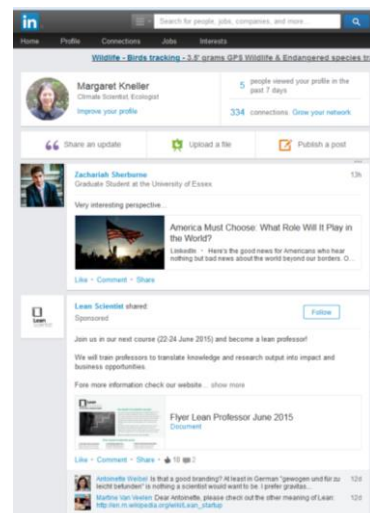
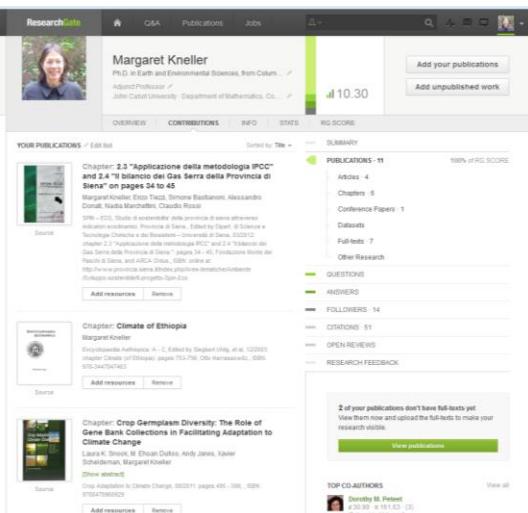


For the AMICAL professors ... the difficulty in teaching climate change science is:

- dispersed nature of teaching materials,
- textbooks -- information is updated too quickly for the traditional print cycle,
- publishers may target country-specific, not international students.

May 2015: Find collaborator AMICAL professors, librarians, IT people ...

- develop a virtual resource center,
- specifically address a multi-national student body.



Margaret Kneller, Ph.D.
Department of Mathematics,
Natural & Computer Sciences





September 20, 2014: The Secretary General of the **UN**, Ban Ki-moon, is to join a public march **calling for action on climate change** this weekend. “I will link arms with those marching for climate action,” Ban [said ...] “We stand with them on the right side of this key issue for our common future.” His unusual step — high-ranking officials do not normally attend mass public protests — is a measure of how high the stakes are at a summit next week of world leaders ... to discuss climate change.

2014 OECD MINISTERIAL STATEMENT ON CLIMATE CHANGE



2014 OECD Ministerial Statement on **Climate Change**: **Climate change** is a major urgent challenge and a potentially irreversible threat to the achievement of our goal of “Resilient Economies and Inclusive Societies”, requiring a decisive, consistent and coherent response. While policies adopted by different countries will need to reflect their individual circumstances, we recognise the importance of aligning policies across all relevant areas.



2015 QDDR
EXECUTIVE
SUMMARY. “America is strongest when our optimism, integrity, ideals, and innovation are a model for the world.”

QUADRENNIAL DIPLOMACY AND DEVELOPMENT REVIEW

This QDDR focuses on four global policy priorities for the **US State Department and USAID**: 1. Preventing and Mitigating Conflict and Violent Extremism, 2. Promoting Open, Resilient, and Democratic Societies, 3. Advancing Inclusive Economic Growth, **4. Mitigating and Adapting to Climate Change.**



“Climate change is one of the greatest risks facing humankind this century. Through a part of its core business, the insurance industry is directly affected and therefore assumes a leading role in devising solutions for climate protection and adaptation to the inevitable changes.”

