

# **Rethinking NARSTO Conclusions and Recommendations of an External Review Panel**

NARSTO Executive Assembly

April 16, 2009

Carol J. Henry, Ph.D., D.A.B.T.

Chair, NARSTO Review Panel



# Motivation for Review

A request from NARSTO's Executive Assembly that the Management Coordinator convene a panel to determine whether or not NARSTO provided sufficient value to justify its continuation, and if so, what improvements were warranted.



# Panel Members

- ***Carol Henry, USA, chair*** (consultant in toxicology and risk assessment, formerly Vice President, Industry Performance Programs, American Chemistry Council)
- ***Jane Barton, Canada*** (consultant in environmental management and public policy, formerly Chief, North American Smog Programs, Environment Canada)
- ***Agustin Garcia, Mexico*** (researcher, Centro de Ciencias de la Atmósfera-UNAM and professor of environmental engineering)
- ***John Kinsman, USA*** (Senior Director, Environment, Edison Electric Institute)
- ***Ed Piché, Canada*** (formerly Senior Science Advisor to the Assistant Deputy Minister for Environmental Sciences and Standards, Ontario Ministry of the Environment)
- ***Rich Poirot, USA*** (Air Quality Planner, Vermont Department of Environmental Conservation)



# Charge to Review Committee

- Assess the quality and value of past and current NARSTO activities
- Assess NARSTO's distinctive capabilities and their value to NARSTO's constituencies
- Assess the future need for and value of NARSTO
- Provide recommendations as to a) whether or not NARSTO should continue, and b) if so, what changes or improvements are needed

