

# International Polar Year 2007/8

Chris Rapley  
Chair - ICSU Planning Group

# IPY Concept

- An internationally-coordinated set of polar observations, analysis and scientific exploration at both poles that:
  - *Increases understanding of the polar regions and their global links*
  - *Attracts and develops the next generation of polar researchers*
  - *Engages the public and policymakers*

# Why International?

- Challenging polar environment and magnitude of task exceed capability of any one nation;
  - *World expert agreement on priorities*
  - *Harmonise approach / methodology so that results are intercomparable*
  - *Marshall assets and resources*
  - *Share and coordinate the activities and costs*
  - *Global synthesis of results*
- Science collaboration builds international relationships, understanding and trust

# Why Polar?

- Polar regions are a key components of the Earth System
  - *Numerous key links and feedbacks*
  - *Changes are occurring rapidly and may be accelerating*
  - *Unique repository of Global Change Information*
  - *Provide a platform for specific observations*
  - *Arctic is of major economic and geopolitical interest*
  - *Manageable (just) in the available timeframe*

# Why 2007/8?

- First Polar Year - 1882/3
- Second Polar Year - 1932/3
- International Geophysical Year - 1957/8
  - *Fostered International Cooperation during the Cold War*
  - *Raised Polar Science to a New Level*
  - *Led to Antarctic Treaty*

# Why 2007/8?

- Measurable Polar changes are under way
- Plethora of polar activities and initiatives would benefit from strategic coordination
- Recent Technology and Logistic Advances provide opportunity to implement new modes of study
- Collaborative effort will produce a key Benchmark for comparisons with future and past

# Advocates of a new IPY

- Numerous individuals, institutes, agencies,
- U.S. Polar Research Board, European Polar Board, SCAR
- International Council of Science (ICSU)
- ASSW - AOSB & IASC endorsements
- WMO Congress
- Antarctic Treaty Consultative Meeting
- (Arctic Council)
- Russia

# ICSU IPY Planning Group

- Established June 2003
- First meeting July 31-August 2, 2003
- Terms of Reference;
  - *Stimulate, encourage and organize debate on IPY*
  - *Formulate set of IPY objectives*
  - *Develop high-level IPY Science Plan*
    - *Promote international cooperation*
    - *Balances Arctic and Antarctic sciences, including social science*
    - *Engages young scientists*
    - *Educates the public*
- Second meeting Dec 17-19, 2003

# ICSU IPY Planning Group

- Membership
  - *Chris Rapley (UK, Chair)*
  - *Robin Bell (USA, Vice-Chair)*
  - *Ian Allison (Australia)*
  - *Robert Bindschadler (USA)*
  - *Steve Chown (South Africa)*
  - *Gerard Duhaime (Canada)*
  - *Vladimir Kotlyakov (Russia)*
  - *Olav Orheim (Norway)*
  - *Zhanghai Zhan (China)*
  - *Prem Pandi (India)*
  - *Hanne Petersen (Denmark)*
  - *Gino Casassa (Chile)*
  - *Michael Kuhn (IUGG)*
  - *Henk Schalke (IUGS)*
  - *Eduard Sarukhanian (WMO)*
- Support
  - *Chris Elfring (US PRB)*
  - *Daniel Rodary (ICSU)*

# IPY Characteristics

- Compelling science issues
- Outcomes that would not otherwise occur
- Internationally coordinated
- Bipolar
- Multidisciplinary
- Relevant
- High profile

# Possible IPY Themes

- Exploration of New Frontiers
- Understanding Change at the Poles
- Decoding Polar Processes
- (Polar Teleconnections/Global Linkages)

# Some developing ideas

- Space "Snapshots"
- Arctic and Southern Ocean "Armadas"
- Resuscitate Russian HydroMet network and Arctic ice stations
- Deploy new technologies - Autonomous Platforms, Underwater Vehicles, Airborne Vehicles ...
- Deploy new techniques - Genomics, Proteomic, Bioinformatics

