger the collapse of the rest of the West Antarctic ice sheet, which comes with a sea-level rise of between 3–5 metres. Such an event will displace millions of people worldwide."
- By 1.5°C, a sea-level rise of many metres, and perhaps tens of metres will have been locked into the system. In past climates, carbon dioxide (CO₂) levels of around 400 parts per million (ppm) have been associated with sea levels around 25 metres above the present. Prof. Kenneth G. Miller notes that "the natural state of the Earth with present CO₂ levels is one with sea levels about 20 meters higher than at present". The expected sea-level rise this century is generally in the range of one to two metres, but higher increases cannot be ruled out. The US military, for example, uses one- and two-metre sea-level-rise scenarios. The US NOAA provides an "extreme" scenario of 2.5 metres sea level rise by 2100.
- On carbon cycle feedbacks, it is worth noting recent work which shows that some tropical forests — in the Congo, the Amazon, and in Southeast Asia — have already shifted to a net carbon source, and recent work on a soil carbon feedback in a 26-year soil-warming experiment in a mid-latitude hardwood forest, in which warming resulted in a complex pattern of net carbon loss from the soil, supporting projections of a long-term, positive carbon feedback from similar ecosystems as the world warms.
- At the current warming of just over 1°C compared to the late nineteenth century, Earth is now approximately 0.5°C warmer than the maximum of the Holocene (the period of relatively stable temperatures over the last nine thousands years and the period of human civilisation), and as warm as it was during the prior Eemian interglacial period, when sea level reached 6-9 meters higher than today. It would be precautionary to establish a warming goal of less than 0.5°C, with the aim of cooling Earth back to this safe zone at the greatest possible speed.

2. There is no carbon budget remaining for 1.5°C, so "What goes up must come down"

There is no carbon budget for 1.5°C, which means that to achieve this outcome, from now on every tonne of emissions must be matched by a tonne of drawdown of atmospheric carbon.

The issues are canvassed at "Unravelling the myth of a 'carbon budget' for 1.5°C." Rogelj et al. noted in 2017: "If the 1.5°C limit should not be breached in any given year, the budget since 1870 is roughly halved and already overspent today" (emphasis added).



In fact, today's CO₂ level if maintained would produce a lot more warming than 1.5°C. In the early- to mid-Pliocene 3–4.5 millions year ago, CO₂ levels were similar today at 365–415 ppm but temperatures were 3–4°C warmer than pre-industrial values and sea levels were 25 metres higher.

Warming is being masked by anthropogenic aerosol emissions, a good proportion of which are coming from fossil fuel extraction and use. This temporary cooling is estimated at 0.7°C, so global warming is likely to accelerate in the next few decades if the cooling influence of human-generated aerosols declines as predicted. When this is taken into account, the implied warming for the current level of greenhouse gases is more than 2°C.

Hence the Paris path of delayed emissions reductions, balanced by a probably unfeasible amount of drawdown in the second half of the century proposed by use of a technology that is unproven at scale — BECCS — is a dangerous path. There is growing alarm amongst scientists about the BECCS political fix, for example Smith et al. 2016, van Vuuren et al. 2017 and Honegger & Reiner 2017. It is worth noting the comments by Oliver Geden, head of the EU Research Division at the German Institute for International and Security Affairs in Berlin:

Climate scientists and economists who counsel policy-makers are being pressured to extend their models and options for delivering mitigation later. This has introduced dubious concepts, such as repaying 'carbon debt' through 'negative emissions' to offset delayed mitigation — in theory... Climate researchers who advise policy-makers feel that they have two options: be pragmatic or be ignored... Many advisers are choosing pragmatism... Each year, mitigation scenarios that explore policy options for transforming the global economy are more optimistic — and less plausible (emphasis added).

A more rapid rate of emission reduction than generally associated with the Paris path can reduce the reliance on drawdown, and especially BECCS.