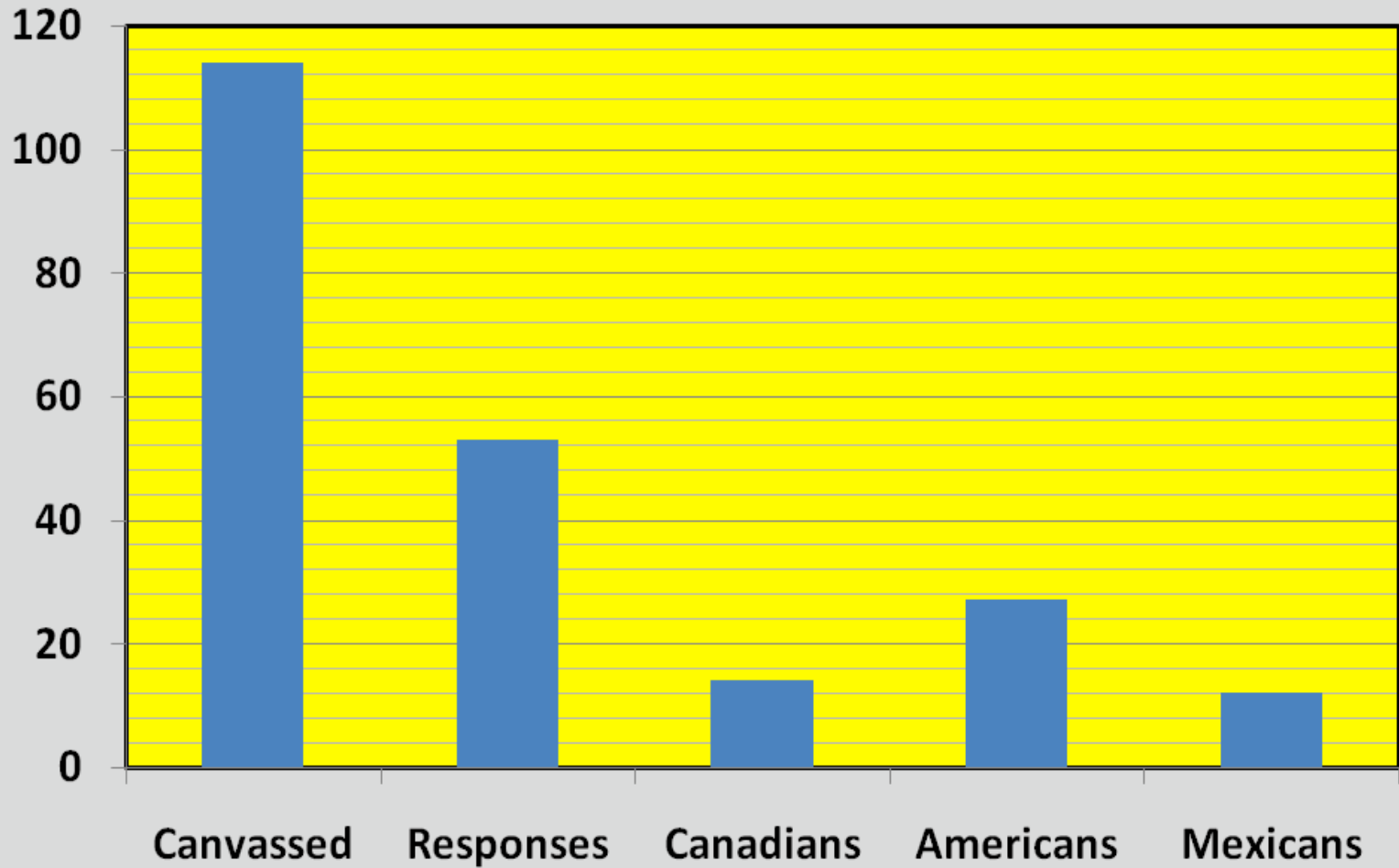


# Methodology

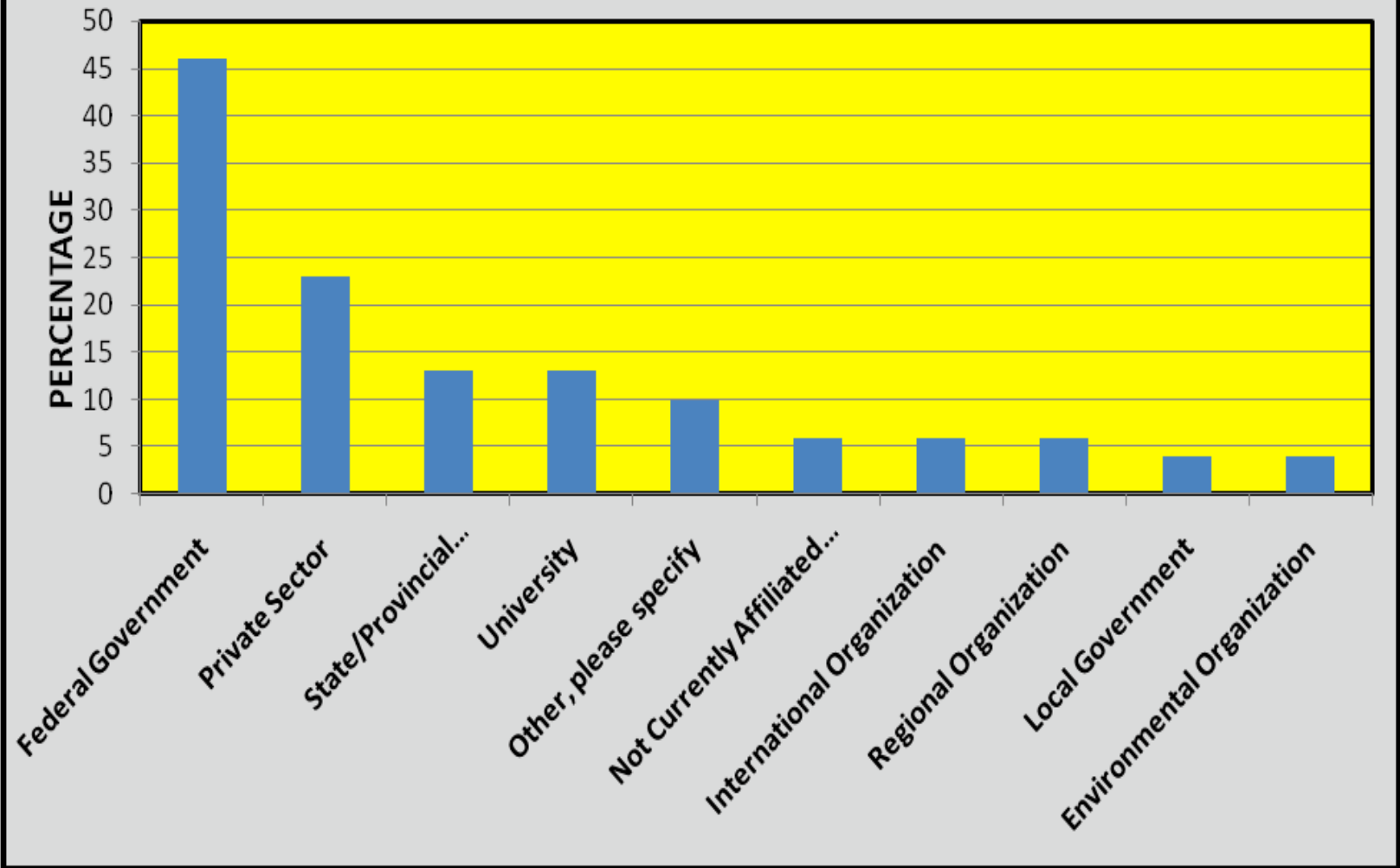
- Interviews: 18 individuals representing EPA, DOE, NAS, NOAA, Environment Canada, INE, a regional AQM organization, and industrial organizations
- Questionnaire: 53 individuals responded representing a broad cross-section of NARSTO constituents
- Citation Analysis: Review Panel conducted research of its own for references to NARSTO in policy actions and scientific articles