Professor Peter Höppler, Head of Munich Re's Geo Risks
Research/Corporate Climate Centre

Date: 04/17/15 02:51 PM—Updated 04/18/15

Green



MSNBC ORIGINALS, 10/2/14, 11:31 AM ET

Growing fossil fuel divestment protests hit colleges nationwide

04/17/15 02:51 PM—UPDATED 04/18/15 02:34 PM

By **Jamie Henn**



The movement to push colleges and universities to divest from fossil fuels is heating up on campus. Everywhere you look, divestment sit-ins, protests, and rallies are sweeping across campuses. At Harvard this week, more than 1,000 students, alumni and professors have taken part in [sit-ins, rallies and protests](#). Their blockade of key administration offices has forced school officials to relocate to a nearby Au Bon

The **seeds of the current divestment movement were planted back in 2011**

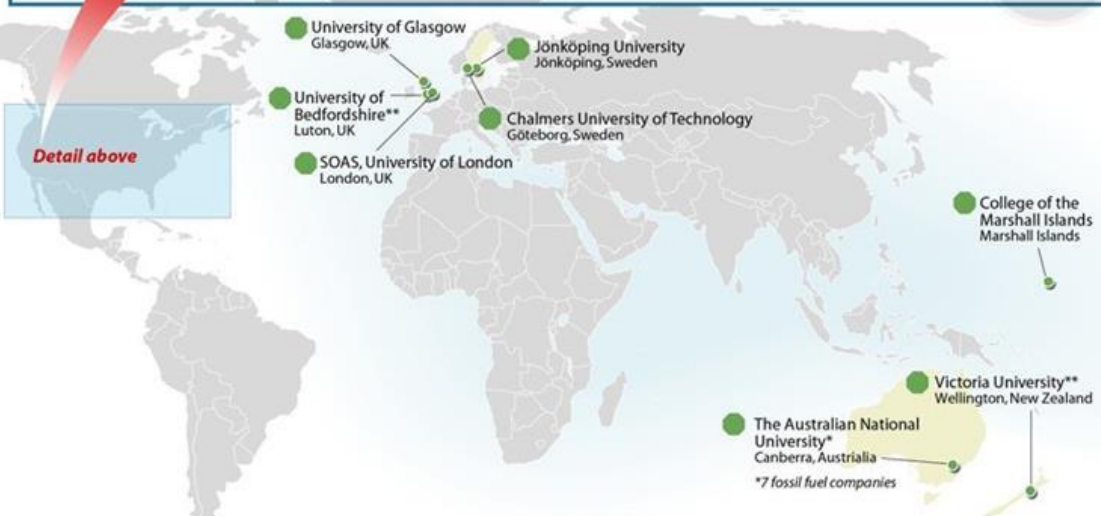
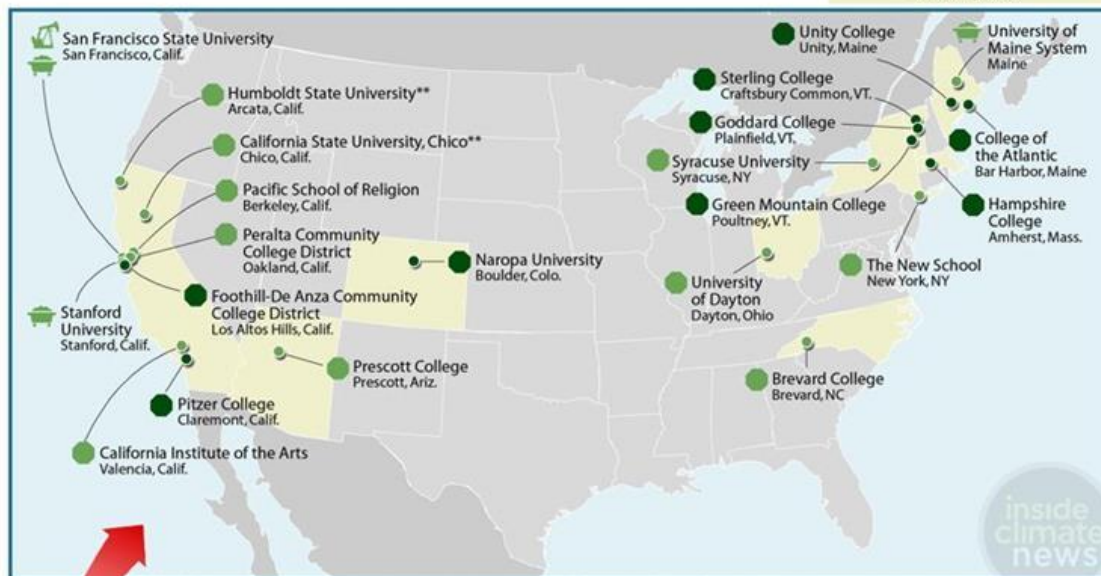
- when campuses like Swarthmore began to push their administrations to divest from coal
- the campaign really started to take root in November of 2012, when
- climate campaigners with 350.org, Energy Action Coalition, and others took to the road to rev up a national divestment movement.

