

Policy Issues Related to Forest Products Markets in 2006 and 2007

Jim L. Bowyer

Dovetail Partners, Inc.
Minneapolis, Minnesota
USA

Helmuth Resch

Institute of Wood Science
University of Natural
Resources
Vienna, AUSTRIA

Franziska Hirsch

UNECE/FAO
Geneva

Policy Issues Related to Forest Products Markets in 2006 and 2006

- Policy dilemmas due to rising bioenergy demand
- Trade trends and policy issues
- Reducing the forest sector's footprint worldwide
- Research and development policies

Policy Dilemmas Due to Rising Bioenergy Demand

Topic One

Policy Dilemmas Due to Rising Bioenergy Demand

Bioenergy Consumption is Rising and Future Development will Favor Wood as a Raw Material.

Production of Biodiesel, Ethanol, and Wood Pellets in EU and US

	E.U.	% growth, 2005-2006	U.S.	% growth, 2005-2006
Biodiesel (mill. t)	4.6	45	1.0	300
Ethanol (bill. l)	1.6	71	19.1	25
Wood pellets (mill. t)	4.7	38	1.6*	25

* Much of U.S. wood pellet production is currently exported to EU countries.

Today, ethanol is made from corn starch, biobutanol from sugar beets, and biodiesel from rapeseed and soybeans.

In the future, all of these liquid fuels will be made from the cellulosic parts of forest and agricultural plants, and wood will be a preferred raw material.

Energy Required to Deliver 1,000,000 Btu to a Vehicle Fuel Tank

Fuel	Total Energy Required (Btu)	Fossil Energy Required (Btu)
Gasoline	1,241,000	1,241,000
Ethanol (corn-starch)	1,587,000	600,000
Ethanol (corn cellulose)	1,250,000	230,000
Ethanol (wood)	2,600,000	10,000

Source: Oregon Department of Energy, 2005.
(<http://egov.oregon.gov/ENERGY/RENEW/Biomass/forum.shtml>)

Policy Issues

The forest sector needs to be prepared for rapid growth in demand for biomass.

- Biomass harvesting guidelines
- Next crop considerations

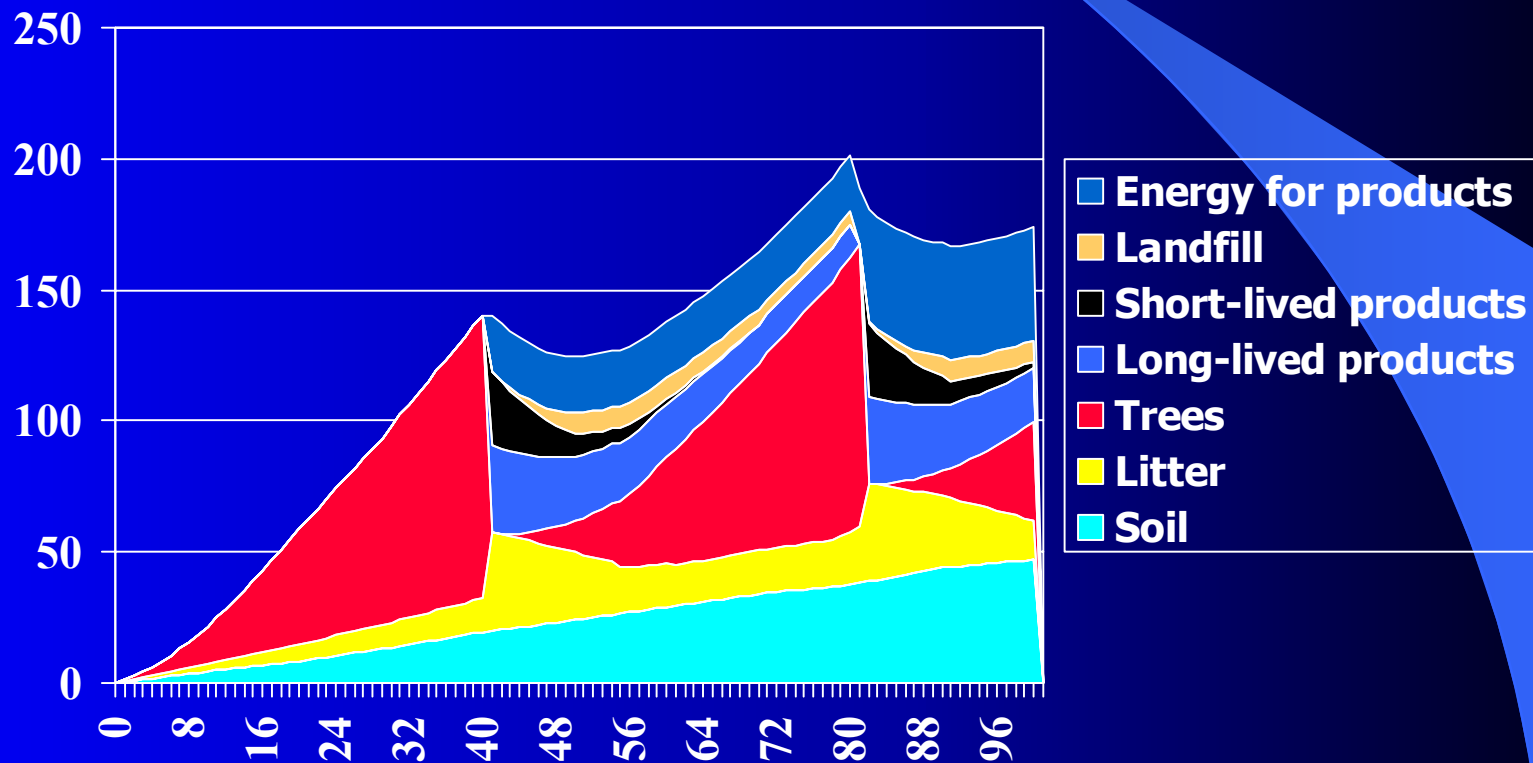
Policy Dilemmas Due to Rising Bioenergy Demand