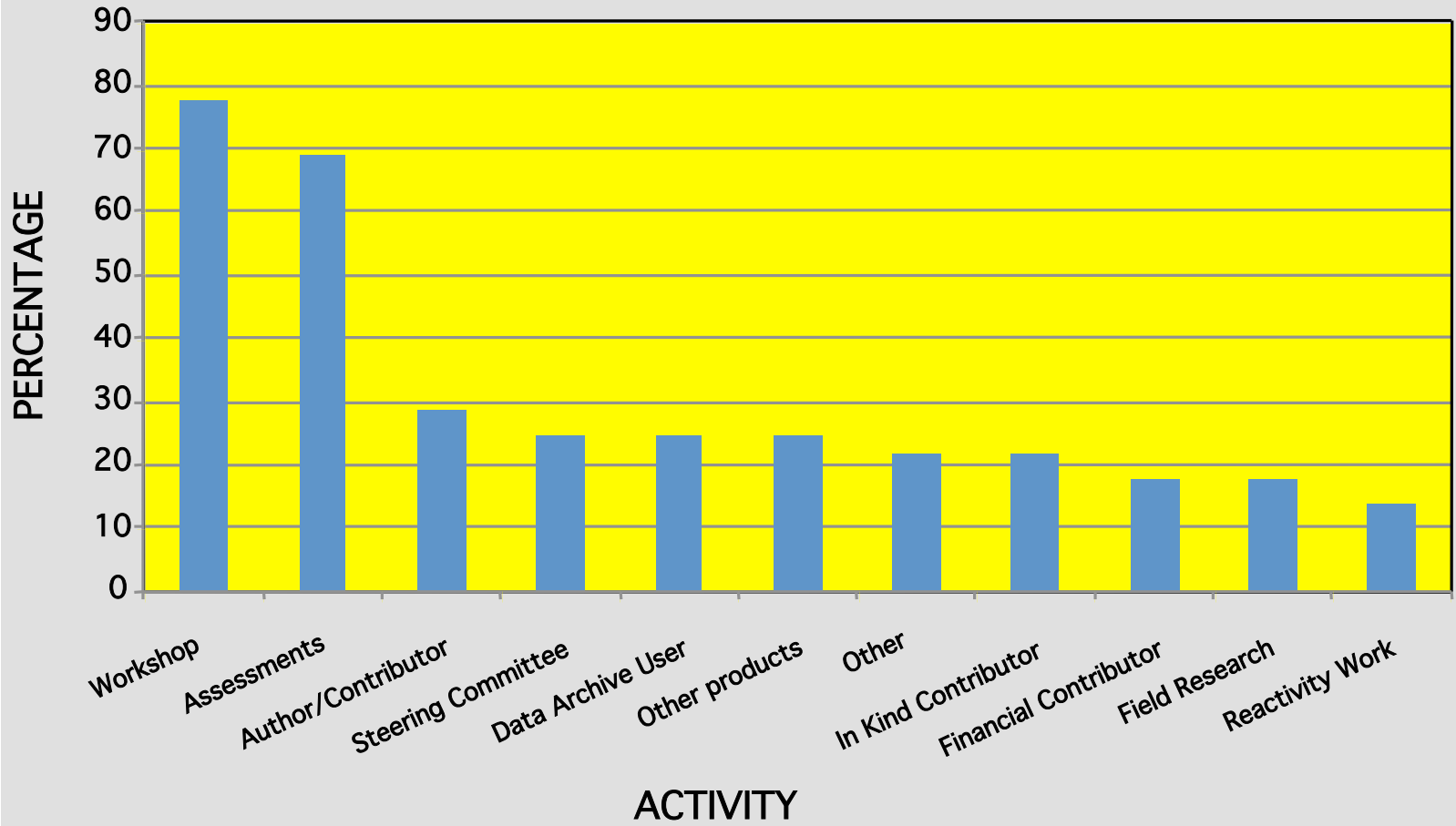
# QUESTIONNAIRE STATISTICS



### Q: 3 NARSTO AFFILIATION



### Q: 4 NARSTO PARTICIPATION





# Quality and Value of Past and Current NARSTO Activities

- Survey participants and interviewees value unique opportunity to collaborate with colleagues from other institutions and countries
- Survey participants and interviewees indicate NARSTO assessments and reports useful in planning future research and communicating scientific issues to management
- NARSTO products have impact on policy decisions in all three countries