GO TO video at: <http://www.msnbc.com/msnbc/fossil-fuel-divestment-protests-hit-colleges-nationwide>

Apr 2, 2015

The State of the College Divestment Movement

So far, 30 universities worldwide have divested from fossil fuels or have committed to divest. They join 41 cities, 72 religious institutions, 30 foundations and more than 650 individuals.



**These schools had minimal to no direct fossil fuel investments at the time of their pledge

SOURCE: gofossilfree.org, InsideClimate News research

Updated April 27, 2015

PAUL HORN / InsideClimate News

SHORT VIDEO at <http://gofossilfree.org/wrap-up/>



GLOBAL DIVESTMENT DAY
LET'S MAKE FOSSIL FUELS HISTORY

Global Divestment Day 2015



0:24 / 1:25

[Share on Facebook](#) [Share on Twitter](#)

Join the fossil fuel divestment movement — sign up here:

<input type="text" value="Name"/>	<input type="text" value="Email"/>	<input type="text" value="City"/>	<input type="text" value="Country"/>	<input type="button" value="SIGN UP"/>
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GLOBAL DIVESTMENT DAY WAS HUGE!

At over 450 events in 60 countries, people around the world declared that it's wrong to wreck the climate — and it's wrong to profit from wrecking it.

February 13-14, 2015

... the time is ripe

Opportunity for Education

Educating University Individuals—What are the Constraints and Responsibilities?

Degree Requirements, Science within the Requirement, Updating the Curricula with Faculty Approval?

John Cabot University offers the Bachelor of Arts degree in:

- Art History
- Business Administration
- Classical Studies
- Communications
- Economics and Finance
- English Literature
- History
- Humanistic Studies
- International Affairs
- International Business
- Italian Studies
- Marketing
- Political Science

GENERAL DISTRIBUTION REQUIREMENTS

1. **English Literature:** Two courses in English Literature, one of which may be replaced by a course in comparative or dramatic literature in English translation. (These courses must have EN 110 as a prerequisite.)
2. **Mathematics and Science:** Two courses in Mathematics, Natural Science, or Computer Science. (MA 101 and MA 102 do not fulfill this requirement.)
3. **Social Sciences, Humanities, and Fine Arts:** Seven courses distributed as follows:
 - a. Social Sciences - at least two courses in Communications, Economics, Political Science, or

NS 202 Global Warming

The class will examine the chemical, biological, physical, and geological processes involved in that climate change, already evident in the 20th century, and predicted for the 21st century. The human impact upon the “greenhouse effect” is explained, the merits of the scientific theory are examined in light of available evidence to date. Climate changes apparent at the century time-scale, and longer, are introduced; the physical forcings responsible for these changes are presented. The international treaties (the UNFCCC and Kyoto Protocol) that address anthropogenic greenhouse gas emissions are introduced, along with local to regional initiatives developed by the private and public sectors.

For some AMICAL professors ...
the Climate Science course is required for a LIBERAL ARTS major:

- advantages with respect to a “Course of Study” determined by a Department (discipline or major “restricted” classes).

