

# Climate Literacy and Energy Awareness Network (CLEAN)

## Supporting Members in Increasing Climate Literacy: Spring 2013 Survey



Tamara Shapiro Ledley – TERC, Cambridge, MA

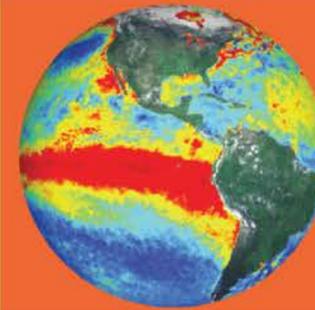
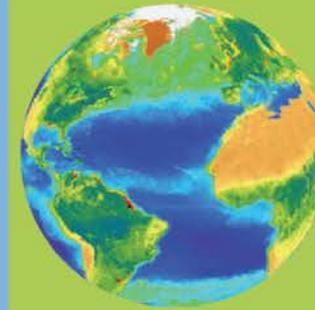
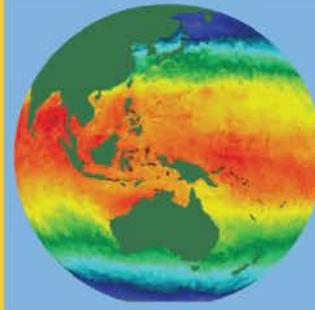


Anne Gold – CIRES University of Colorado Boulder

September 24, 2013



# CLEAN



## **CLEAN Portal [cleanet.org](http://cleanet.org)**

**Climate Literacy and Energy Awareness Network**

### **CLEAN Community**

CLEAN Network

Educators

Resource Developers

Partners

### **CLEAN Resources**

CLEAN Collection

*educational resources*

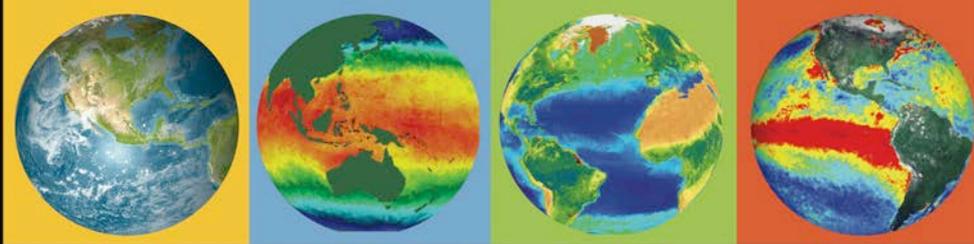
Climate & Energy Literacy

*pedagogical support*

Professional Development

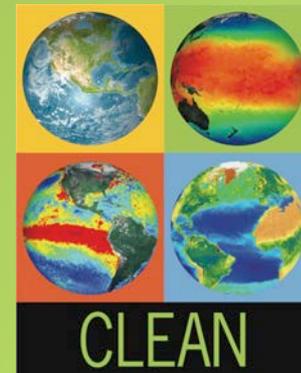
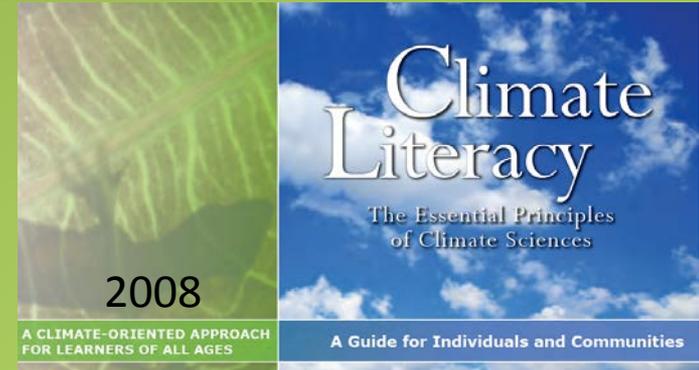
# CLEAN Network

# CLEAN

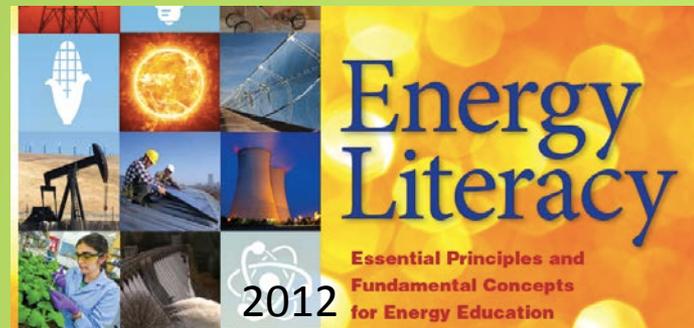


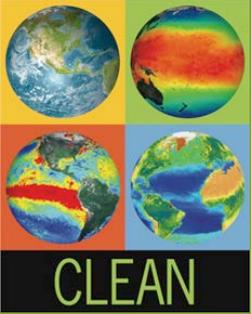
CLIMATE LITERACY & ENERGY AWARENESS NETWORK

- Formed in January 2008
  - Pressing need to infuse climate literacy into schools and other educational contexts to prepare society and future workforce to address the environmental issues and challenges of the future.
- Active Listserv
  - 98% of survey respondents indicate that they read the listserv frequently or sometimes
- Weekly teleconferences
  - Average 12 participants/discussion
  - Presentations & Discussions Posted
- Professionally Diverse
  - Over 21 professions represented
  - 60 professional organizations represented



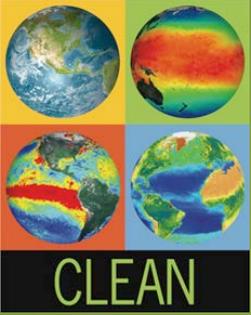
2010



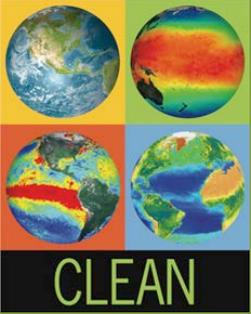


# CLEAN Survey Instrument

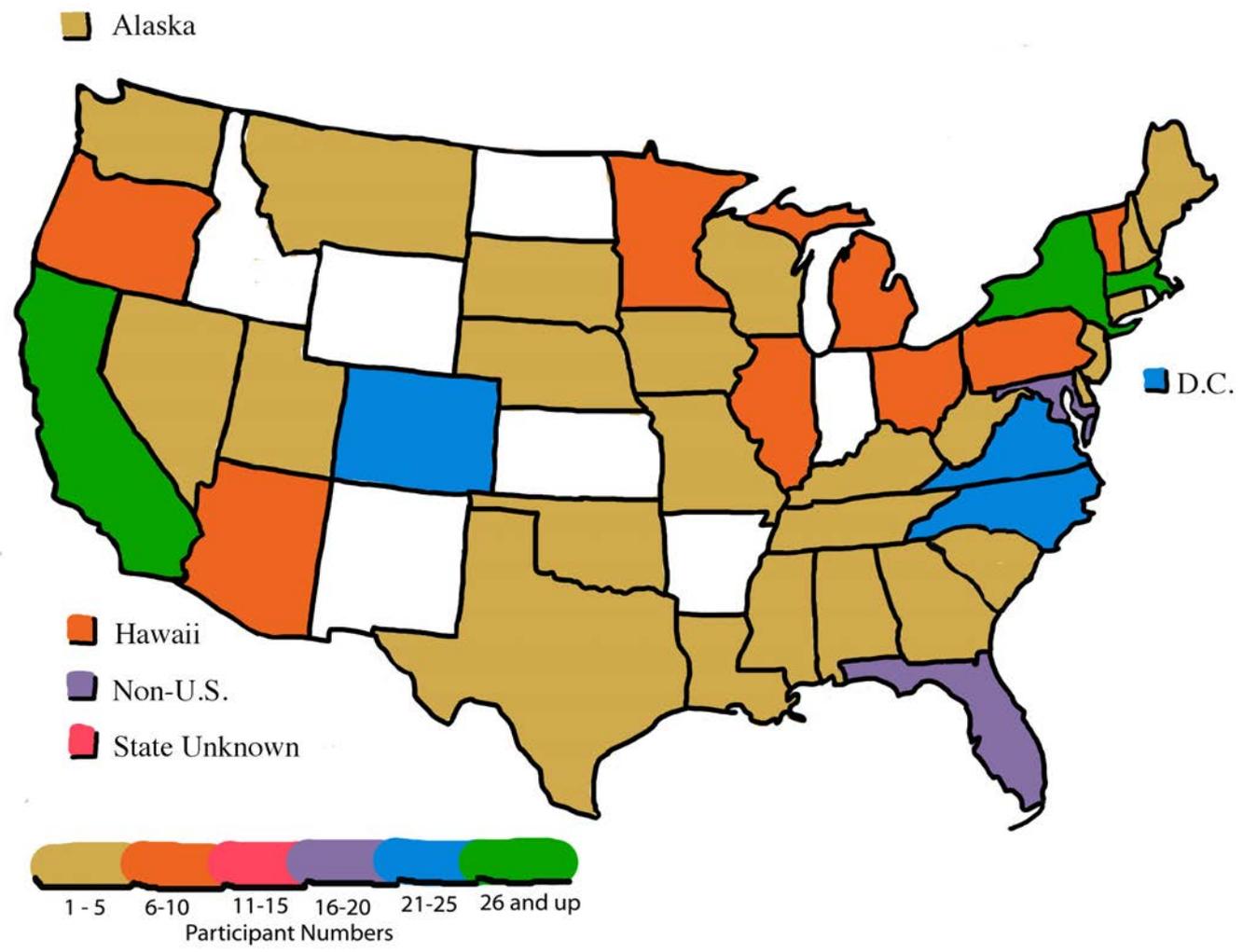
- 19 Questions – multiple choice & open responses
- Four Broad Areas
  - Awareness of CLEAN Network
  - Use and Participation in the CLEAN Network
  - Composition of the CLEAN Network
  - Future Activities of the CLEAN Network
- Invitation to respond to CLEAN Network listserv only - 381 members (currently 409)
- Survey Open – March 18 – April 8, 2013
- 116 completed surveys – 30% response rate