# In the United States

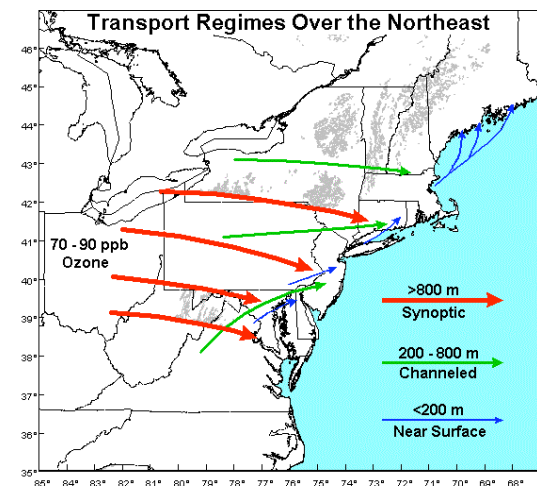
- Frequently cited in standard setting
    - Criteria documents and Staff Papers for ozone and PM
    - Clean Air Interstate Rule
    - New Source Review for PM<sub>2.5</sub>
    - Clean air PM<sub>2.5</sub> Implementation Rule and Regional Haze Regulations
  - Reactivity Research Working Group results cited in
    - EPA guidance on control of VOCs in ozone SIPs
    - Approval of California SIP revisions for control of aerosol coatings
- National reactivity-based VOC emission standards for aerosol coatings



# United States (Cont)

- NARSTO products cited by State and regional AQM groups
  - National Association of Clean Air Administrators (NACAA)
  - Ozone Transport Assessment Group (OTAG)
  - Ozone Transport Commission (OTC)
  - Regional air quality management organizations (e.g., MARAMA, NESCAUM)

From a presentation to OTAG  
on NARSTO NE by Don Blumenthall  
Included in the Executive Summary Report,  
OTAG Air Quality Analysis Workgroup



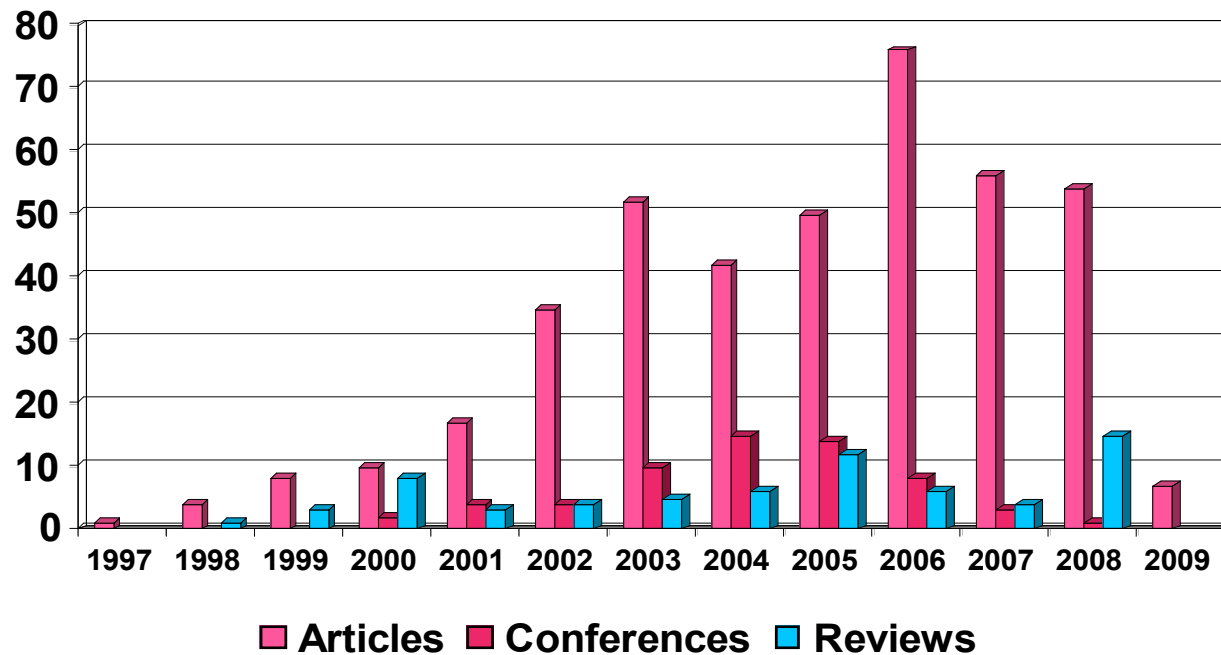
# In Bilateral and Trilateral Activities

- Transboundary air pollution is a fact affecting air quality management in all three NARSTO countries
- NARSTO's contributions to understanding to improving understanding of this problem was recognized as valuable (and even unique by some respondents), for example
- NARSTO's work on methods and formats (e.g., in emissions inventories and modeling) have set the stage for establishing uniform continental-wide conclusions regarding air quality