Potential Impacts of Carbon Trading Markets on Forest Management and Wood Availability

Potential Impacts of Carbon Trading Markets on Forest Management and Wood Availability

- On the one hand it is recognized that considerable carbon is stored in forests – in trees, litter, and soils.
- It is also recognized that substitution of biomass fuels for fossil fuels in energy generation can reduce GHG emissions.
- Not yet formally recognized is that use of wood for structural and non-structural building products in place of more energy intensive alternatives can also significantly reduce GHG emissions.

Cumulative Changes in Carbon Stocks with Afforestation and Subsequent Harvest After 40 Year Rotation



Source: Marland and Schlamadinger 1999; CORRIM 2007.

It remains to be seen what the impact of carbon trading might be on forests. Trading could:

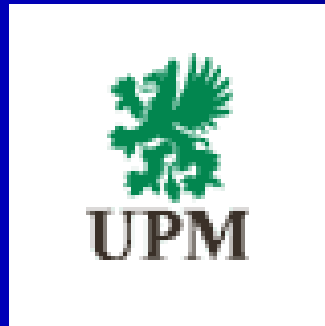
- Encourage forest harvesting and wood use.
- Discourage forest harvesting and wood use.
- Encourage bioenergy development from forests and dedicated tree plantations.

Specifics of public policy measures will largely determine outcomes.

Policy Dilemmas Due to Rising Bioenergy Demand

Biofuels Potential Stimulating Forest Industry Investment and New Cooperation Between Forest and Energy Sectors

October 2006 - UPM Kymmene
announces that it will “invest
strongly” to become a major second
generation biodiesel producer from
wood-based biomass.



October 2006.

Europe's Largest Wood Biomass Power Plant



Austrian Federal Forests, Inc.



Vienna Energy

Became operational in the third quarter of 2006 in Vienna. When fully operational, the plant will use 625,000 m³ of biomass annually to produce electricity and hot water for home heating.