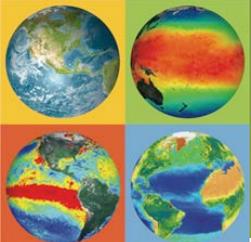


# Awareness of CLEAN Network Activities



# State Representation in CLEAN Network – May 2013

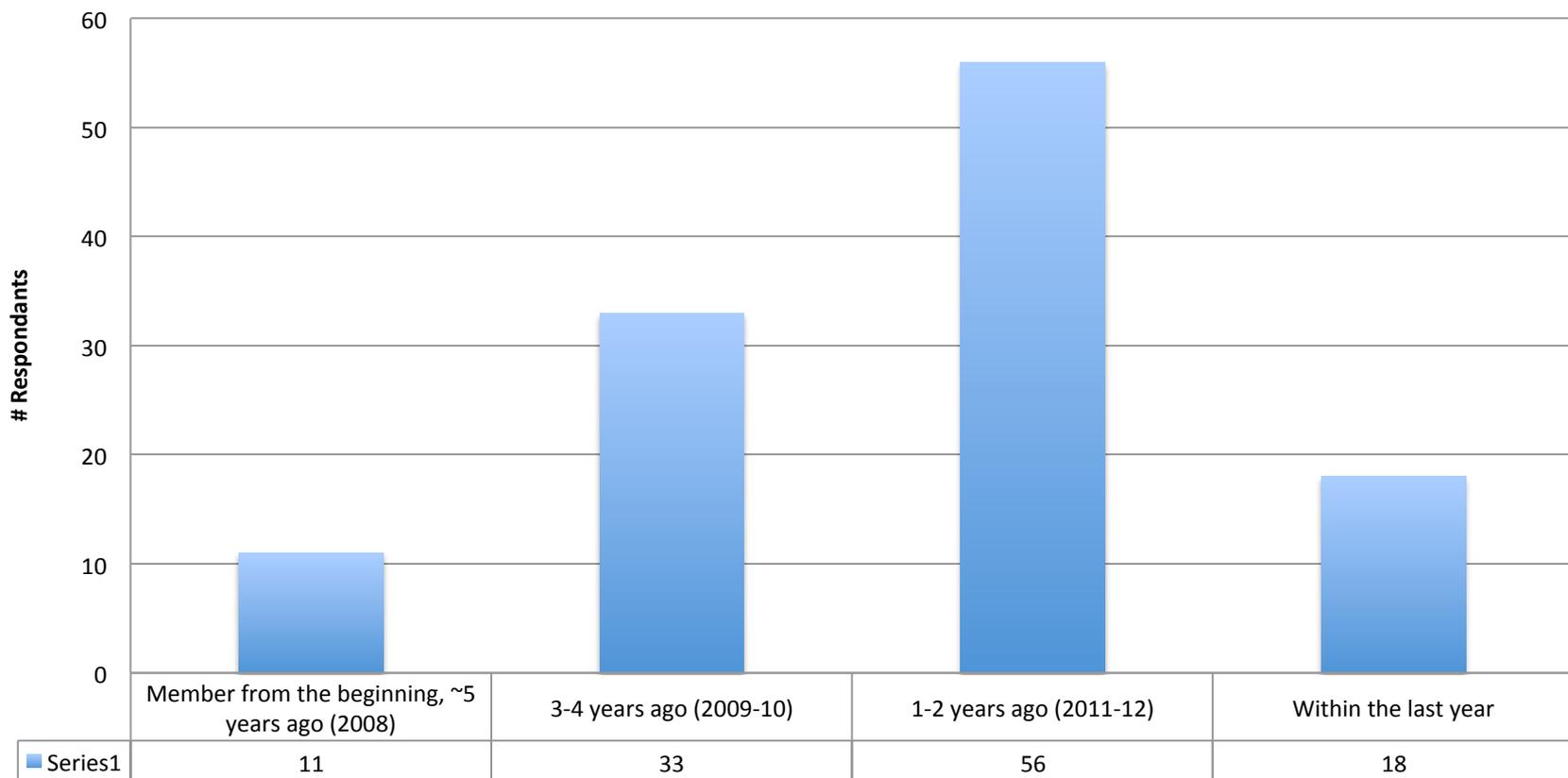




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## How Long Have You Been a Member?

Through 5/13

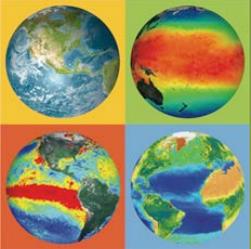


10%

28%

48%

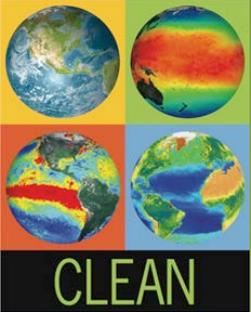
16%



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Responses to the survey question “What CLEAN Network Activities Are You Aware Of?”  
 The items in parenthesis correspond to each of the listed percentages on the right.

Activity Category (specific activity)	Range of Responses in the Activity Category
Listserv (listserv archive) Note: as respondents received the link to the survey via the listserv we did not ask explicitly about their awareness of the listserv itself.	71%
Teleconferences (presentations, informal discussions)	88%, 93%
Coordinated presence at professional meetings (session and presentation coordination, social gatherings)	84%, 54%
Input into the development of the Next Generation Science Standards (Framework, drafts of NGSS)	68%, 78%
Input into development of literacy documents ( <i>CLEP</i> , <i>ELEP</i> )	65%, 53%
CLEAN Facebook page	48%

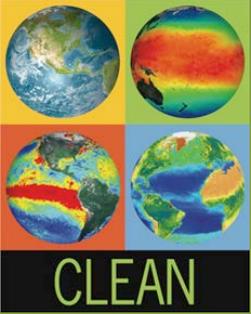


### Responses to the survey question

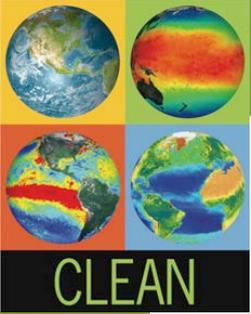
“How Have You Interacted With the CLEAN Collection Project?”.

The items in parenthesis correspond to each of the listed percentages on the right.