# In the Scientific Literature

NARSTO has been referenced in more than 500 publications in more than 100 journals between 1997 and 2009



NARSTO Citations in the Scientific Literature, by year

# And Elsewhere

A web search on “NARSTO” yields

- 23,200 hits on Google
- 119,000 hits on AlltheWeb
- 4,330 hits on Search.com



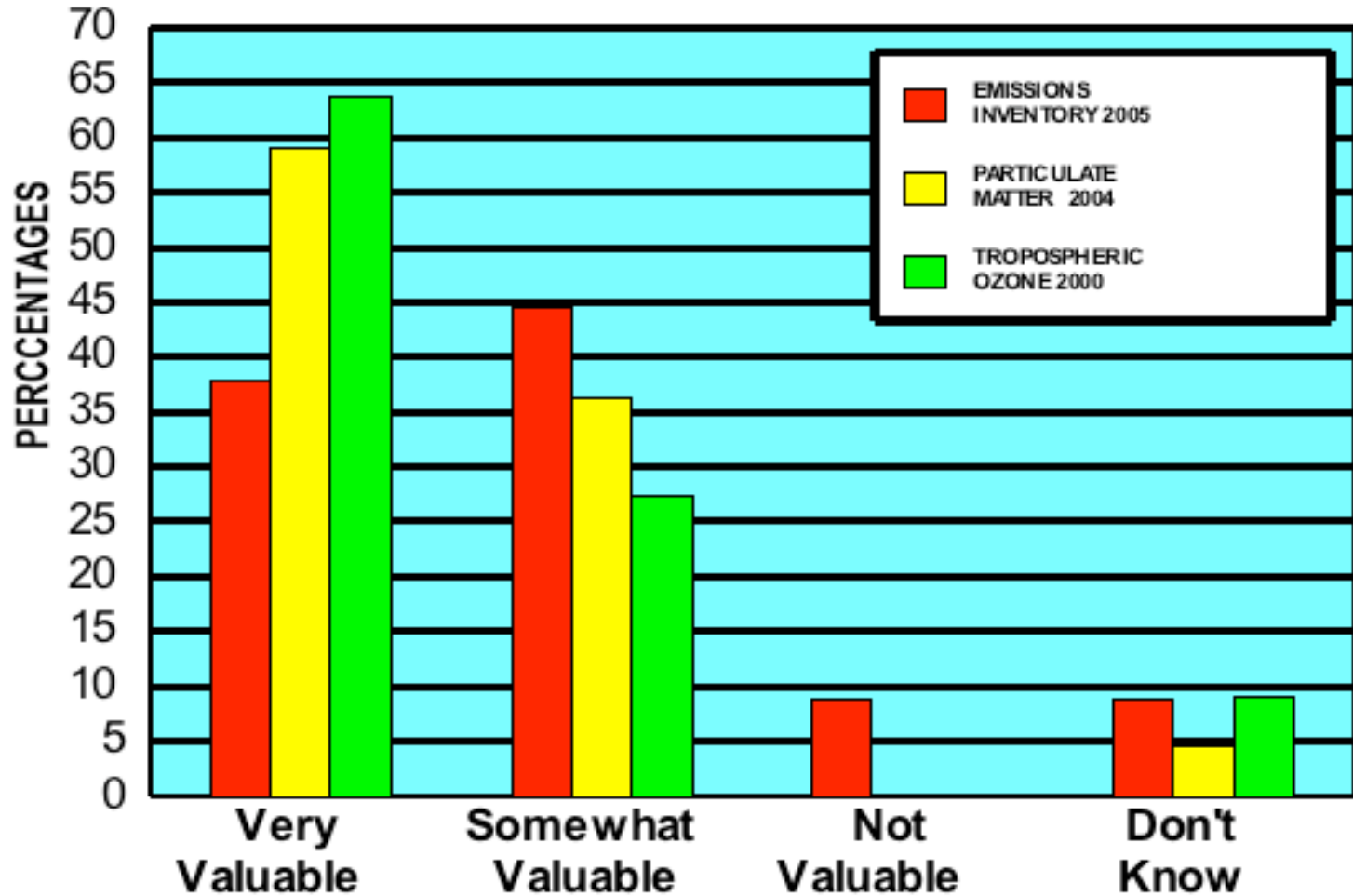
# Ranking of NARSTO Activities

NARSTO Activity	Number Responding	Average Rank	Highest Rank	Lowest Rank
Assessments	44	1.8	1	5
Reports	37	3.5	1	11
Meetings/Workshops	38	3.7	1	9
Networking Opportunities	31	4.6	1	10
Regional Emission Inventory Workshops	23	5.1	1	11
Data Archive	30	5.3	1	11
Atmospheric Model Inter-comparisons	26	5.3	2	10
Website	28	5.8	1	9
Executive Assemblies	24	6.2	2	11
Measurement Methodologies	23	6.2	2	10
Reactivity Working Group	15	6.5	1	11



