GLOBAL METHANE INITIATIVE:

METHANE BLUE RIBBON PANEL

www.globalmethanefund.org

A Global Effort to Reduce Methane: Prototype Methane Financing Facility

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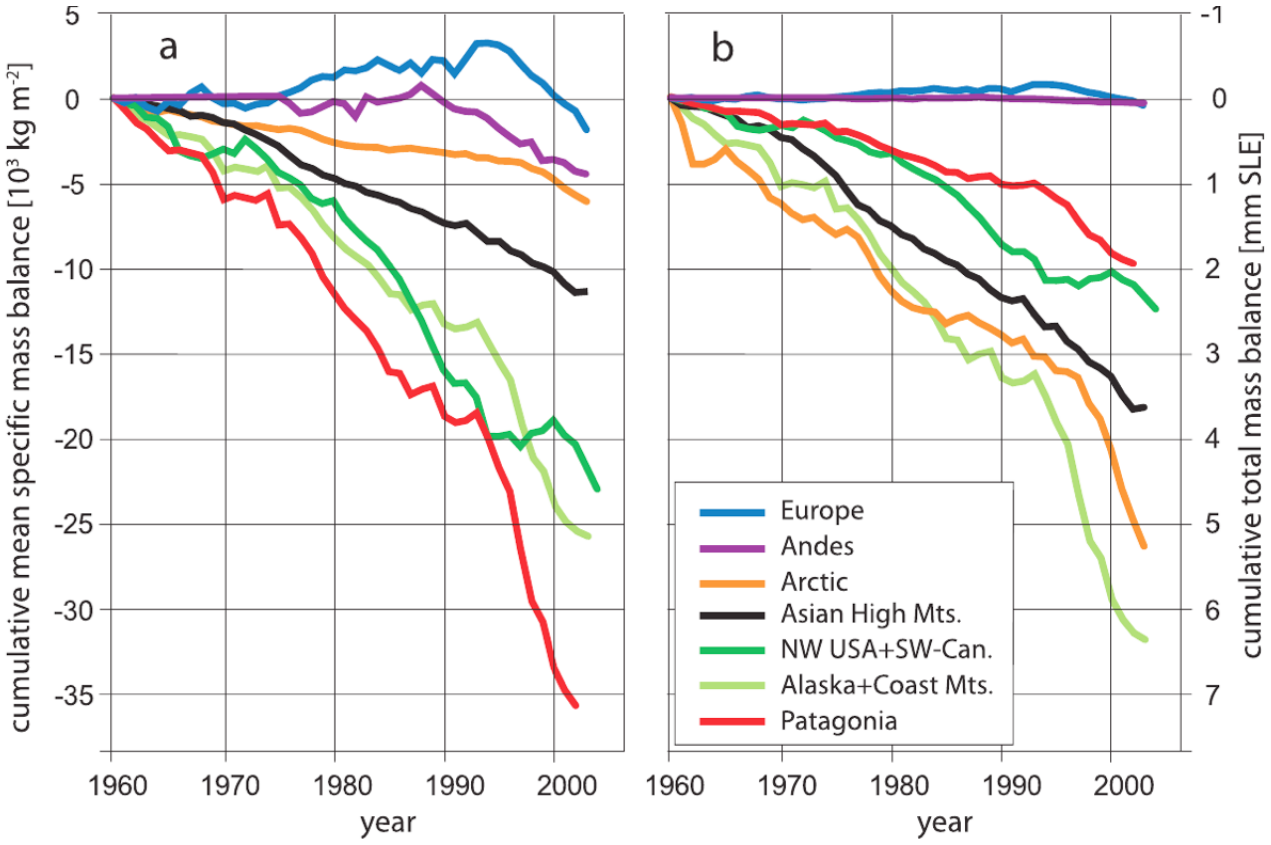
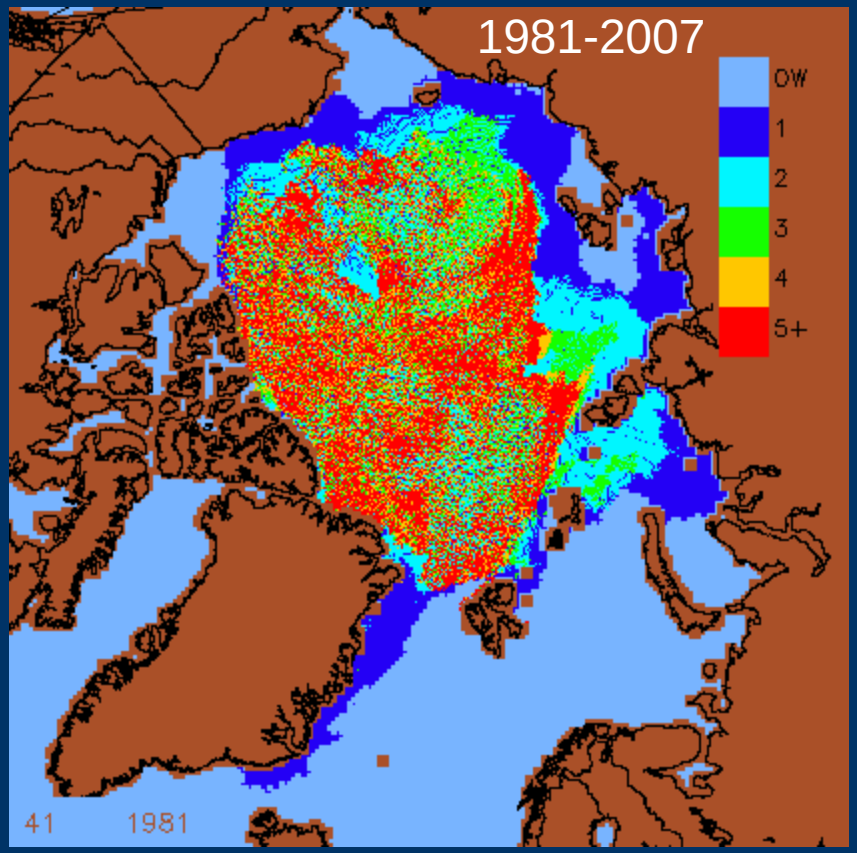
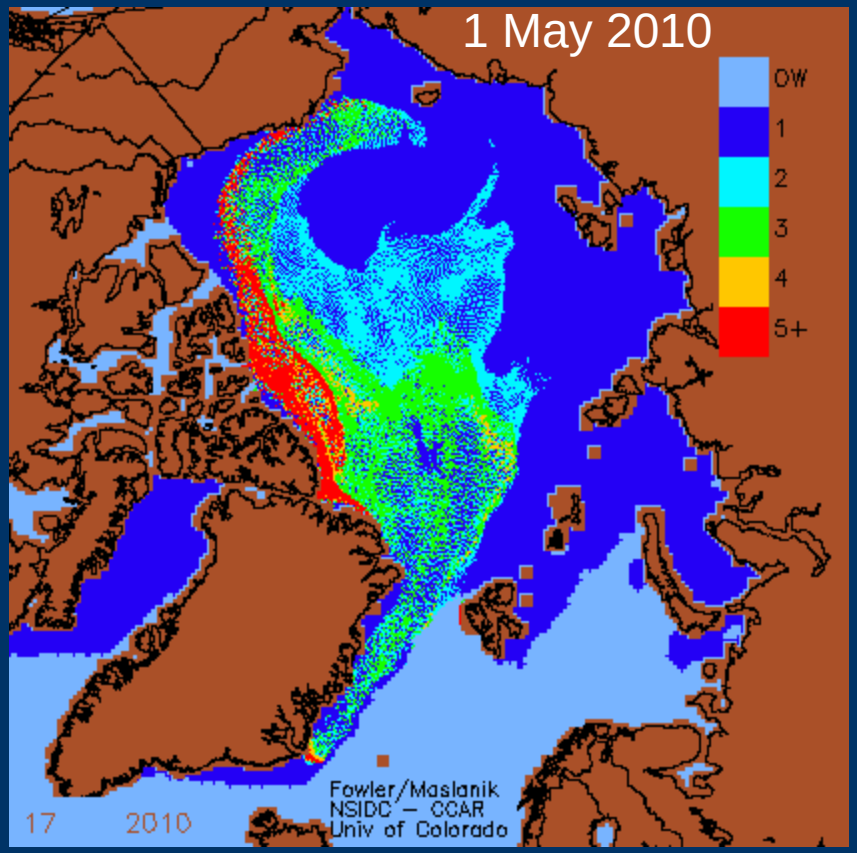
Land Glacier Ice Loss