A paper just out, "Alternative pathways to the 1.5°C target reduce the need for negative emission technologies", is worthy of a close look, and some of its propositions could be adopted by the Victorian Government.

Since all emissions from now on must be matched by at least an equivalent amount of drawdown: **A Victorian carbon budget and emissions target should be complemented by a Victorian carbon drawdown budget and target.**

The adoption of a carbon drawdown budget would help to normalise as necessary what is still, too often, constructed as a distant and theoretical task.

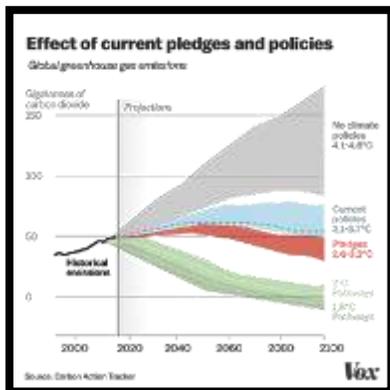
A recent paper by Kate Dooley at UniMelb, "Land-based negative emissions: risks for climate mitigation and impacts on sustainable development", found the most cost-effective large-scale drawdown action is the restoration of carbon-dense and biologically rich natural forests. There are also opportunities for increasing soil organic carbon (SOC), where more research work needs to be done, but one estimate from the European Academies' Science Advisory Council is that increasing SOC could have the potential to absorb 2-3 GtC/year.

3. "Overshoot" in emission reduction scenarios should be minimised in extent and duration to avoid tipping points that may be irreversible on human time frames

All 1.5°C scenarios involved "overshooting" the target before cooling back to 1.5°C by 2100. This overshoot should be minimised by adopting more stringent emission scenarios as the basis for policymaking.

Global warming will pass the 1.5°C threshold in about a decade from now.

All 1.5°C emission scenarios include a period of "overshoot" towards 2°C, before returning to the 1.5°C threshold by 2100.



On the present high emissions path, warming will hit the 2°C by the mid-2040s, and large reductions in CO₂ emissions will not by themselves significantly delay this timing, due to the “Faustian bargain” we have struck with our reliance on aerosols — a by-product of fossil fuel use — that by their significant but very short-term cooling impact are masking considerable warming. Going to zero emissions with CO₂ at ~420 ppm would result in a warming of around 2°C at equilibrium, if the level of short-lived gases was constant.

Thus the 1.5°C overshoot will last several decades and up to half a century in the Paris scheme of things.

There are specific dangers in overshooting, which increase both with the duration and the magnitude of the overshoot.

In a period of rapid warming, most major tipping points once crossed are irreversible in human time frames, principally due to the longevity of atmospheric CO₂ (a thousand years). At the COP23 in Bonn, Pam Pearson, Director of the International Cryosphere Climate Initiative, warned that the cryosphere is becoming “an irreversible driver of climate change”. She said that most cryosphere thresholds are determined by peak temperature, and the length of time spent at that peak, warning that “later, decreasing temperatures after the peak are largely irrelevant, especially with higher temperatures and longer duration peaks”. She added: “What keeps cryosphere scientists up at night are irreversible thresholds, particularly West Antarctica and Greenland. The consensus figure for the irreversible melting of Greenland is at 1.6°C.”

Thus “overshoot scenarios”, which are now becoming the norm in policy-making circles hold much greater risks. Specifically, overshoot to 2°C for up to half a century may trigger events and activate tipping points that cannot be reversed even with significant cooling.

Hence a more rapid rate of emission reduction than generally associated with the Paris path can reduce in extent and duration the overshooting of the 1.5°C threshold.

Service



Using our gifts to be of service is the fullest expression of our lives. Each day, we find a multitude of ways to be useful. Whatever we may achieve, the quality of our own life comes from the quality of our contribution. First and foremost we serve our loved ones. We notice what others need, discover their wishes, and respond helpfully. We don't wait to be asked. A spirit of service invests whatever we do with excellence. We give our very best effort. People who want to be of service can change the world.


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I look for opportunities to be useful.
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