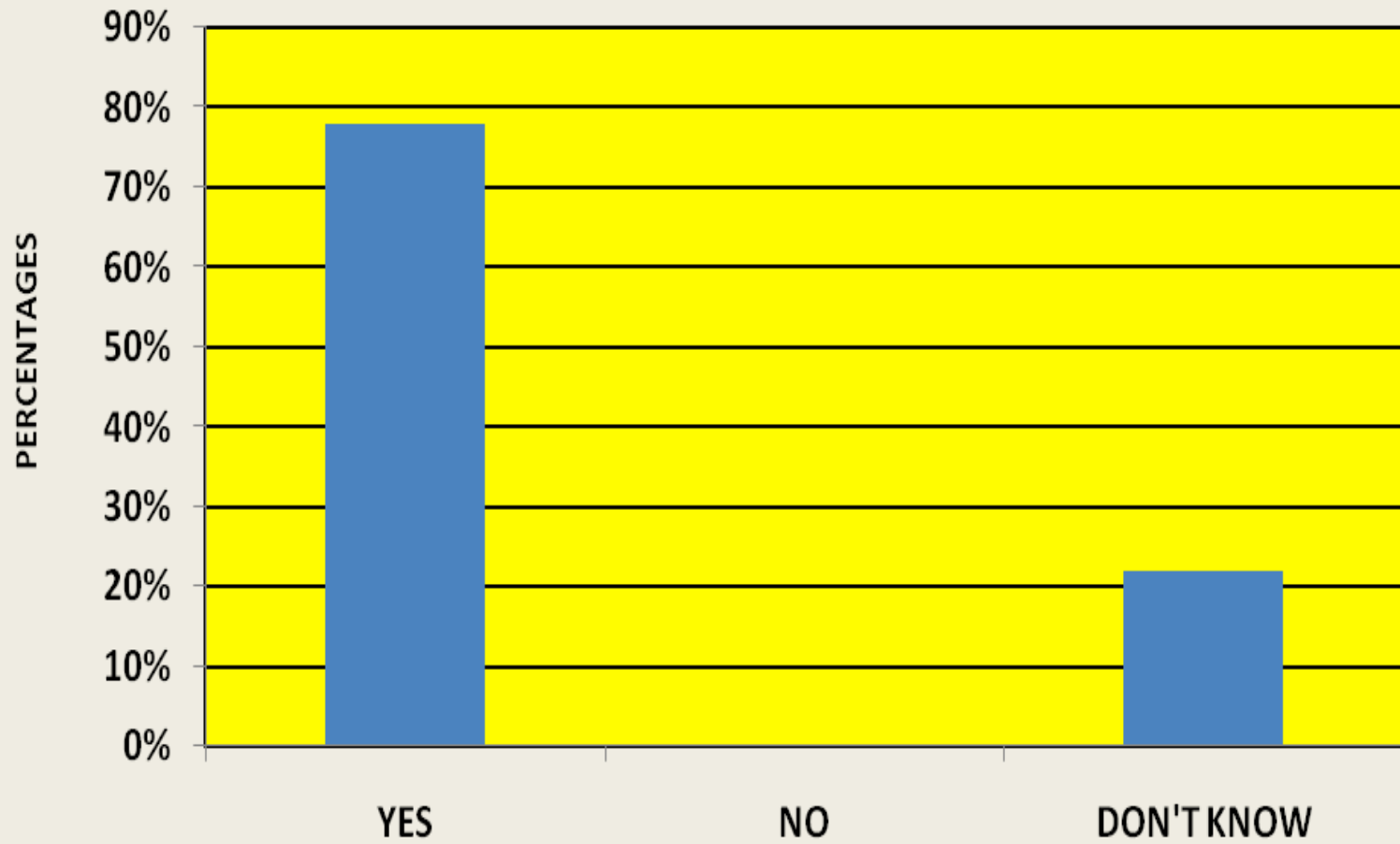
Ranking of 11 NARSTO activities: 1 is most valuable 11 least valuable