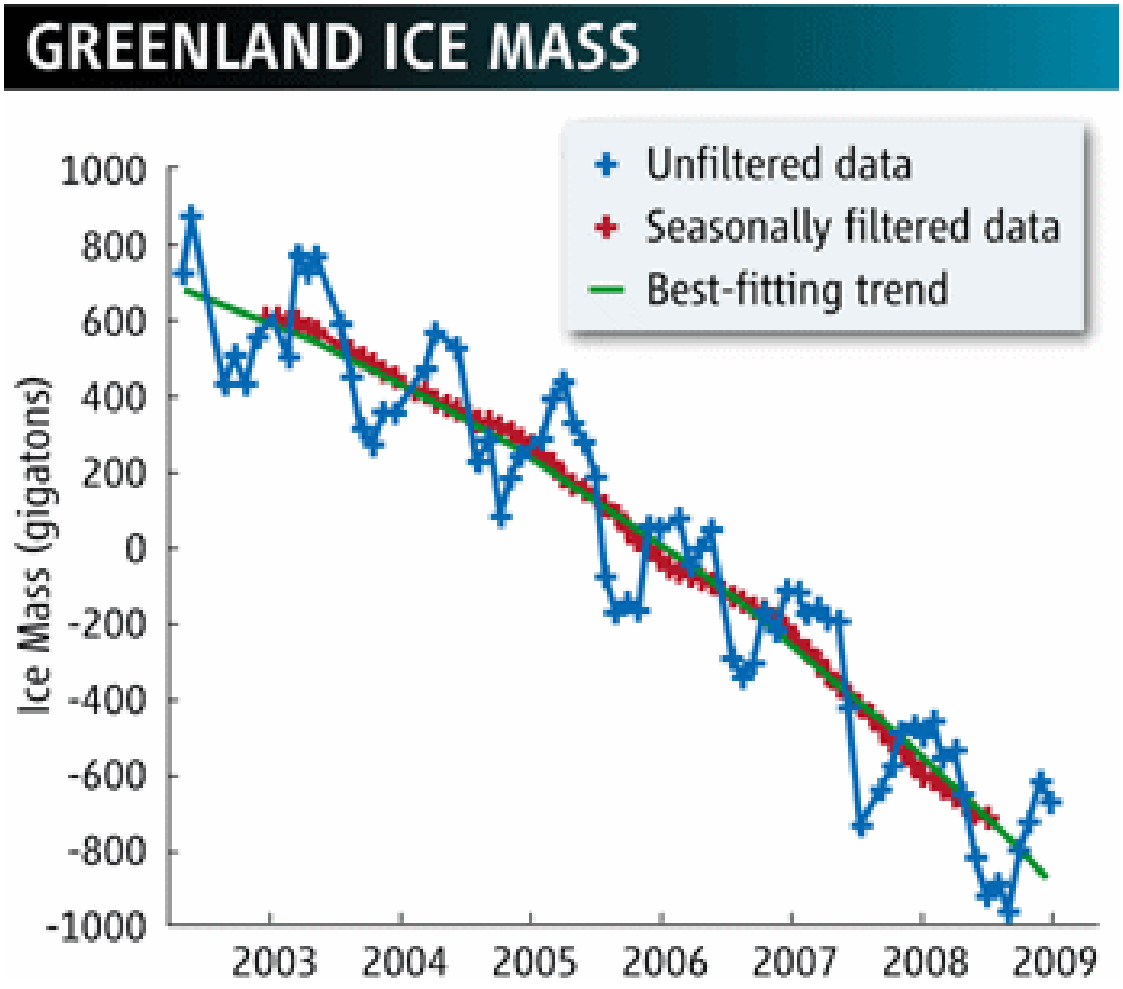
Ice is getting younger and thinner

Old, ice used to covered most of central Arctic
Now it is limited to narrow band along Greenland and Canadian Archipelago





From J. Maslanik, C. Fowler, Univ. Colorado (Presentation of Dr. Walt Meier, NSDIC)



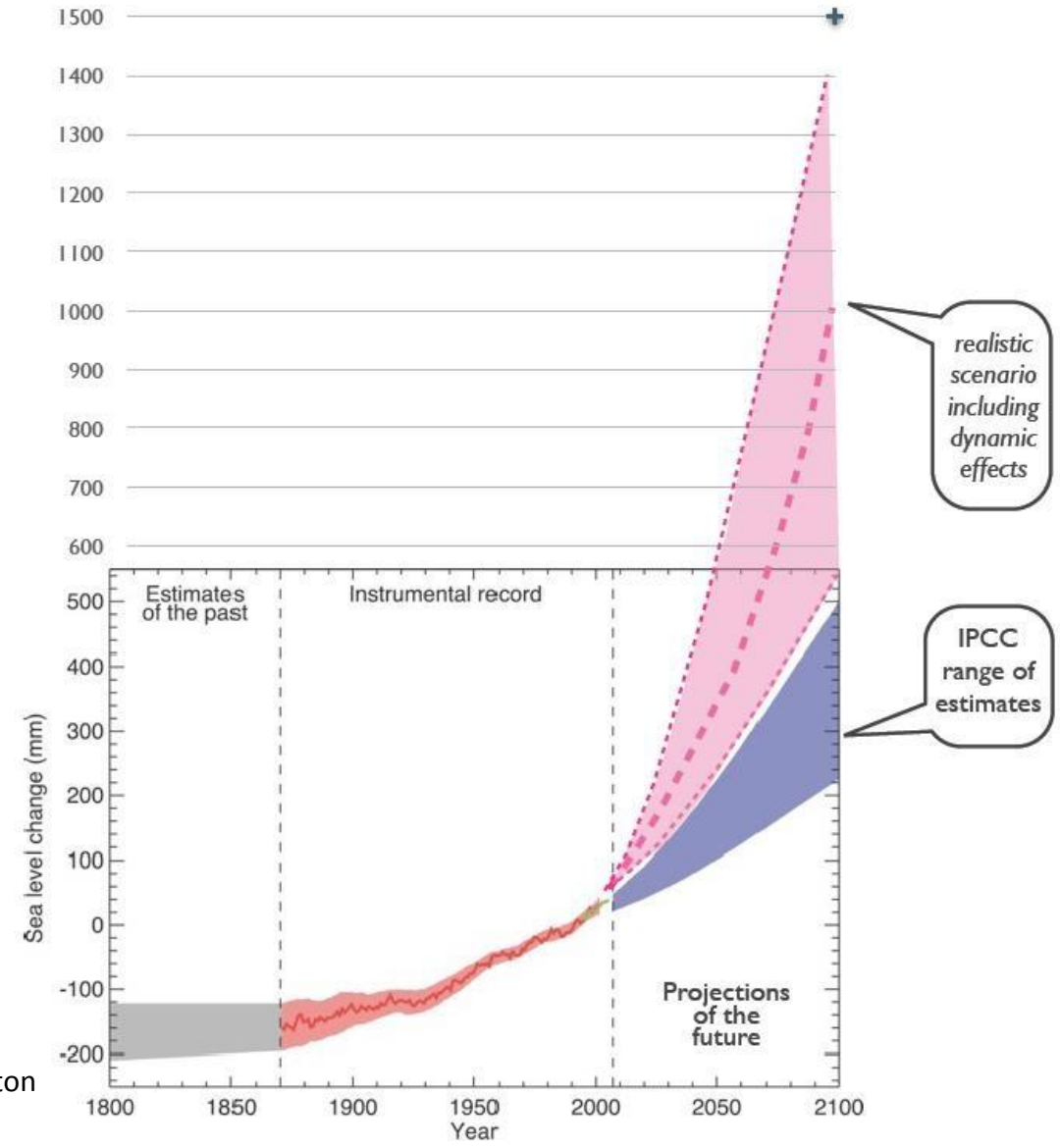
R. A. Kerr Science 326, 217-a (2009) (2009)

