When Science and Citizens Connect:
Public Engagement on Genetically Modified Organisms

A Workshop of the Roundtable on Public Interfaces of the Life Sciences

January 15-16, 2015
National Academy of Sciences

Background Materials for Breakout Sessions

The breakout discussions are an opportunity for participants to take what they have learned from the workshop and apply it to the following selected topics:

1. Breakout Group A: Bt Corn and the Monarch Butterfly
2. Breakout Group B: The American Chestnut
3. Breakout Group C: Genetically Modified Mosquitoes

Please note that the report-outs from the breakout sessions will be webcast, but remote participation will not be available for the breakout sessions themselves.

Breakout Questions:

As part of their discussion, the break-out groups will address the following questions:

1. What are the science claims, legitimate or questionable, being made? Who is making those claims?

2. Are there societal contexts or underlying values or associated (or fueling) particular science claims? If yes, what might they be?

3. What are the main mechanisms scientists & science organizations are using (or have used) to communicate/engage with lay audiences?

4. How do the main communication/engagement mechanisms about science reflect societal contexts and underlying values?

5. What seemed to work well or not work well with communication/engagement mechanisms? Why?

6. From this point forward, what would you do differently to communicate/engage with lay audiences about the science?

7. If you could start from scratch, what key considerations would be important to incorporate to develop a science communication/engagement plan?

Materials for Breakout A: Bt Corn and Monarch Butterfly

1. Three Years Later: Genetically Engineered Corn and the Monarch Butterfly Controversy. (Pew Initiative on Food and Biotechnology June 2002). http://www.pewtrusts.org/en/research-and-analysis/reports/2002/06/10/three-years-later-genetically-engineered-corn-and-the-monarch-butterfly-controversy

2. Transgenic pollen harms monarch larvae (Losey et. al May 1999 Scientific Correspondence in Nature 399, 214 20) http://www.nature.com/nature/journal/v399/n6733/full/399214a0.html

3. Gene-Altered Corn May Kill Monarchs (Washington Post, May 1999) http://www.washingtonpost.com/wp-srv/national/daily/may99/monarchs20.htm

4. False reports and the ears of men. (Shelton, A. M., & Roush, R. T. 1999 Nature Biotechnology, 17(9), 832-832) http://www.nature.com/nbt/journal/v17/n9/full/nbt0999_832.html

5. Monarchs safe from Bt. (Nature News 2001) http://www.nature.com/news/2001/010912/full/news010913-12.html

6. Milkweed loss hurts monarchs (UM News press release March 2012) http://umnews.ur.umn.edu/news/features/2012/UR_CONTENT_378473.html

7. The beautiful monarch butterfly is in deep trouble. (Reuters via Business Insider, Dec 2014) http://www.businessinsider.com/r-monarch-butterfly-eyed-for-possible-us-endangered-species-protection-2014-12#ixzz3NP0yvcdQ

Breakout B: The American Chestnut

1. A New Generation of American Chestnut Trees May Redefine America's Forests (Scientific American, Mar 2014) http://bit.ly/1xlqXkx

2. Like-Minded Rivals Race to Bring Back the Chestnut Tree (New York Times, July 2013) http://nyti.ms/15sCzAc

3. What if Extinction is not Forever? http://www.sciencemag.org/content/340/6128/32.full.pdf?sid=b0187d86-f469-46cd-9d95-cadee5b9214d

4. Genetically modified chestnuts roasting on an open fire (Popular Science, Dec 2014) http://www.popsci.com/transgenic-chestnuts-roasting-open-fire

Breakout C: Genetically Modified Mosquitoes

1. MRCU Sterile Mosquitoes (Oxitec video released via Cayman Islands GOV TV, Oct 2010) https://www.youtube.com/watch?v=_nY_AlWe5kM

2. GM Mosquito Trial Alarms Opponents, Strains Ties in Gates-Funded Project (Science, Nov 2010) http://www.sciencemag.org/content/330/6007/1030

3. Re-engineering mosquitoes for fight disease (Hadyn Perry, Oxitex TED talk via YouTube, Jan. 2013) https://www.youtube.com/watch?v=cpsRAk5HpK4

4. Genetically modified mosquitoes set off uproar in Florida Keys (Al Jazeera America, Nov 2013 http://america.aljazeera.com/articles/2013/11/9/genetically-modifiedmosquitoessetoffuproarinfloridakeys.html

5. Brazilians welcome genetically-modified mosquito to help fight dengue fever (PRI April 2014) http://www.pri.org/stories/2014-04-25/brazilians-welcome-genetically-modified-mosquito-help-fight-dengue-fever

6. Keys Prepare for Genetically Modified Mosquito Release (WLRN, October 2014) http://wlrn.org/post/keys-prepare-genetically-modified-mosquito-release