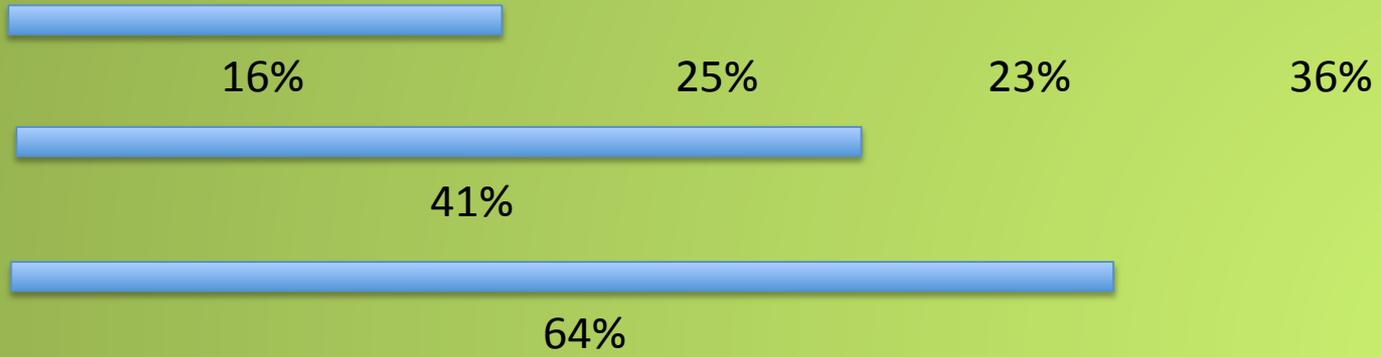
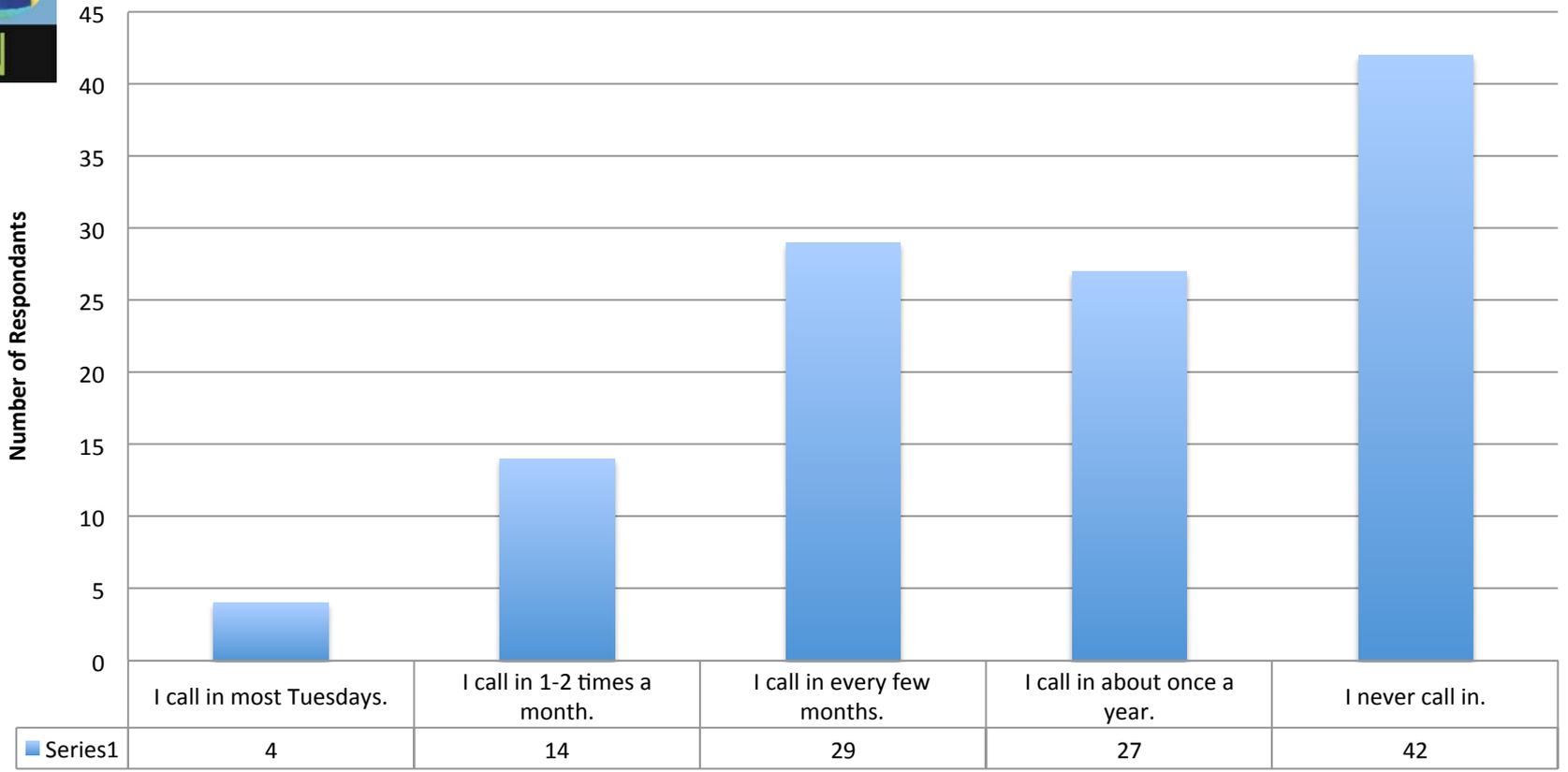
Activities Indicating Engagement with CLEAN Collection	Range of Responses Indicating Participation
Used a resource (own use, use with students)	41%, 41%
Referred someone to CLEAN Collection	51%
Submitted a resource for inclusion in CLEAN Collection	22%
Involved in the CLEAN Collection review process (conducted individual review, served on CLEAN review panel)	16%, 16%

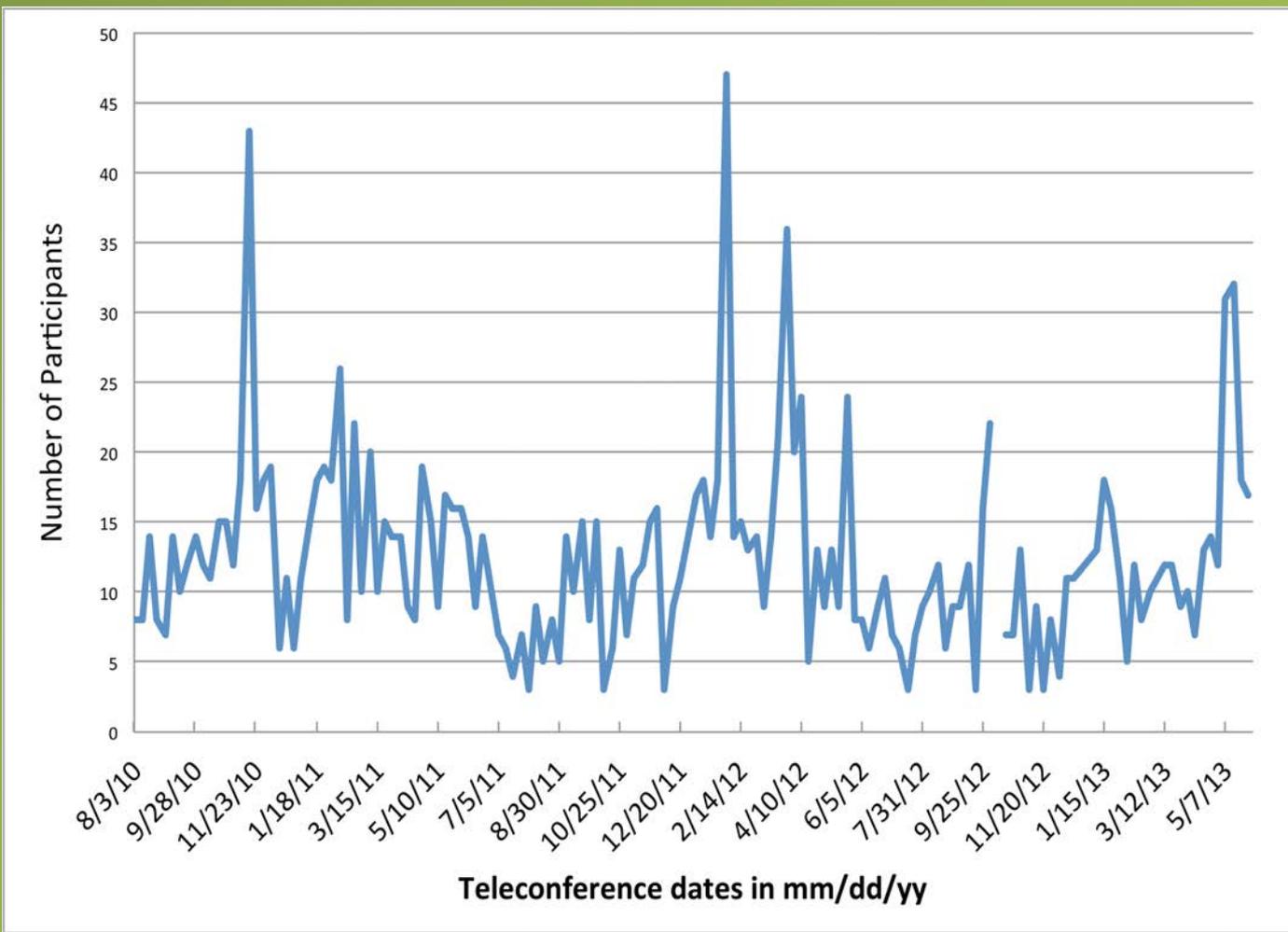
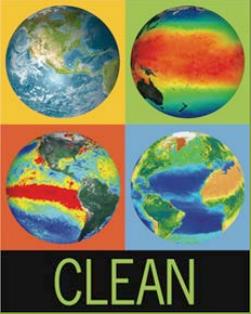