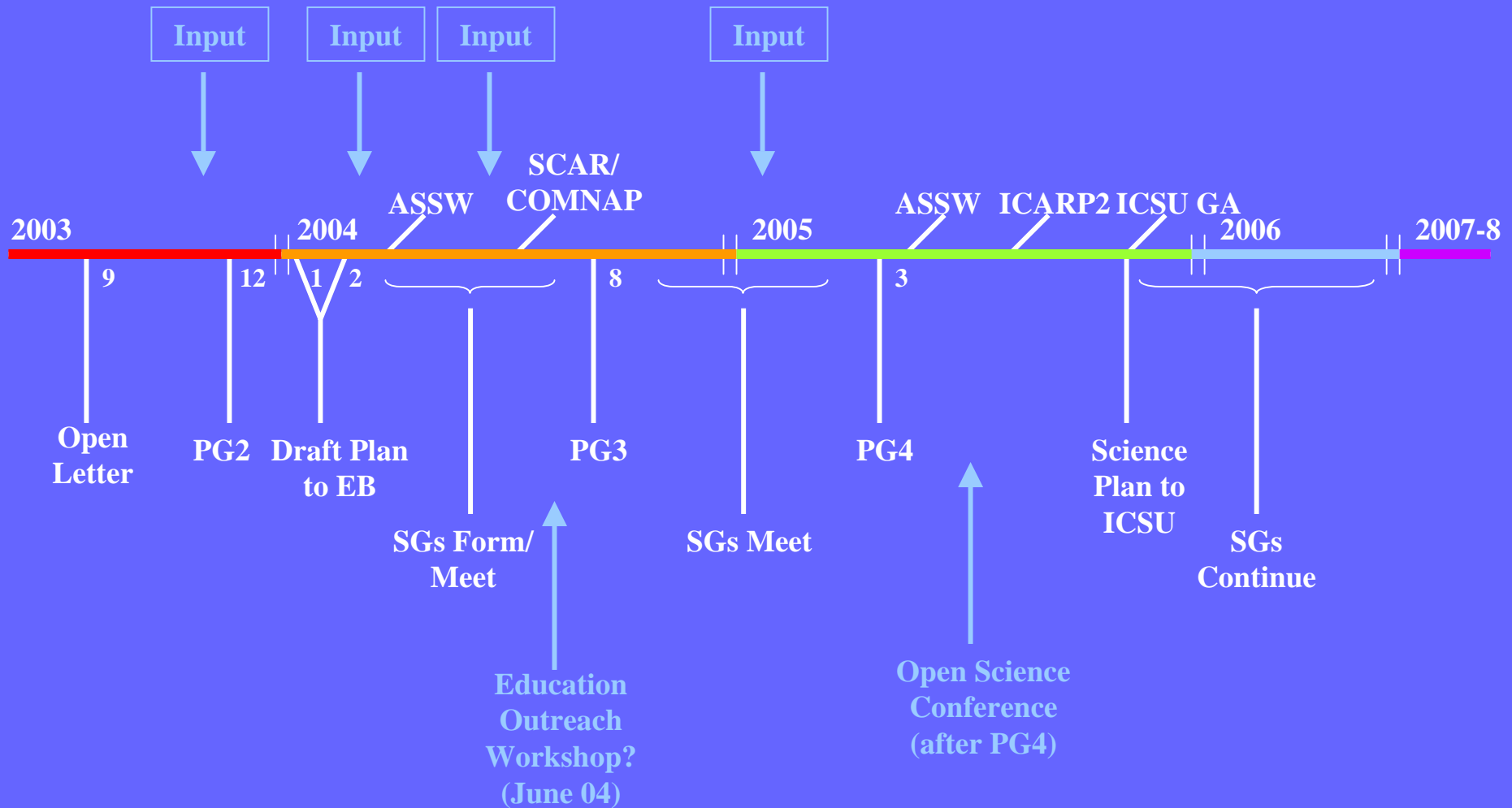
# Education & Outreach

- Communications strategy
- Leading broadcaster involvement
- International Communication sub group
- Teachers / schoolchildren / general public to participate

# ICSU Request

- Statement of Intent on communication mechanism - POC
- Comments on draft themes
- Brief descriptions of proposed concepts for research activities
- Brief descriptions of cross-cutting activities

# Timeline



# UK National IPY Committee

- Sir John Houghton (Chair)
- Steve Albon
- Michael Deplege
- Bob Dickson
- Julian Dowdeswell
- Jane Francis
- Brian Hoskins
- John Lawton
- Peter Liss
- Julia Marton-Lefevre
- Liz Morris
- Chris Rapley
- Richard Williams
- Duncan Wingham
- Cynan Ellis-Evans (Secretary)

# UK NC Initial Thoughts

- Observational Core
  - *Space / in situ*
  - *As a reference for the future and to compare with the past*
- ~5 "Flagship" projects which benefit from IPY coordination and impetus
- Additional high quality projects / programmes recognised provided they satisfy IPY criteria

# UK NC Initial Thoughts

- Science Priorities
  - *Accelerating water cycle*
  - *West Antarctic Ice Sheet*
  - *Bio/Eco/Genomics - Biodiversity?*
  - *Social and Ecosystem impacts of Arctic change*
- Southern Ocean excluded as too ambitious?
- Town Hall meeting first/second quarter 2004

# Issues

- Website
- Executive Director / Secretariat
- Funding
- Relationship with WMO initiative, Year of Planet Earth, etc
- Programme Element selection / accreditation
- Data policy and activity