Science October 2009, adapted from Isabella Velicogna, Geophysical Research Letters.

Science
AAAS

Sea Level Rise Estimates

Adapted and modified from Figure 5.1 (IPCC, 2007)



Source: Personal Communication from Dr. Gordon Hamilton

Area at risk of inundation from 1-meter (3.3 ft.) rise in sea level

- Current sea level
- Low estimate
- Central estimate
- High estimate

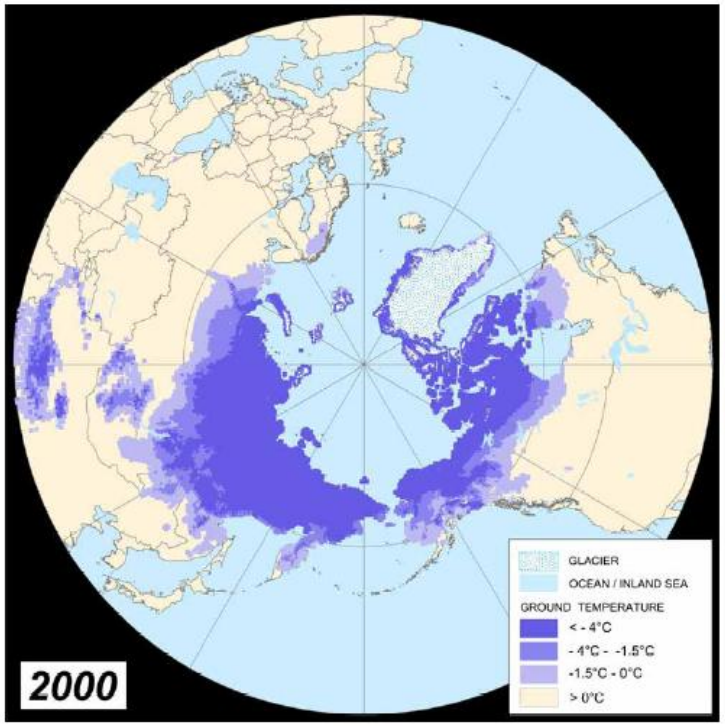
Elevations based on computer models, not actual surveys. High, central, and low estimates indicate amount of land potentially inundated. Range in estimates reflects uncertainty in underlying elevation model. Inundation shown does not reflect coastal protection efforts that may prevent some low-lying areas from being flooded as sea level rises. Map does not depict inland areas below modeled sea level where not connected directly to the sea. Some hydraulically isolated areas that are below the predicted rise in sea level may become inundated as water tables rise.

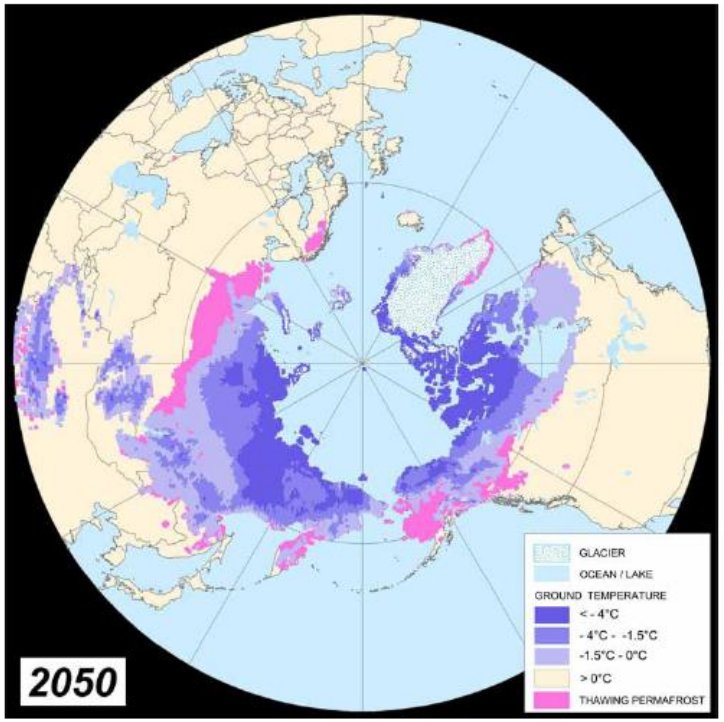
CLEAN AIR COOL PLANET

Prepared by Strata Consulting Inc.
Elevation data: USGS, 2009
Imagery: Florida DEP, 2004