**Q: 6 VALUE OF THE THREE NARSTO ASSESSMENTS**





### Q: 9 HAS NARSTO HELPED TO ADDRESS AIR QUALITY ISSUES

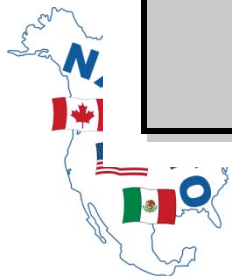
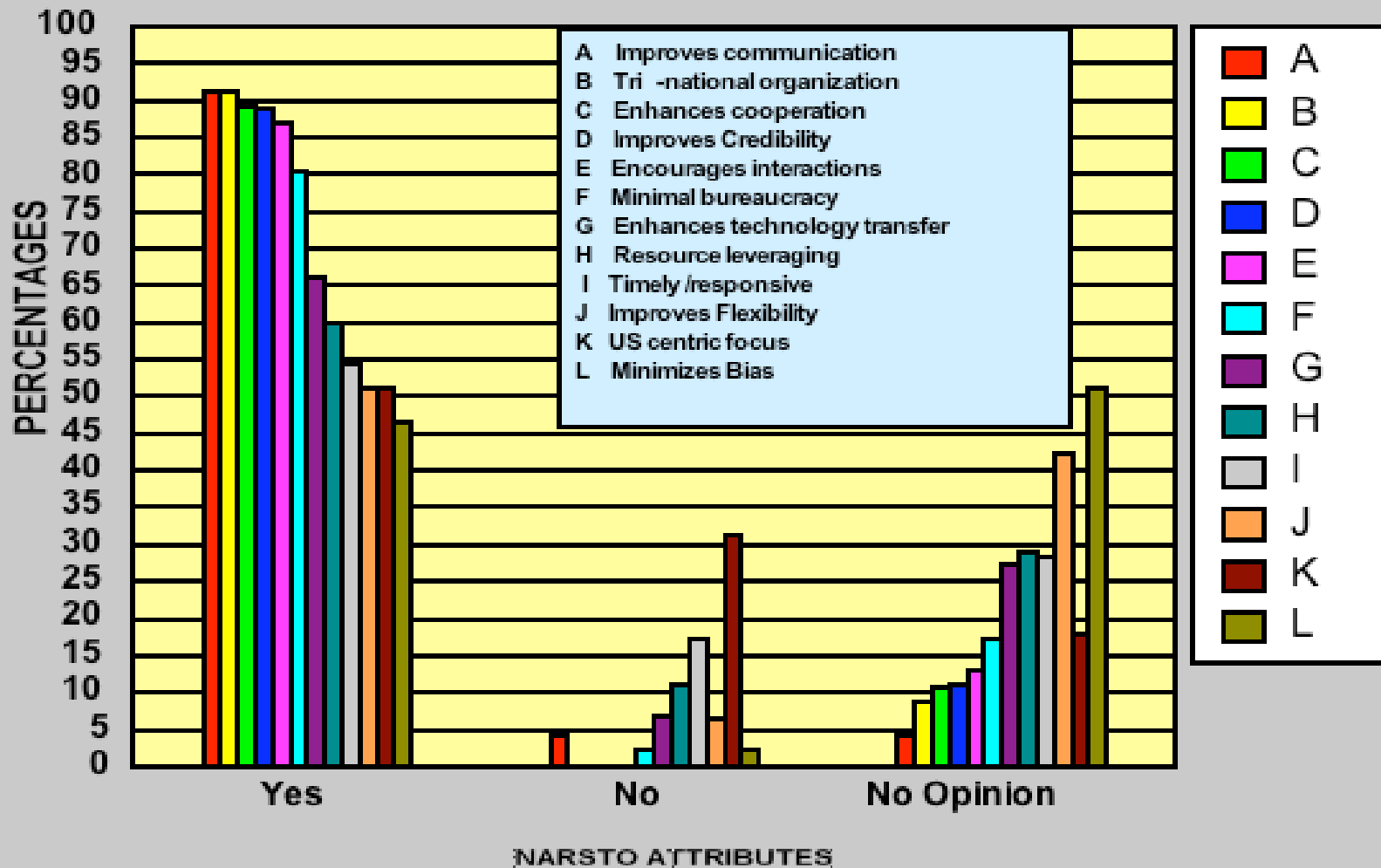


# NARSTO's Distinctive Capabilities and Their Value

- NARSTO unique in its tri-national scientific capabilities
- Enables collaboration among government, industry, and academic experts in all three countries
- NARSTO's organization is streamlined, non bureaucratic, flexible and transparent
- Data archive is seen as useful
- No other organization in North America encompasses NARSTO's scope, for example
  - US National Academy of Sciences covers some of the same US issues, but involves process that is more time-consuming and costly
  - NAFTA's CEC is tri-national, but not equipped to take on in-depth scientific work



