

**Subject:** RE: CBD Online Forum Update

**From:** Heath Packard <heath.packard@islandconservation.org>

**Date:** 7/13/2017 11:54 AM

**To:** Royden Saah <royden.saah@islandconservation.org>

**CC:** Karl Campbell <karl.campbell@islandconservation.org>, Gregg Howald <gregg.howald@islandconservation.org>, Ray Nias <ray.nias@islandconservation.org>, Nick Holmes <nick.holmes@islandconservation.org>, Karen Poiani <karen.poiani@islandconservation.org>, "Ingrid Parker (imparker@ucsc.edu)" <imparker@ucsc.edu>, Carol Schimke <carol.schimke@islandconservation.org>, Todd Kuiken <tkuiken@ncsu.edu>

Thanks, Royden.

You have it right...please be vigilant in your monitoring emails from Benjamin. See latest from yesterday. These are our time-saving shortcuts to our strategic engagement!

I'd also advise drafting a response and circulating it for review/comment/contributions as opposed to soliciting recommendations from the team at the outset...that will streamline the input time needed by others and really facilitate the process. Please be sure to align whatever you submit with the information I submitted for us in the call for information last month. You all got copies of that.

My time to engage in this has been eclipsed by my needs to prioritize DARPA press statement and talking points for the partnership...really appreciate you taking the lead on this.

Best,

**Heath Packard**

Director of Marketing & Communications

[Island Conservation](#)

360.584.3051 (mobile)

heath.packard1 (skype)

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**From:** Royden Saah

**Sent:** Tuesday, July 11, 2017 9:39 PM

**To:** Heath Packard <heath.packard@islandconservation.org>

**Cc:** Karl Campbell <karl.campbell@islandconservation.org>; Gregg Howald <gregg.howald@islandconservation.org>; Ray Nias <ray.nias@islandconservation.org>; Nick Holmes <nick.holmes@islandconservation.org>; Karen Poiani <karen.poiani@islandconservation.org>; Ingrid Parker (imparker@ucsc.edu) <imparker@ucsc.edu>; Carol Schimke <carol.schimke@islandconservation.org>; Todd Kuiken <tkuiken@ncsu.edu>

**Subject:** RE: CBD Online Forum Update

**Importance:** High

Roger. To be clear on the task, I will elicit responses from IC GBIRD associates and GBIRD listserv and compile. Deadline of July 17 is understood. Please (including those copied on the email) feel free to clarify as I move forward. Your input and peer reviewed references are critical.

Thanks,  
rs

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**From:** Heath Packard

**Sent:** Tuesday, July 11, 2017 11:29 PM

**To:** Royden Saah <[royden.saah@islandconservation.org](mailto:royden.saah@islandconservation.org)>

**Cc:** Karl Campbell <[karl.campbell@islandconservation.org](mailto:karl.campbell@islandconservation.org)>; Gregg Howald <[gregg.howald@islandconservation.org](mailto:gregg.howald@islandconservation.org)>; Ray Nias <[ray.nias@islandconservation.org](mailto:ray.nias@islandconservation.org)>; Nick Holmes <[nick.holmes@islandconservation.org](mailto:nick.holmes@islandconservation.org)>; Karen Poiani <[karen.poiani@islandconservation.org](mailto:karen.poiani@islandconservation.org)>; Ingrid Parker ([imparker@ucsc.edu](mailto:imparker@ucsc.edu)) <[imparker@ucsc.edu](mailto:imparker@ucsc.edu)>; Carol Schimke <[carol.schimke@islandconservation.org](mailto:carol.schimke@islandconservation.org)>; Todd Kuiken <[tkuiken@ncsu.edu](mailto:tkuiken@ncsu.edu)>

**Subject:** FW: CBD Online Forum Update

**Importance:** High

Hi Royden,

I've copied here a specific recommendation for our (GBIRD/Island Conservation) engagement in the CBD Online Forum. The recommendation is excerpted from the update below from Ben (from the gene drive research sponsors/supporters coalition), who is helping staff us for the forum. I've attached his initial introductory email as I think you'll find it helpful.

Given that I'm traveling in a conference all week and starting PTO on Saturday, I'm hoping you could take a lead on developing and submitting a response along the lines recommended by Ben. This segment of the forum closes on the 17<sup>th</sup>, so I presume that's our drop deadline.