Threat from “Natural” Methane Release:

May equal or exceed all CO2 currently in atmosphere





http://www.ametsoc.org/atmospolicy/documents/2008ESSS/ESSS92608/WDC_08%20Romanovsky2.pdf

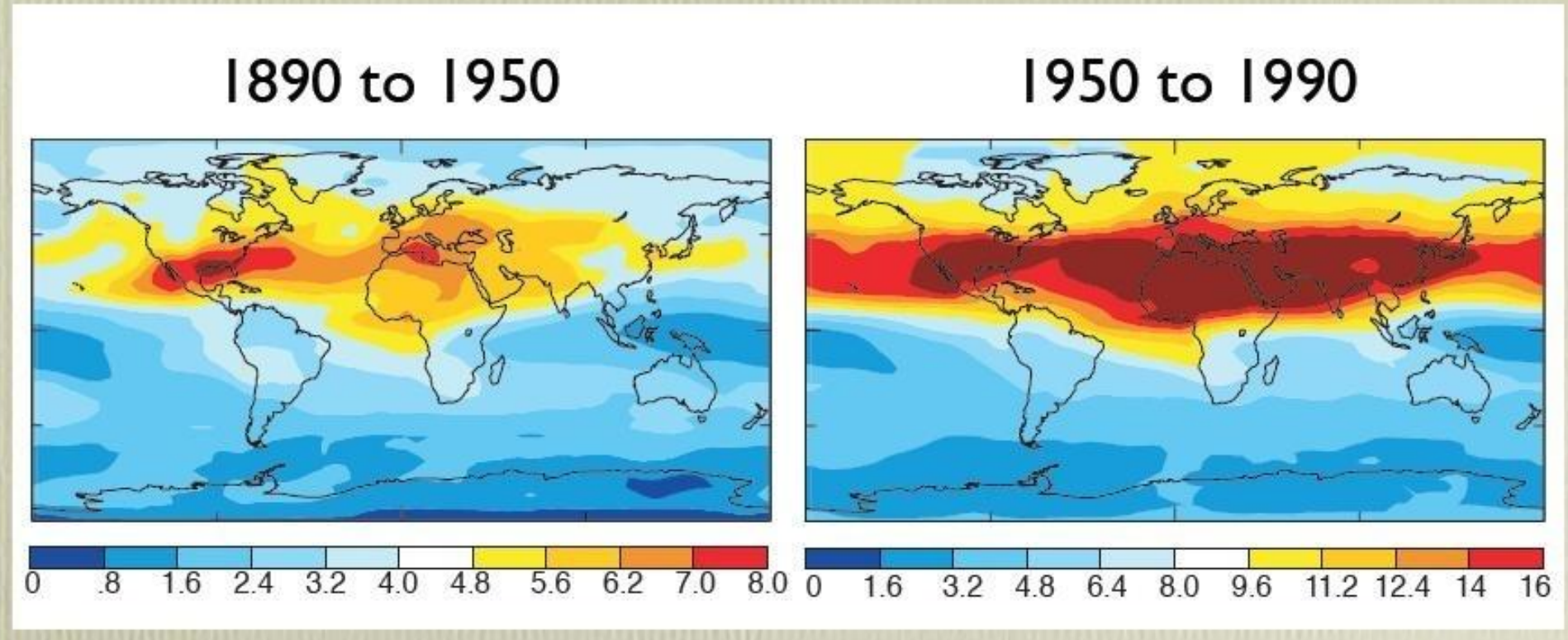
Call to Action on SLCFs

- The response to these rapid changes must be urgent, immediate and build momentum
- The response must be part of a comprehensive approach to climate change
- Pricing, regulation, R&D including geo-engineering research, all needed elements

Methane:
Low-hanging fruit to slow warming

- Methane warms at least 72 times as CO_2 over a 20 year period
- Reductions have a direct, relatively rapid impact on warming.
- Mitigation of methane emissions carries development benefits
- Technologies for methane reduction are tested and available
- Lowers ozone

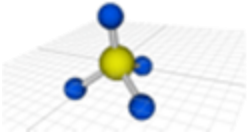
20th Century Ozone Increases



Values are for the tropospheric ozone column (in Dobson Units)

All values are positive. Scale x2 on right.