# Engagement of Members in CLEAN Network Activities



## Frequency of Calling into Tuesday Teleconference

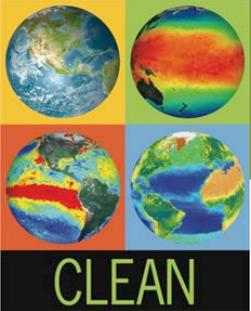




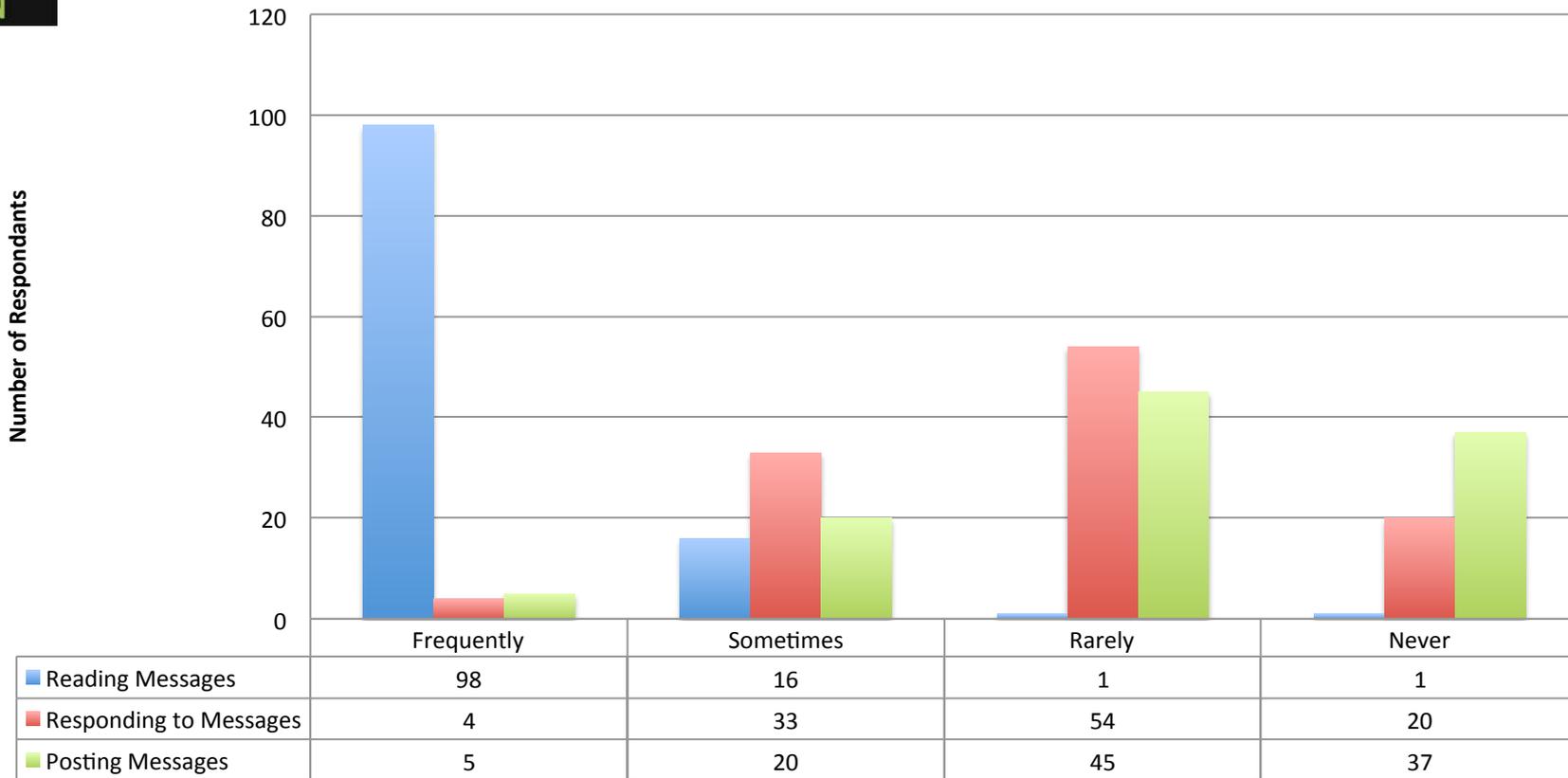
Number of participants in CLEAN Network weekly teleconferences, August 2010 (when we began recording and documenting the teleconferences) through May 2013

57 presentations in 145 sessions  
Average # participants – 12.8

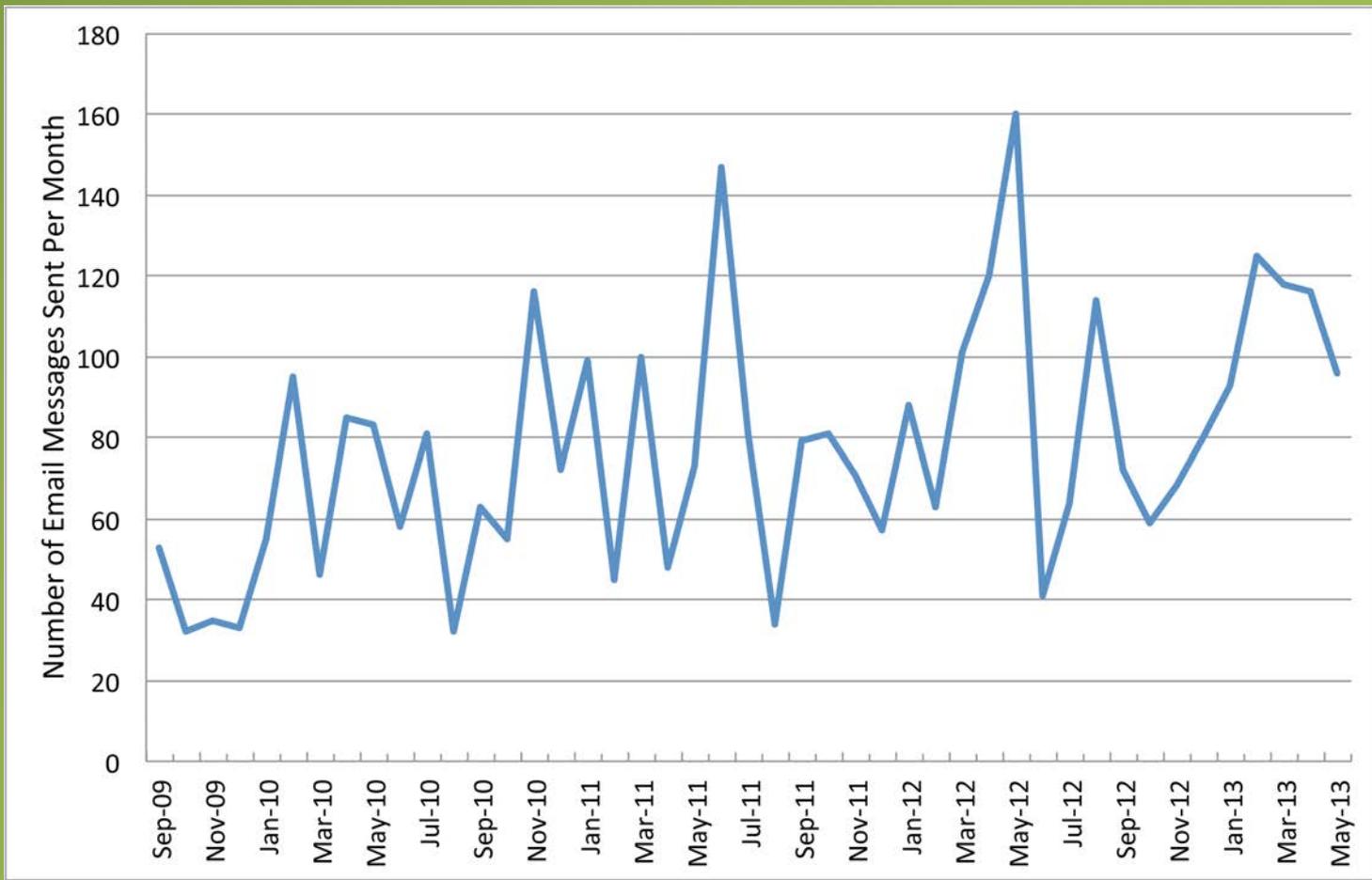
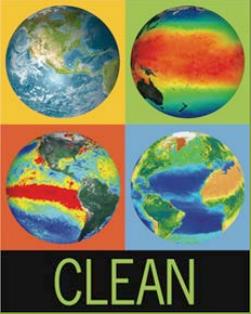
Maximum # participants – 47  
12 presentations with >20 participants (5/13)