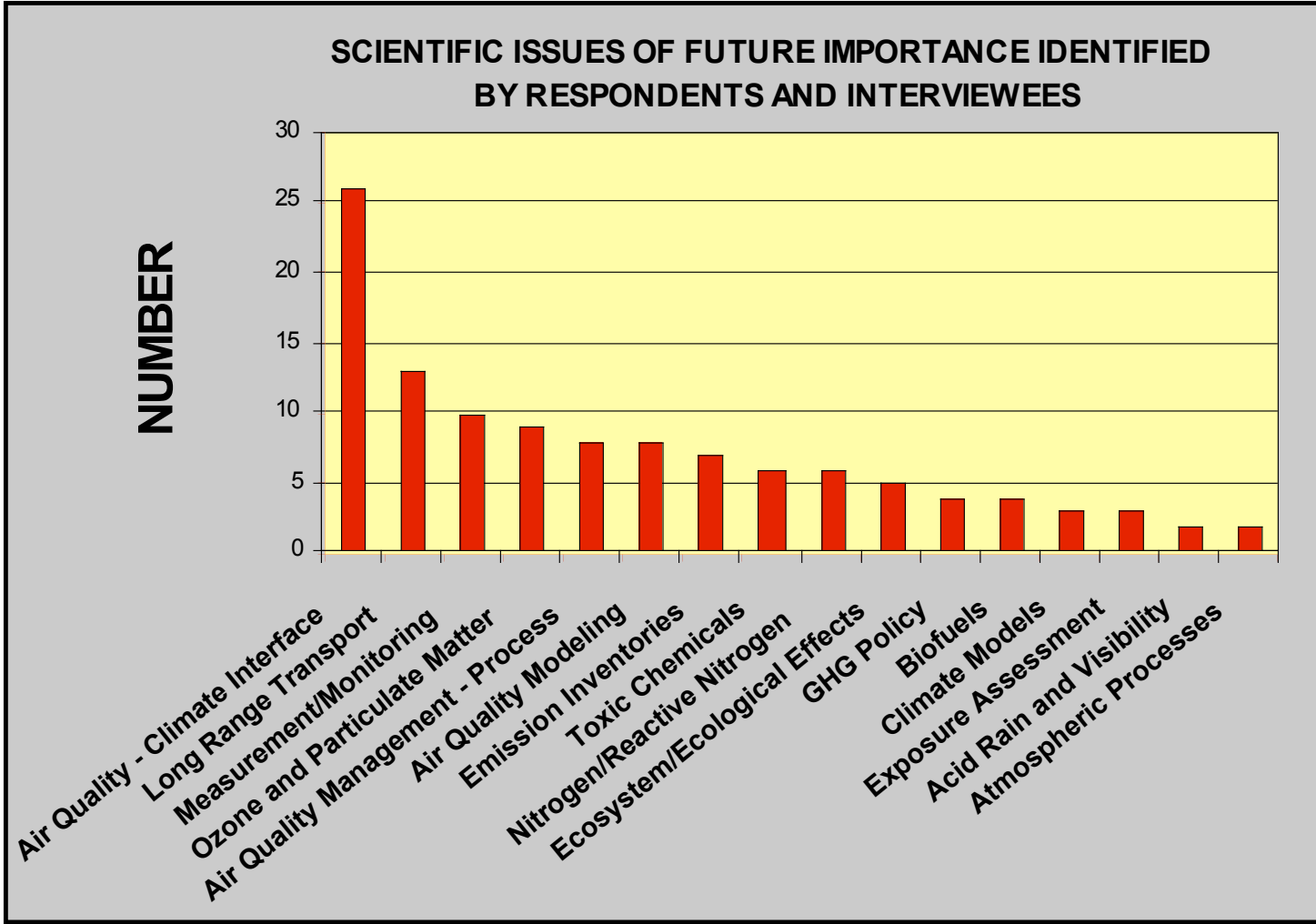
## Q: 12 NARSTO ATTRIBUTES BY PERCENTAGE



# Future Need for NARSTO

- Most interviewed or surveyed stated that NARSTO should be continued. No one called for its abolition.
- A substantial number of interviewees and questionnaire respondents identified problems if NARSTO ceased to exist.





# Issues Raised

- Funding model needs to be addressed -- too dependent upon DOE, unbalanced among three countries;
- Without core funding, NARSTO cannot function;
- Policy-makers who set priorities are less involved in NARSTO than before;
- Institutions and other clients are not aware of the value and relevance to their work of NARSTO products;
- Involvement of key clientele in planning is necessary to ensure that NARSTO projects remain relevant to NARSTO members;
- As individuals involved in the founding of NARSTO retire or move on, their level of commitment has not always been sustained by their institutions.



# Recommendations

- NARSTO should be continued;
- Formalize institutional support for NARSTO;
- Increase participation by policy-makers;
- Strengthen NARSTO's strategic work planning;
- Assure funding for core activities; and
- Review and assess NARSTO's organizational structure and partnerships.



# Perspectives from Panel Members

- Jane Barton—Canada
- Agustin Garcia—Mexico
- Rich Poirot—State and Regional
- John Kinsman—Industry/Private Sector