AMS congressional briefing, D. Shindell, May 31, 2006



Global Methane Fund

- Recommended by Blue-Ribbon Panel, including representatives of scientific, private sector, developer, government communities:

(Members: Bob Watson, Mohamed El-Ashry, Ken Newcombe, Luisa Molina, Kathleen Cravero, Chuanliu Ni, Sunil Deshmukh, Mark Grobmyer, Christian Langaard, Melinda Kimble, Rafe Pomerance, Bo Kjellen)

- Easiest, fastest means available:

  → A floor price guarantee mechanism

- Concrete goal: 1 GT CO_2e by 2020 (50% IIASA)

Panel Reasoning

- **New methane CDM projects has dropped to near-zero** since 2009, from approx. 200 per quarter in 2007

- Key reasons identified:
  - **Lack of available financing** due to the credit crunch
  - **Decline of primary prices of Certified Emission Reductions** (CERs) by over 50% since mid-2008.
  - **Uncertain post-Kyoto CDM window**
  - **Lack of capacity/costs of project development**

- Ultimate goal of the Global Methane Fund (GMF) is to **support rapid methane abatement** by addressing these and other barriers – but need to start small

Early Prototype Phase:
"Prototype Methane Financing Facility"

- Establishes a "methane CER price guarantee" mechanism, providing a "price floor"
- Focus on "clogged pipeline" projects, projects in LDCs and SIDS, and cookstoves
- CDM and high standard "voluntary" markets
- Reduces developer uncertainty
- Help jump-start broader SLCF initiative

How It Works

Process

Funding

- Initial reserve of perhaps $20 million in pledges adequate to prove model in prototype “PMFF” phase
- New PMFF Board issues call for projects with a given price floor (say $12), signs contracts with projects at that floor.
- Guarantees operate based on ***pledges***, except to support administration (small 2-3 person secretariat)
- Support from Governments, Multilaterals, Foundations, Private sector, including in-kind
- Board itself decides risk in terms of price floor, number of CERs to support

Source: Point Carbon report, Dalberg analysis

How It Works

Process

Collection/Payout

- Guarantees collected by projects only if and when CERs are issued
- If market price is below “floor,” PMFF makes up the difference.
- If spot price is above floor price, PMFF receives a portion of profits, to allow PMFF transition to self-support (and more ambitious “GMF” agenda)
- Point Carbon estimated PMFF can be entirely self-supporting (and support additional methane-related activities) by Year Three

Dalberg

Source: Point Carbon report, Dalberg analysis

How It Works

Process

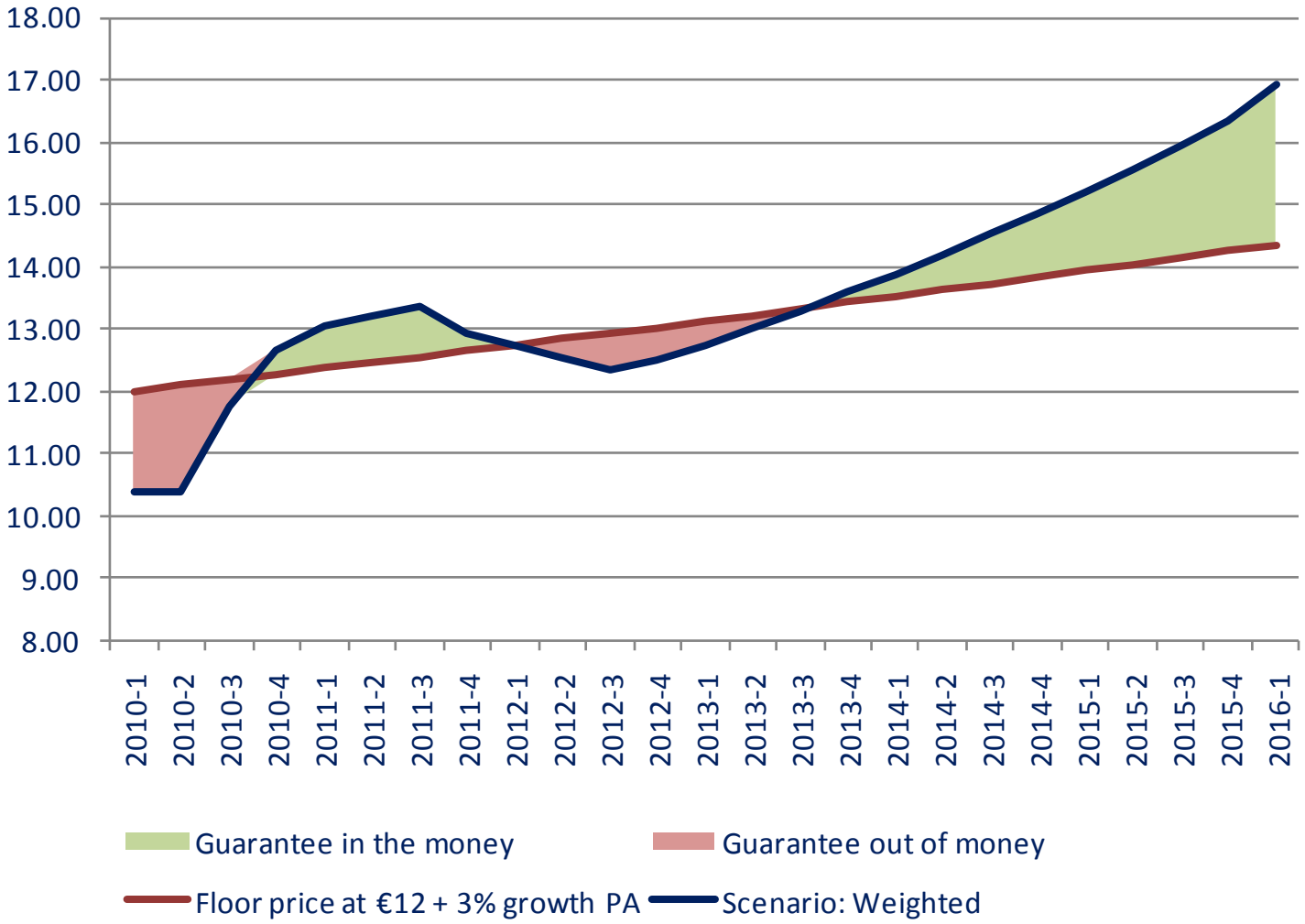
Example:

- Wastewater Project A signs contract with PMFF at a floor price of $11 in 2012, with 50% of profits above floor to PMFF
- Project A obtains financing, builds plant, and begins generating methane CERs in 2014.
- Project A can sell CERs in 2014 for only $10. PMFF pays out $1 per CER.
- Price in 2015 is $12. Project A pays $0.50 per CER to PMFF.
- Price in 2016 is $13, $1/CER goes to PMFF

Source: Point Carbon report, Dalberg analysis

Projected PMFF Performance

Analysis/Modeling by Point Carbon (Thompson-Reuters)



Point Carbon Conclusion:

Yes, Floor Price Will Stimulate Methane Projects

- Significant new projects stimulated by a floor price of 9-11 €uroes ($12-15).
- PMFF Board should adjust price floor in nimble manner as market evolves, to walk fine line between minimizing donor risk yet still stimulate new projects
- PMFF will **generate net income over lifetime,** donors unlikely to ever need to pay out
- PMFF “income” should go back into guarantee mechanism and over time, broader capacity-building
- Point Carbon’s bottom line: PMFF will quickly move forward lagging methane reduction projects.

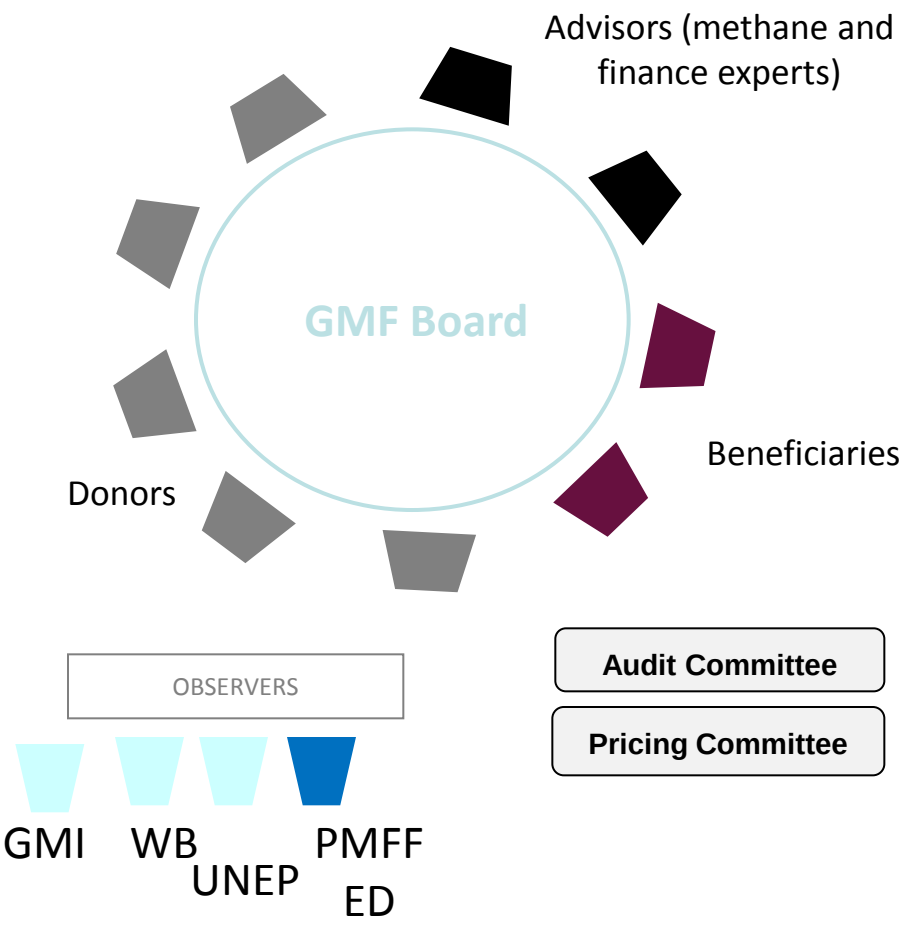
Point Carbon Conclusions:

Leverage and Risk Levels

- Point Carbon believes the PMFF can safely guarantee between 20-25 times the amount of PMFF pledges if it sets the floor price properly
- This is because 1) the PMFF only makes up the DIFFERENCE between market v. floor price, and 2) only half of proposed methane projects ever actually generate CERs.
- This means that for each $10 million in Fund pledges, the PMFF could with reasonable risk guarantee between $200-250 million in projected CERs from methane projects.
- ***Ultimate price floor and risk however up to founding Board.***

Example PMFF governance: Small, representative board using the proportional representation vote allocation model