## Engagement with Listserv

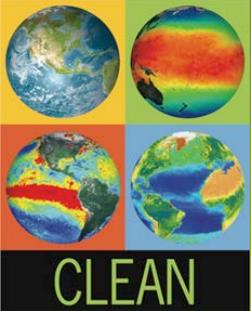


Reading	85%	14%	1%	1%
Responding	3%	28%	47%	20%
Posting	4%	17%	39%	32%

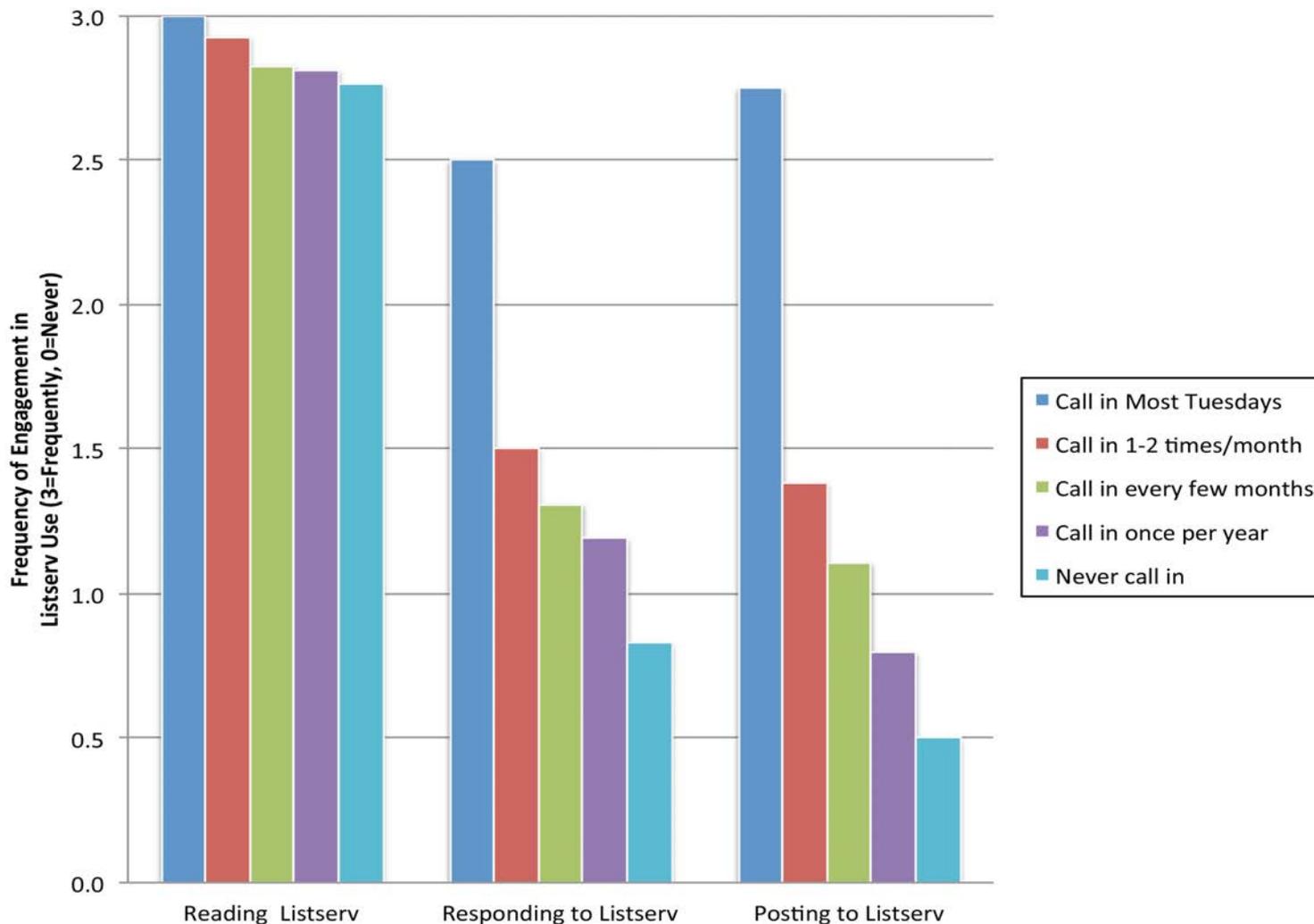


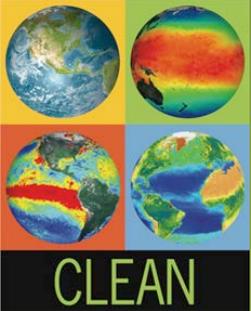
Monthly totals of emails sent through the CLEAN Network listserv, September 2009 (when tracking of email traffic began) through May 2013.