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Member Institutions



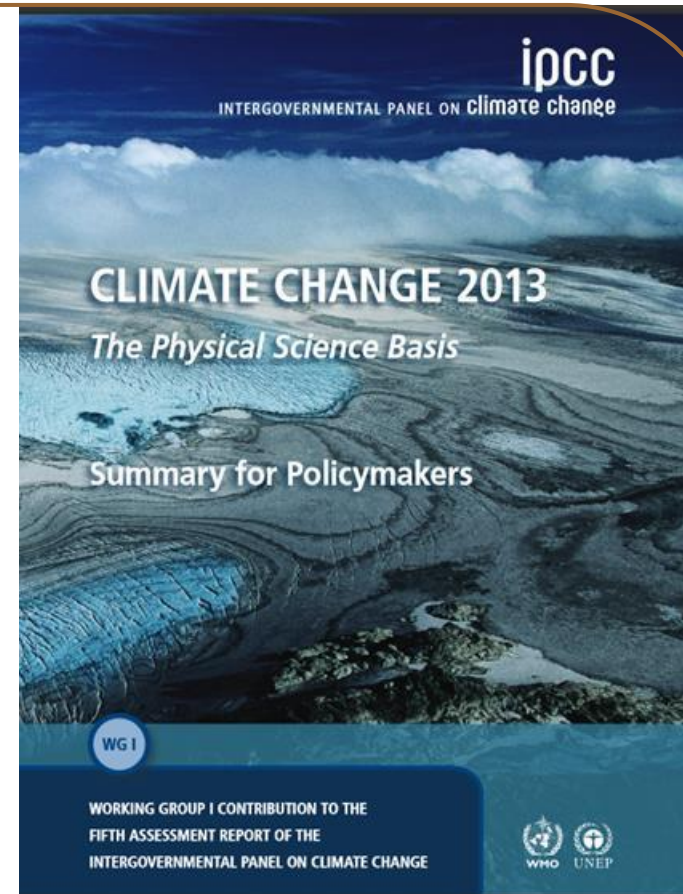
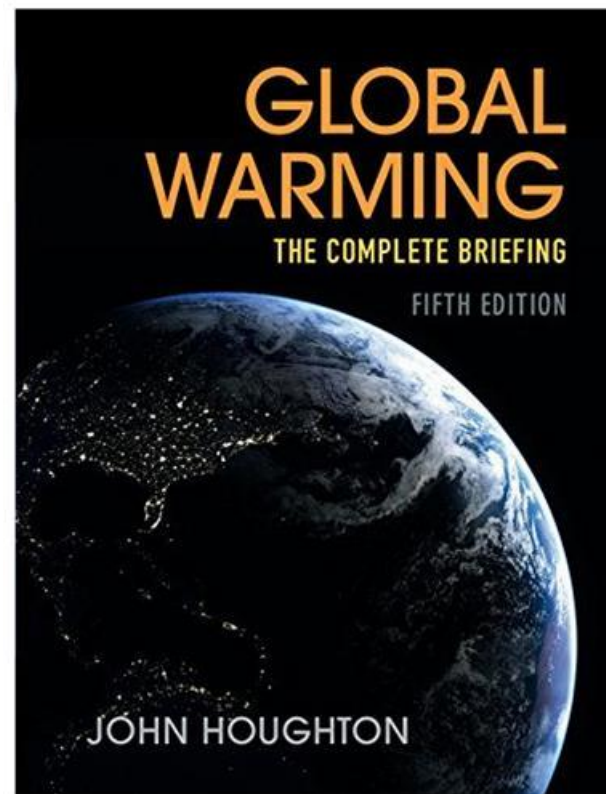
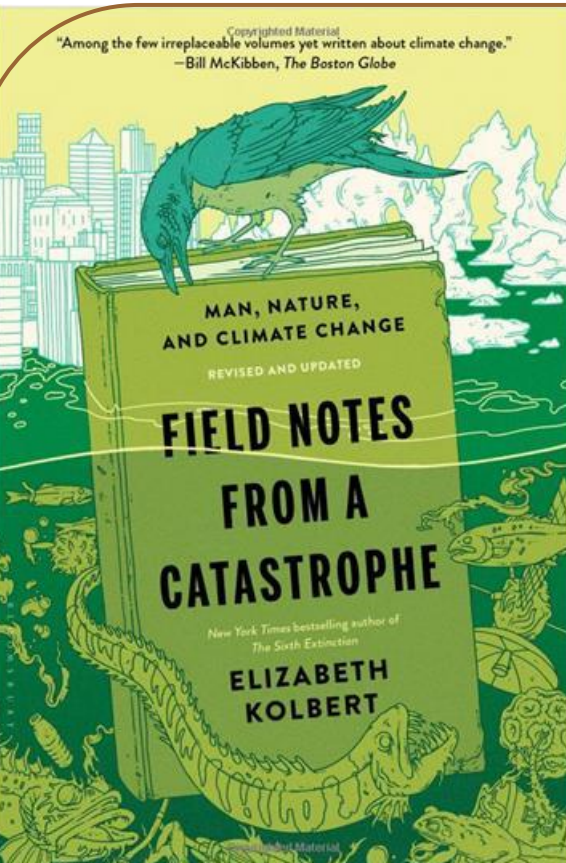
About