Possible Board Structure



Proposed Principles

- 6-9 members, 4 observers, with donors/investors in majority
- 6 board meetings per year in first two years, 4 per years afterwards. Half of board meetings are virtual
- Aim to have decisions by consensus with vote as a last resort.
- Larger donors will have individual seats, multiple smaller donors will be represented by one seat

Source: Dalberg analysis for Methane BRP

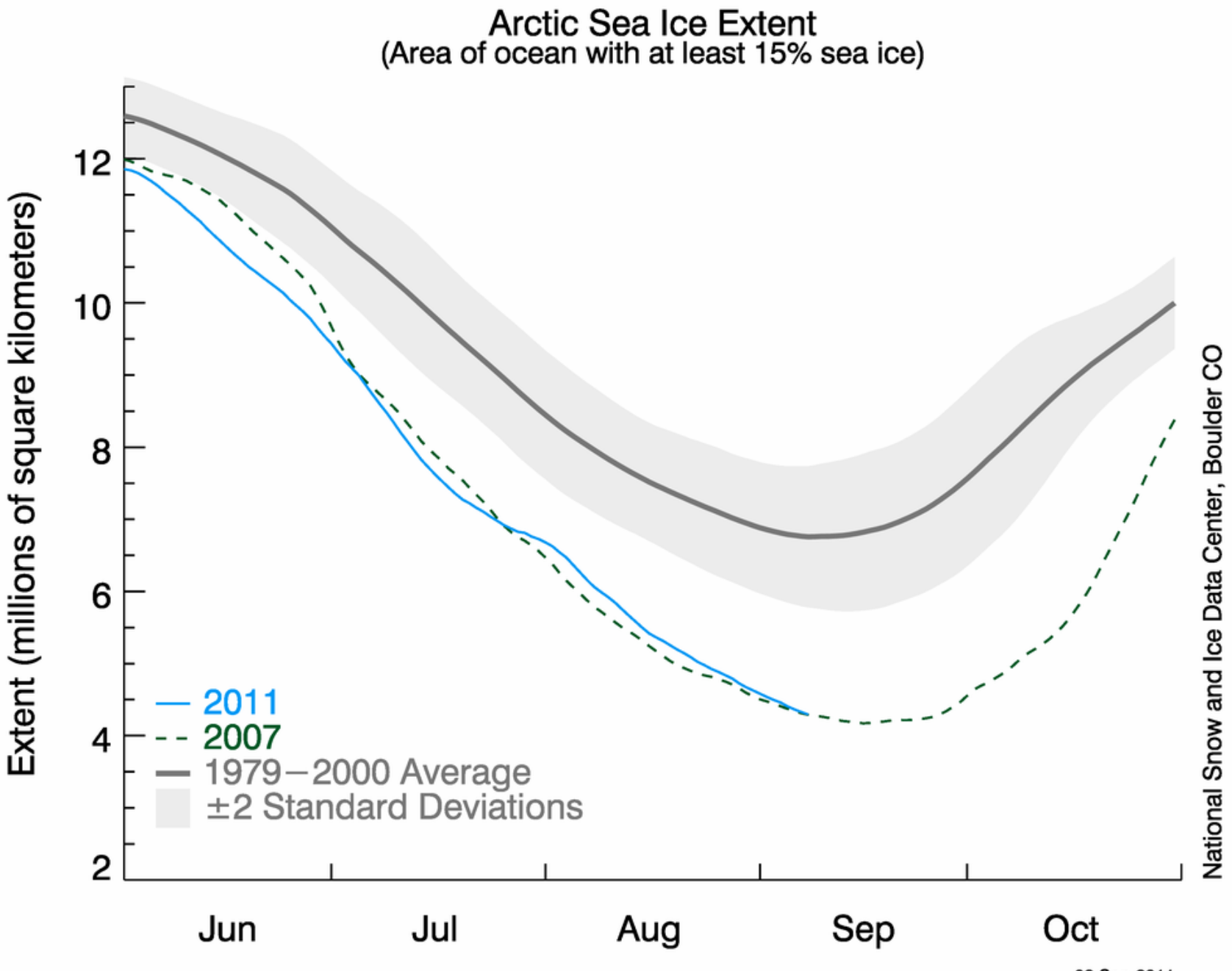
Potential to Grow if Prototype Phase Successful

Launch and scale-up ambition for GMF

	2012	2014	2016
Ambition	PMFF Phase: Narrow activity focus, focus on risk management and sustainability	Broaden investment target and gradually assume more risk, while still being financially sustainable	GMF Phase-in: Include more risky projets, leading-edge technologies?
Main targets	Unclogging the backlog, stimulating methane projects in LDCs and involving cookstoves	Mechanism becomes self-finacning	Greater focus on capacity-building, grant and soft-loans to stimulate additional projects?

Expansion over time will increase the overall impact (methane projects stimulated).

Source: Dalberg analysis


Arctic Sea Ice Extent
(Area of ocean with at least 15% sea ice)
Extent (millions of square kilometers)
12
10
8
6
4
2
Jun
Jul
Aug
Sep
Oct
2011
2007
1979–2000 Average
±2 Standard Deviations
National Snow and Ice Data Center, Boulder CO
08 Sep 2011