Average messages per month – 77; Maximum – 160 messages April 2012

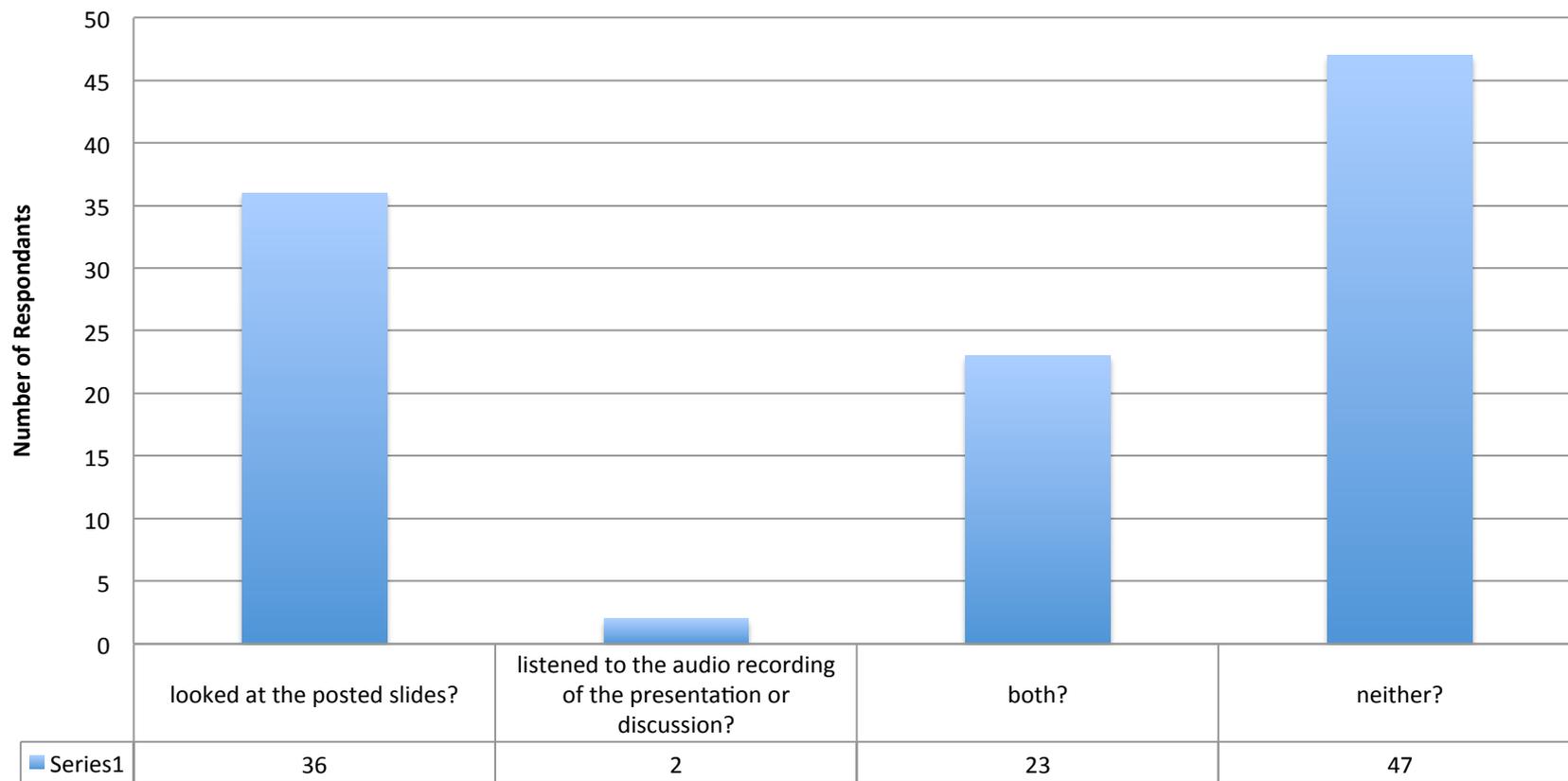


# Frequency of Engagement with Listserv vs Participation in Teleconferences





## Do You Use Posted Teleconference Slides & Recordings

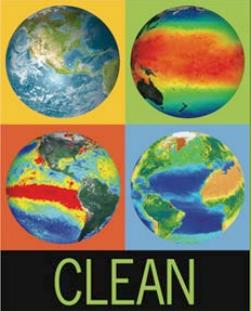


31%

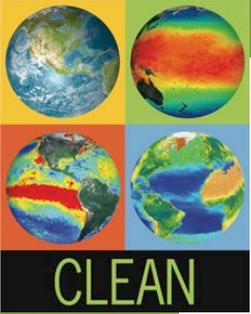
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20%

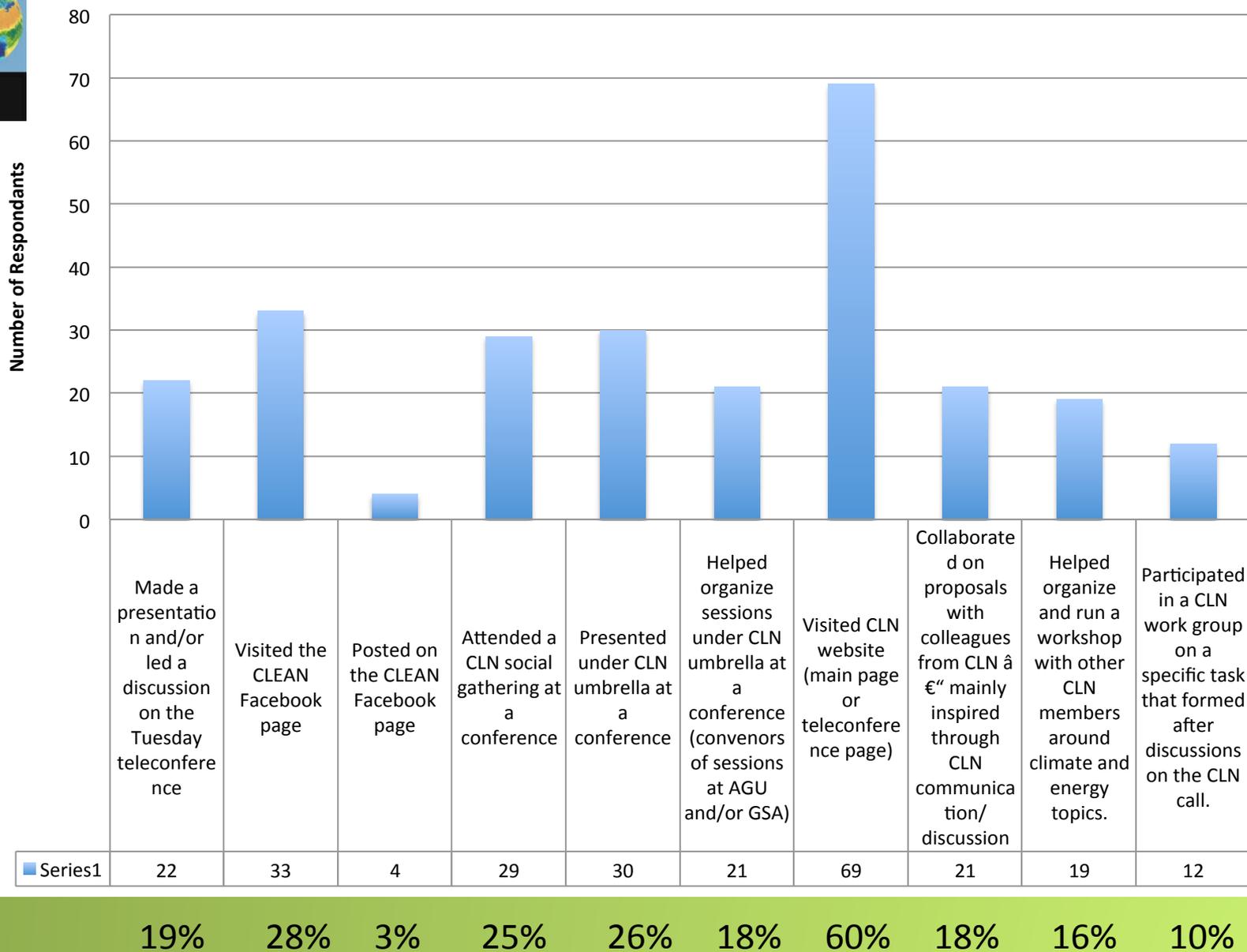
41%

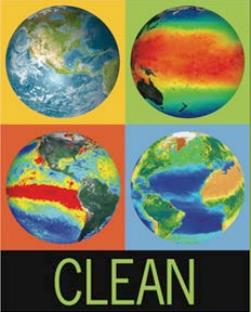


# Uses of CLEAN Network by Members



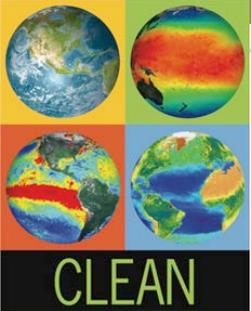
## What CLEAN Network Activities Do You Participant In?