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 - [Membership Agreement: Affiliate](#)
 - [Operational Guidelines](#)
- [AMICALIST](#)
- [News](#)

	Institution	Membership Status	City	Country
1	Al Akhawayn University in Ifrane	Full member	Ifrane	Morocco
2	American College of Greece (Deree)	Full member	Aghia Paraskevi	Greece
3	American College of Thessaloniki	Full member	Thessaloniki	Greece
4	American University in Bulgaria	Full member	Blagoevgrad	Bulgaria



... the time is ripe
 Opportunity for Education
 ...and the Textbook?



1st Example—Students Learn About Temperature, and CO₂, from Online Resources, updated Annually

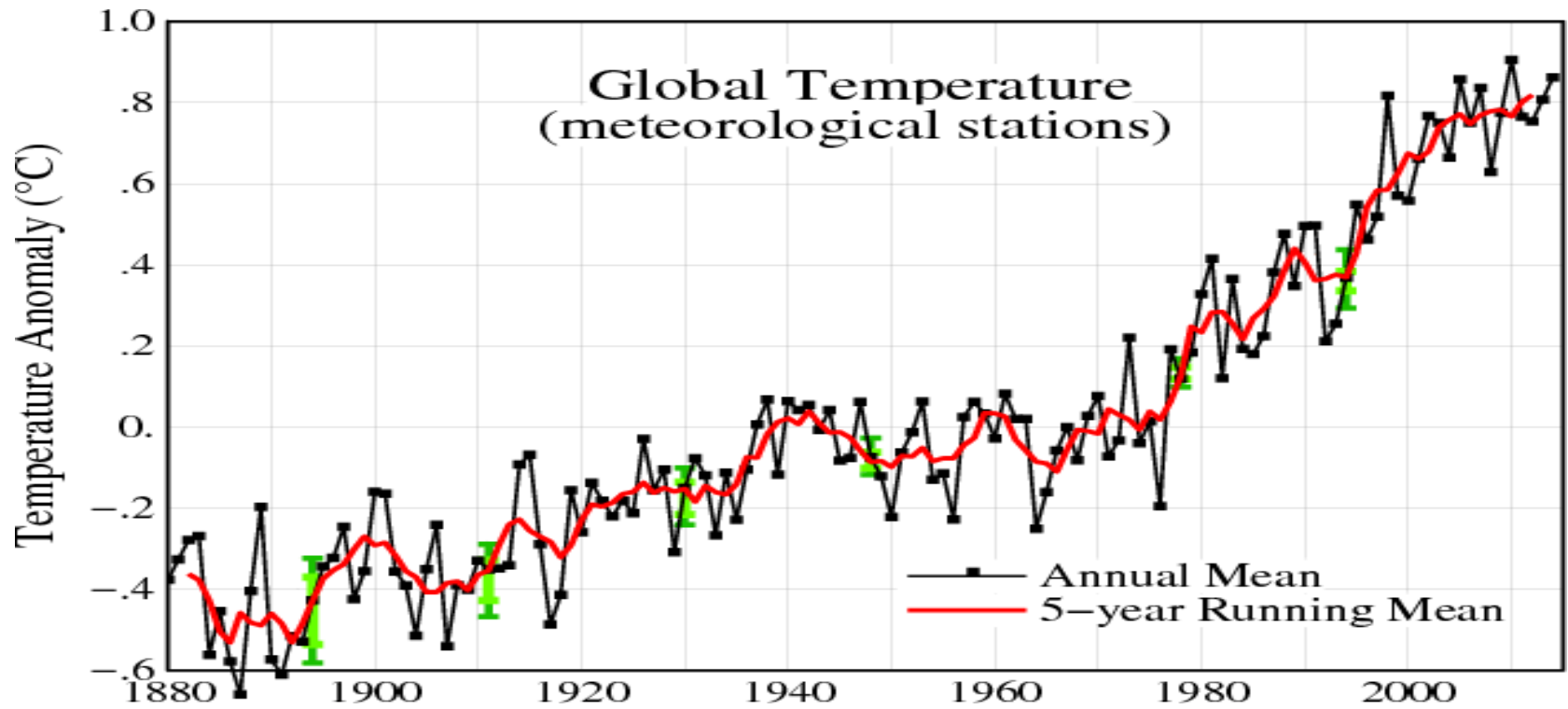
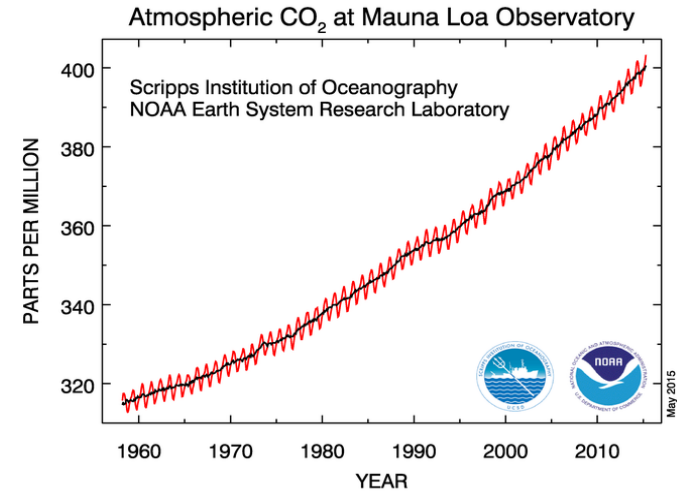
Online Textbook for Climate Change Science

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Collaborator AMICAL professors and librarians?

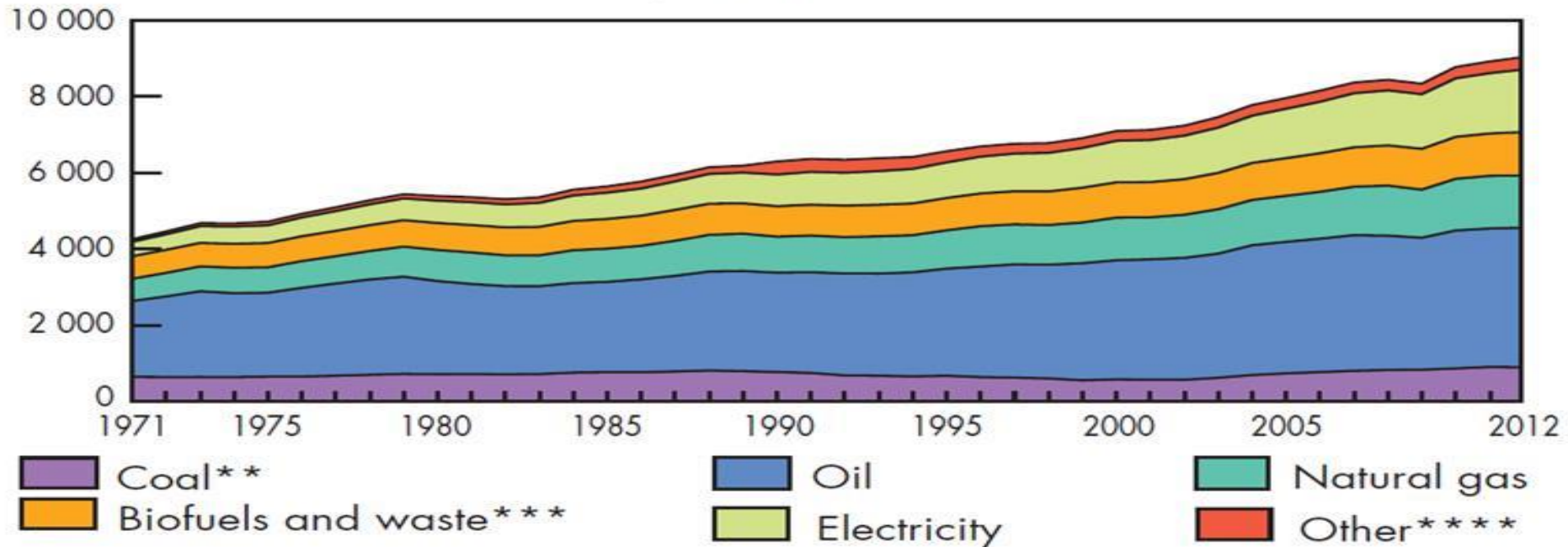
- develop a virtual resource center,
- specifically address a multi-national student body.