**Suggested Actions:**

1. *As much of the discussion up to this point has focused on the unknown dangers and potential negative consequences of gene drive for ecosystems and biodiversity, it may be good for **those working in conservation (particularly those affiliated with Island Conservation) to provide some comments related to the moderator's request to "capture positive impacts of synbio organisms on biodiversity"**, which can be found in the following comment: <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8365#8442>*

**Summary of new developments:** *so far in the discussions, gene drive has mostly come up in the context of hypothetical deleterious effects on ecosystems. In response to this, some participants (e.g. <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8410>) have asked that discussions be limited to concrete examples and specific situations and problems, avoiding sweeping and vague generalizations. This may be a useful message to pick up on. Sub-groups have also been mobilized to address concerns about the likelihood of horizontal gene transfer, and to clarify that vector control strategies (even those making use of synthetic biology) do not intend to cause the extinction of vector organisms, only to reduce their numbers. With regards to general tenor, the discussions have tended to place more emphasis on the risks and unknowns associated with novel uses of synthetic biology, although several members of this group have attempted to redress this balance.*

**Heath Packard**

Director of Marketing & Communications

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**From:** Benjamin Robinson [<mailto:Ben@emergingag.com>]

**Sent:** Friday, July 07, 2017 8:40 AM

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**Cc:** Morgane Danielou <[Morgane@emergingag.com](mailto:Morgane@emergingag.com)>; Delphine Thizy <[d.thizy@imperial.ac.uk](mailto:d.thizy@imperial.ac.uk)>

**Subject:** CBD Online Forum Update

Hi all,

There continues to be a high-volume of activity on the forum, with many raising concerns about horizontal gene transfer and the ecological effects of deployment of synthetic biotech, and with the first explicit mention of gene drive.

**Points you may wish to address:**

1. Edward Hammond, Third World Network: <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8431>
  - o He questions whether appropriate facilities and expertise for safe containment are in place in many developing countries. Although his concerns focus on one project in particular, they can be applied more broadly to the entire gene drive research community.
  - o **Please note that a sub-group is currently drafting a response outlining some of the containment procedures used, and clarifying which are appropriate to which types of projects and what the risks involved are.**

**Suggested Actions:**

1. As much of the discussion up to this point has focused on the unknown dangers and potential negative consequences of gene drive for ecosystems and biodiversity, it may be good for **those working in conservation (particularly those affiliated with Island Conservation) to provide some comments related to the moderator's request to "capture positive impacts of synbio organisms on biodiversity"**, which can be found in the following comment: <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8365#8442>

**Summary of new developments:** so far in the discussions, gene drive has mostly come up in the context of hypothetical deleterious effects on ecosystems. In response to this, some participants (e.g. <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8410>) have asked that discussions be limited to concrete examples and specific situations and problems, avoiding sweeping and vague generalizations. This may be a useful message to pick up on. Sub-groups have also been mobilized to address concerns about the likelihood of horizontal gene transfer, and to clarify that vector control strategies (even those making use of synthetic biology) do not intend to cause the extinction of vector organisms, only to reduce their numbers. With regards to general tenor, the discussions have tended to placed more emphasis on the risks and unknowns associated with novel uses of synthetic biology, although several members of this group have attempted to redress this balance.

Regards,

Ben



Ben Robinson

Policy Coordinator

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**CBD Online Forum on Synthetic Biology will take place soon!** Experts should [register online](#) to participate.

Contact us if you require assistance.

Supporter of the Manyinga orphan schools project – find out more at [www.manyinga.org](http://www.manyinga.org)

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**Subject:** CBD Online Forum Update

**From:** Benjamin Robinson <Ben@emergingag.com>

**Date:** 7/12/2017 11:42 AM

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**CC:** Morgane Danielou <Morgane@emergingag.com>

Hi all,

Please see below for the latest developments in the CBD online forum. The rate of posting has dropped off somewhat since last week, but please be advised that the forum will close on **July 17<sup>th</sup>** and there may be a flurry of activity right at the end.

#### Points you may wish to address:

- Christoph Then, Testbiotech: <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8365#8495>
  - Identifies gene drives inserted into mosquitoes and other organisms as technologies that are particularly susceptible to producing unforeseeable effects when released in the field, due to environmental stressors not present under laboratory conditions.
  - Suggests that risk-assessment cut-off criteria and regulatory boundaries be instituted in cases where projects may cause technically inserted genetic information to persist in wild populations, and where sound risk-assessment is not possible due to the unknowns outlined above.
- Carlos Bravo, Columbia: <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8499>
  - Refers to unspecified negative effects which could result from transfer of artificial genetic material to wild populations via vertical gene transfer and introgression.
  - Mentions that vector suppression may lead to the emergence of new threats as other disease vectors replace those that are suppressed.
    - Please note that the above concern is not specifically related to synthbio and may be beyond the scope of the forum's activities.

#### Summary of new developments:

There has been substantial discussion of the potential off-target effects associated with current CRISPR-Cas9 methods (<https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8498>; <https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8504>), with some referring to a recent publication by Schaefer et al on CRISPR-Cas9 editing and unexpected mutations in mice in *Nature Methods* (<https://www.nature.com/nmeth/journal/v14/n6/full/nmeth.4293.html>). However, some have called into question this interpretation of the study due to

limitations in the experimental design, and presented evidence of Cas9 specificity being increased (<https://bch.cbd.int/synbio/open-ended/discussion/?threadid=8384#8506>).

Regards,  
Ben



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**CBD Online Forum on Synthetic Biology will take place soon!** Experts should [register online](#) to participate.

Contact us if you require assistance.

Supporter of the Manyinga orphan schools project – find out more at [www.manyinga.org](http://www.manyinga.org)

— Attachments: —

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