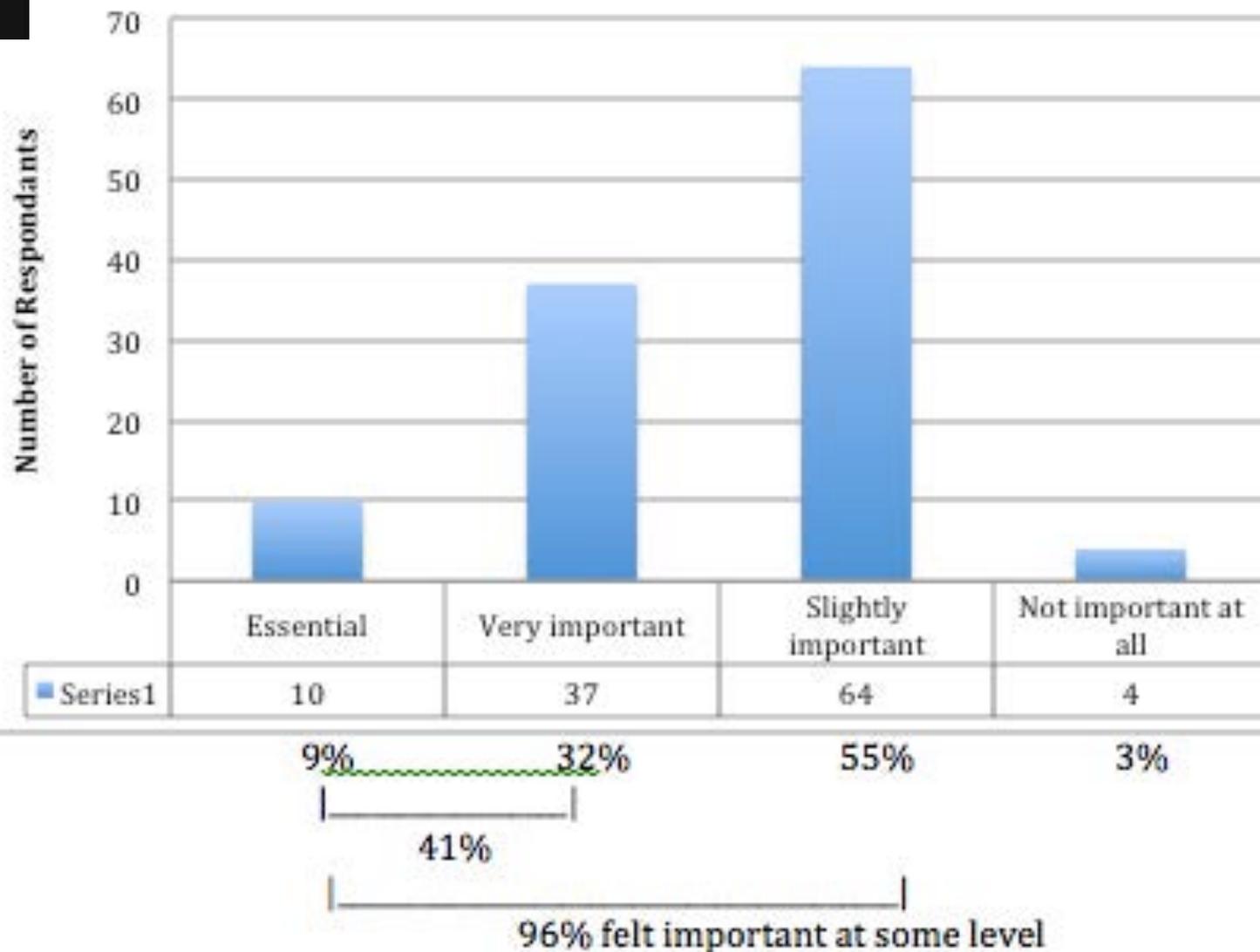


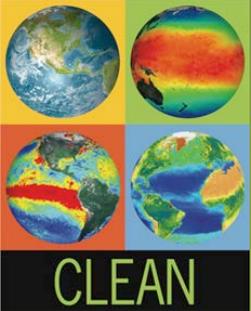
What have you used your involvement in the CLEAN Network for?  
Multiple responses could be entered

Activity	Percentage of Respondents
Networking	47%
Discussing science or policy topics	45%
Discussing teaching ideas	38%
Getting input on an issue my organization or project is dealing with	28%
Posting/publicizing events or publications from your organization	27%
Community Support	24%

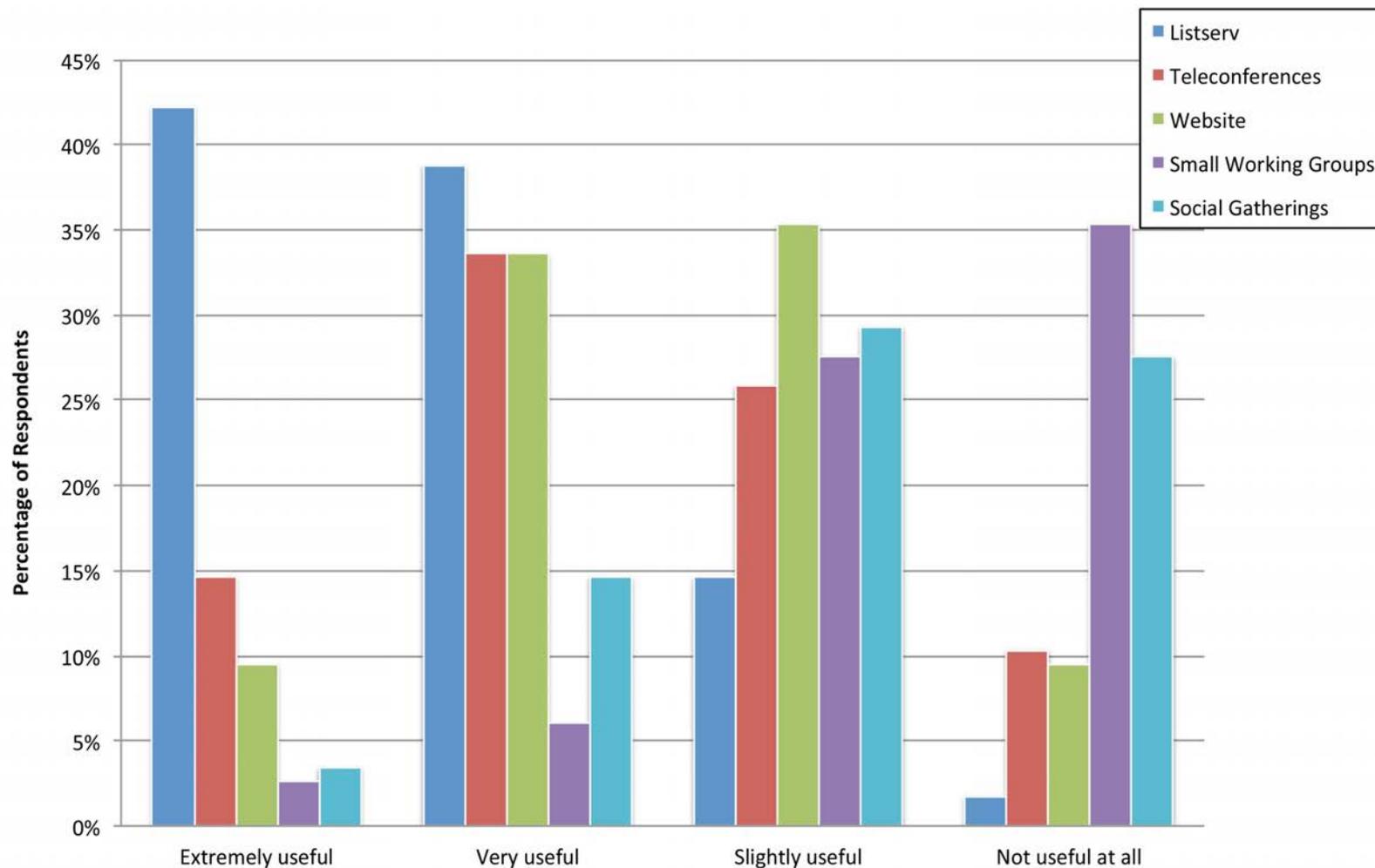


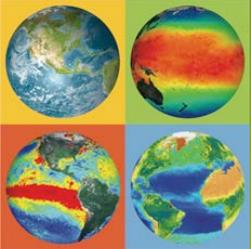
## Importance of CLEAN Network in Daily Work