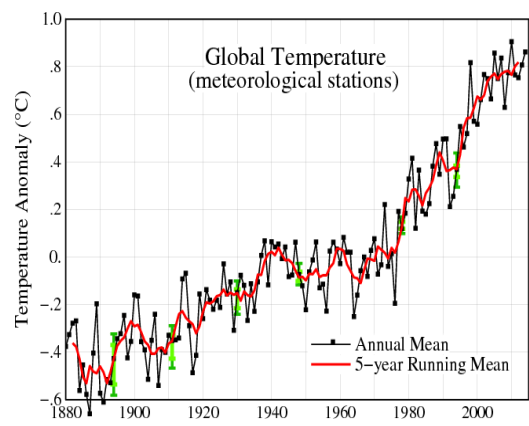
2nd Example—Students Learn About Energy from Online Resources, updated Annually



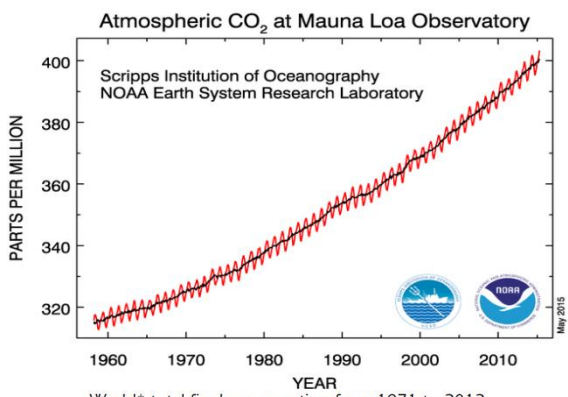
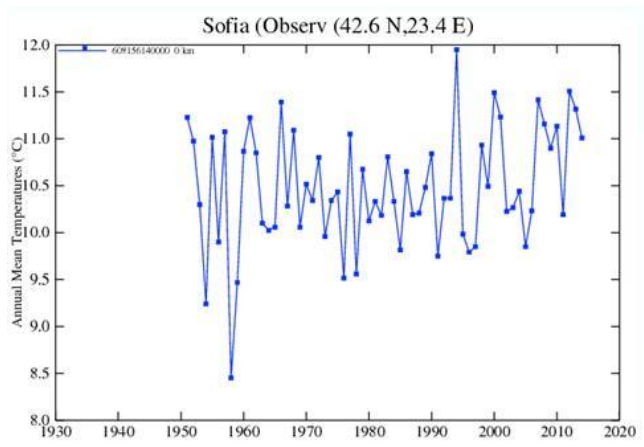
World* total final consumption from 1971 to 2012
by fuel (Mtoe)