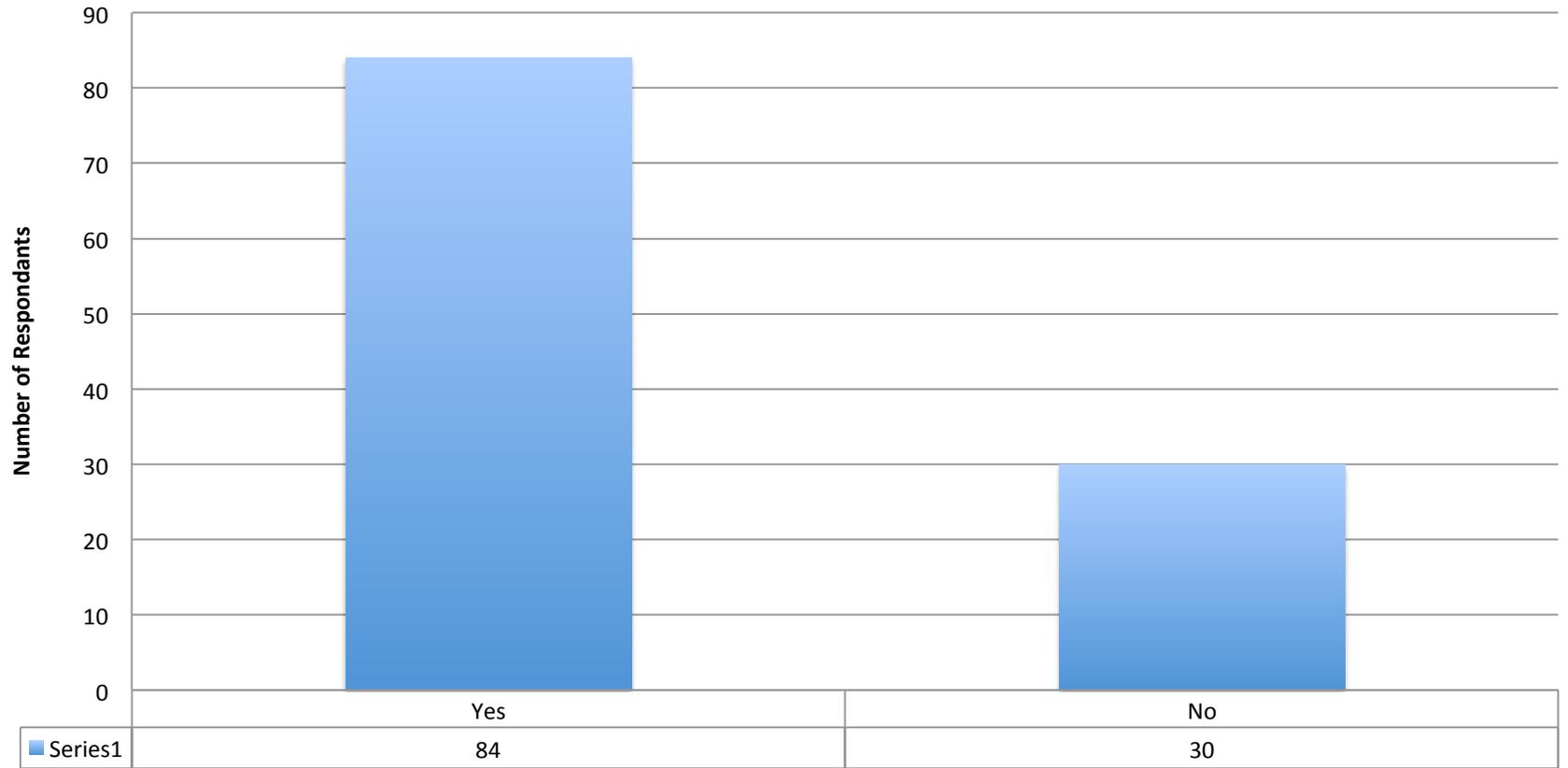
# Usefulness of CLEAN Network Activities to Members





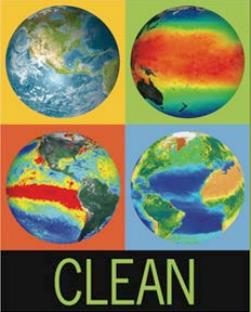
**CLEAN**

## Have you suggested others join CLEAN Network



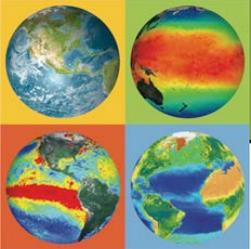
72%

26%



# Professional Diversity of CLEAN Network

Deep understanding of climate change requires the input from a wide range of active stakeholders with interdisciplinary and transdisciplinary expertise.



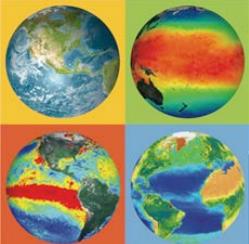
**CLEAN**

Professions Represented in the CLEAN Network Based on Survey Results  
(116 respondents, multiple professions could be entered)

Profession	Percentage of Respondents
Formal Education – K-12	14%
Formal Education – Higher Education	34%
Informal Education	41%
Professional Development Provider	40%
Curriculum Developer	35%
Scientist	33%
Public Health Specialist	1%
Social Scientist	13%
Psychologist	1%
Economist	2%
Urban Planner	1%
Artist	4%
Media Specialists / Journalist	7%
Social Media Specialist	4%
Technologist	2%
Lobbyist	0%

Professions Entered in Open Text Box

Decision makers/managers	5	Publishers/writers/bloggers	3		
Work for National Parks	1	Policy Analyst	1	Student	1

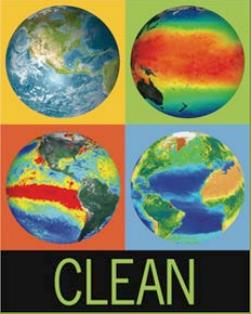


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Professional Societies Represented by at least 2 CLEAN Network Survey Respondents

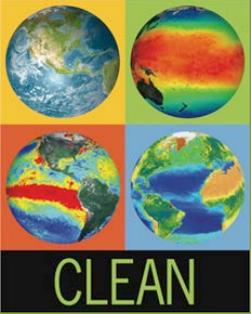
Professional Society	Percentage of Respondents
American Geophysical Union (AGU)	42%
North American Association of Environmental Education (NAAEE)	31%
National Science Teachers Association (NSTA)	30%
American Association for the Advancement of Science (AAAS)	16%
American Meteorological Society (AMS)	14%
Geological Society of America (GSA)	12%
National Association of Geoscience Teachers (NAGT)	9%
National Earth Science Teachers Association (NESTA)	9%
Council of State Science Supervisors (CS3)	3%
American Chemical Society (ACS) ★	3%
Association of American Geographers (AAG) ★	3%
Ecological Society of America (ESA) ★	3%
National Association for Research in Science Teaching (NARST) ★	3%
American Educational Research Association (AERA) ★	2%
National Association for Interpretation (NAI) ★	2%
American Society for Engineering Education (ASEE) ★	2%
★ Society not identified specifically as an option – added by respondents	

>60 Professional Societies listed by survey respondents



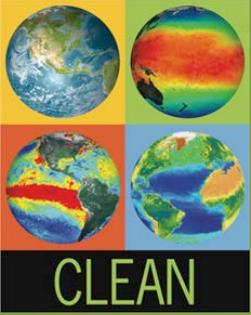
# The CLEAN Network

## A First Step to Enabling Collective Impact



# CLEAN and Collective Impact

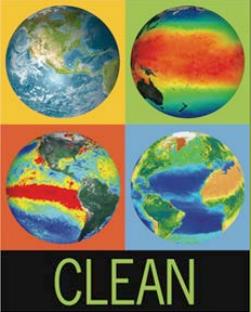
- Large-scale *COLLECTIVE IMPACT* is needed that integrates effective climate literacy efforts for teachers and students as well as all decision-makers who need to address the implications of climate change in their decisions.
- Evidence suggests that achieving Collective Impact requires 5 conditions (Kania and Kramer, 2011)
  - Common Agenda
  - Shared Measurement Systems
  - Continuous Communication
  - Mutually Reinforcing Activities
  - Backbone Support Organizations



# Collective Impact

Partners/contributors need to

- Develop a *COMMON AGENDA*,
- Develop a *SHARED SYSTEM OF MEASURES* to track progress and success,
- Engage in *CONTINUOUS COMMUNICATION* that facilitates the building of the community of stakeholders,
- Identify *MUTUALLY REINFORCING ACTIVITIES* that address the *common agenda* and contribute to the measures of progress, and
- Have a *BACKBONE SUPPORT ORGANIZATION* that can engage and coordinate all stakeholders in addressing and implementing of these elements.



Through its activities, the **CLEAN Network** is providing, to varying degrees, the first steps toward establishing the elements necessary for enabling successful *COLLECTIVE IMPACT* in addressing climate literacy and associated societal problems resulting from climate change.

Contact:

Tamara Shapiro Ledley, [Tamara\\_Ledley@terc.edu](mailto:Tamara_Ledley@terc.edu), 617-873-9658