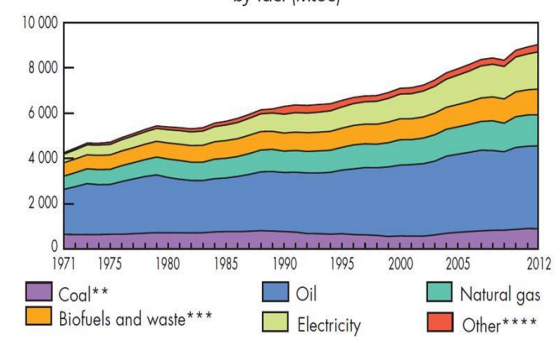
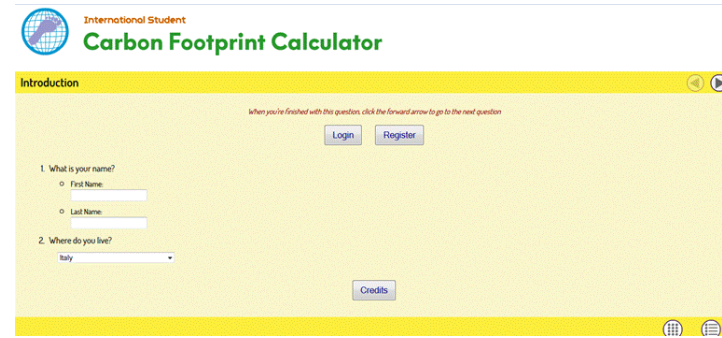
Develop a virtual resource center-- specifically address a multi-national student body



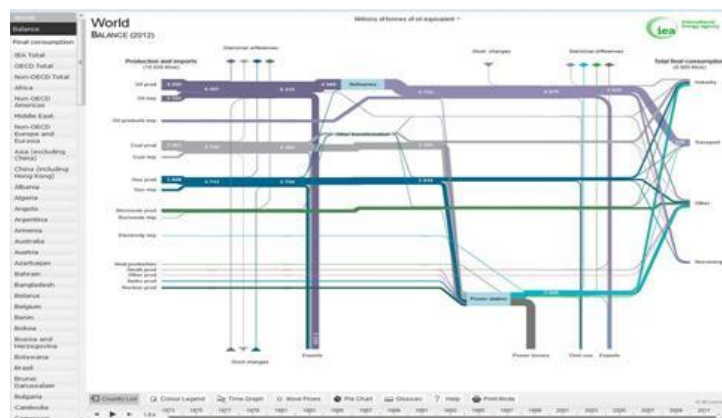
GO TO: NASA's
Goddard Institute for
Space Studies Surface
Temperature Analysis
http://data.giss.nasa.gov/gistemp/station_data/



GO TO: Stanford
University, USA
<http://footprint.stanford.edu/calculate.html>



GO TO: International
Energy Agency, Paris
<http://www.iea.org/sa/nkey/>



Online Textbook Materials for Climate Change Science ... (& Policy?) which engage an international student body

Multi-media materials, accessible in classroom and presenting data from a global perspective, include:

- **global temperature data sets**
- **real time carbon dioxide atmospheric measurements**
- **Sankey diagrams for energy flow**
- **critical climate impact data (Arctic Ocean sea ice, sea level)**
- **drought warning systems**
- **renewable energy types and capacity**

Open and Professional Source Materials:

- **intergovernmental and national research centers, and trade organizations**
- **data is updated at least annually**
- **content uses a range of infographic styles.**

The materials can be grouped into stand-alone chapters (or modules). Much of this science data, has applications within related disciplines—economics, communications, geopolitics of energy and trade.

Conclusion

May 2015 ... Construct network of AMICAL professors, librarians, information specialists, and interested participants ...

- **collaborate** to develop a virtual resource center,
- specifically address a **multi-national student** body,
- engage and **educate a Liberal Arts major**
- **Use the resource** as on line text, or in module format.

*Margaret Kneller, Ph.D.
Department of Mathematics,
Natural & Computer Sciences*