Joint Venture to Develop Second Generation Bio-Fuels



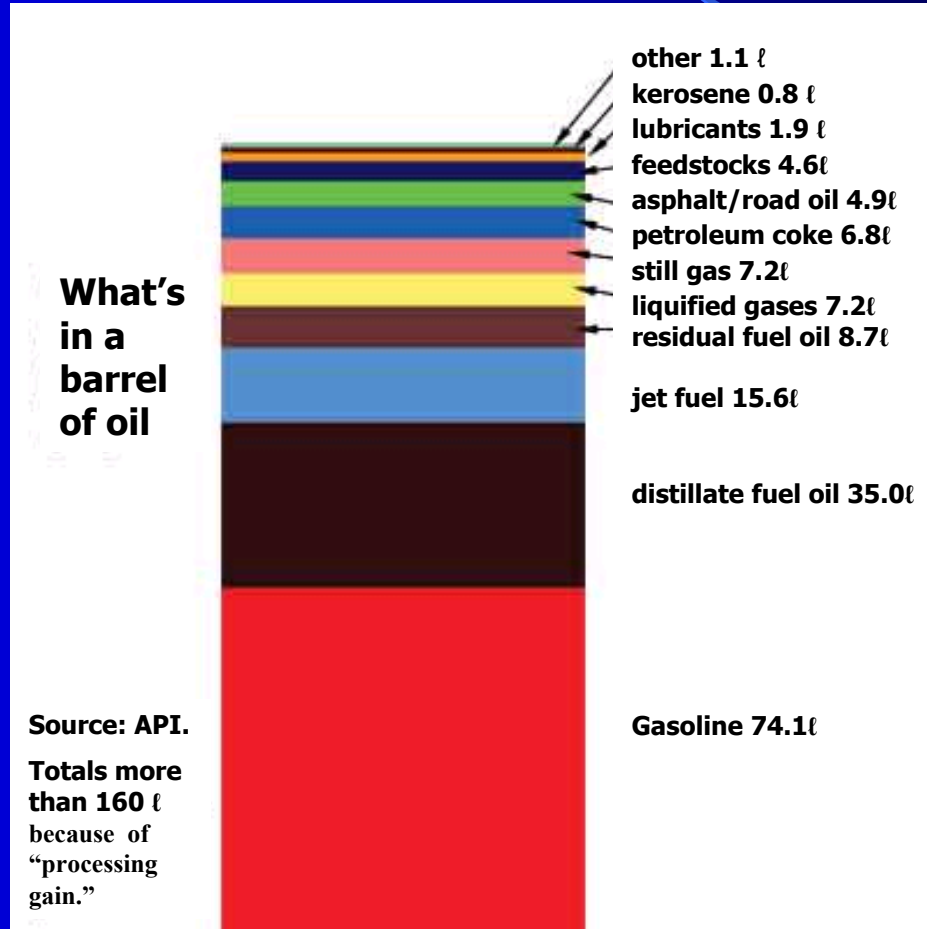
April 2007

Policy Implications

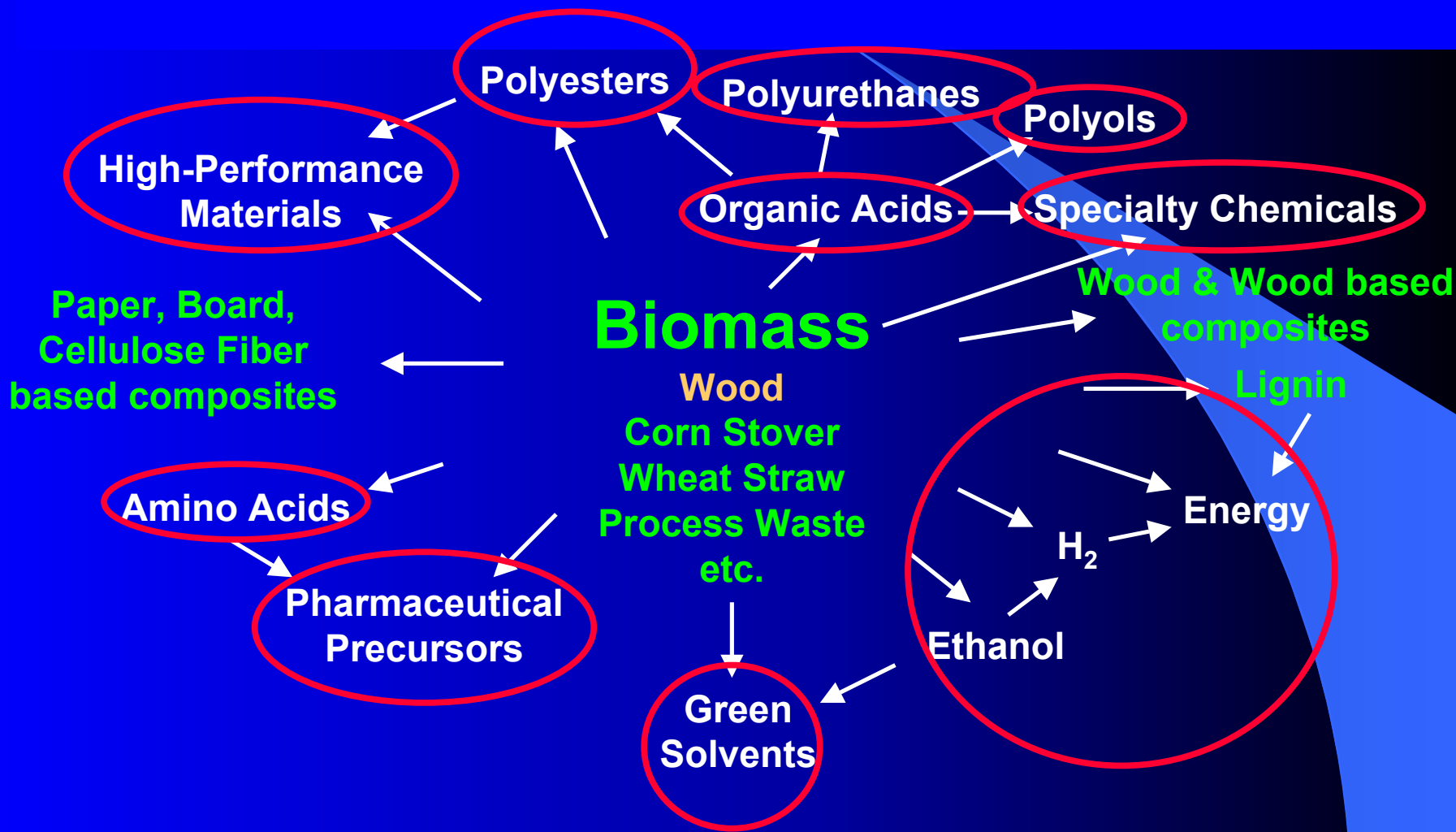
Rapid development and strong industry involvement may signal that **government incentives for bioenergy development may not be needed** for much longer in many UNECE countries.

Although this discussion is focused on biomass energy, it is important to keep in mind that petroleum is not only the principal source of transportation fuels, but also of industrial chemicals and feedstocks.

Many of these chemicals and materials are currently obtained from petroleum.



Vision of Biorefining to Bioproducts



Policy Dilemmas Due to Rising Bioenergy Demand

Sustainable Mobilization of Additional Wood Resources

Meeting increasing demands for wood raw materials throughout the UNECE region will require mobilizing additional wood resources consistent with principles of sustainable forest management.

There appears to be significant potential for increasing wood supply through:

- Expansion of the forest area harvested annually.
- Facilitation of access to and utilization of forest resources through enhancement of infrastructure and logistics.
- Further development of short rotation tree plantations.
- Better use of post-consumer wood products.

Policy Challenges

- Lack of restraint in development could create a whole new set of problems.
- Bio-energy development could create disincentives for energy conservation.
- Biomass energy and bio-chemicals plants can create environmental problems of their own.
- Public perception could inhibit development.

Policy Challenges

- Public policy development must balance both the established wood products sector and the new bioenergy sector.
- To find ways to link to carbon trading markets as a means of providing additional financial incentive to landowners.

Trade Trends and Policy Issues

Topic Two

Russian Federation

A new Russian Forest Code seeks to create an enabling environment for investments in domestic wood-processing industries to promote value-addition within Russia.

A related government decree in March 2007 dramatically increased duties on the export of logs that could lead to a significant realignment of trading patterns.

Russian Export Duties

Since Jan. 2006: 6.5%

As of July 2007: 20% (no less than €10 (\$13) /m³)

As of April 2008: 25% (no less than € 15 (\$20)/m³)

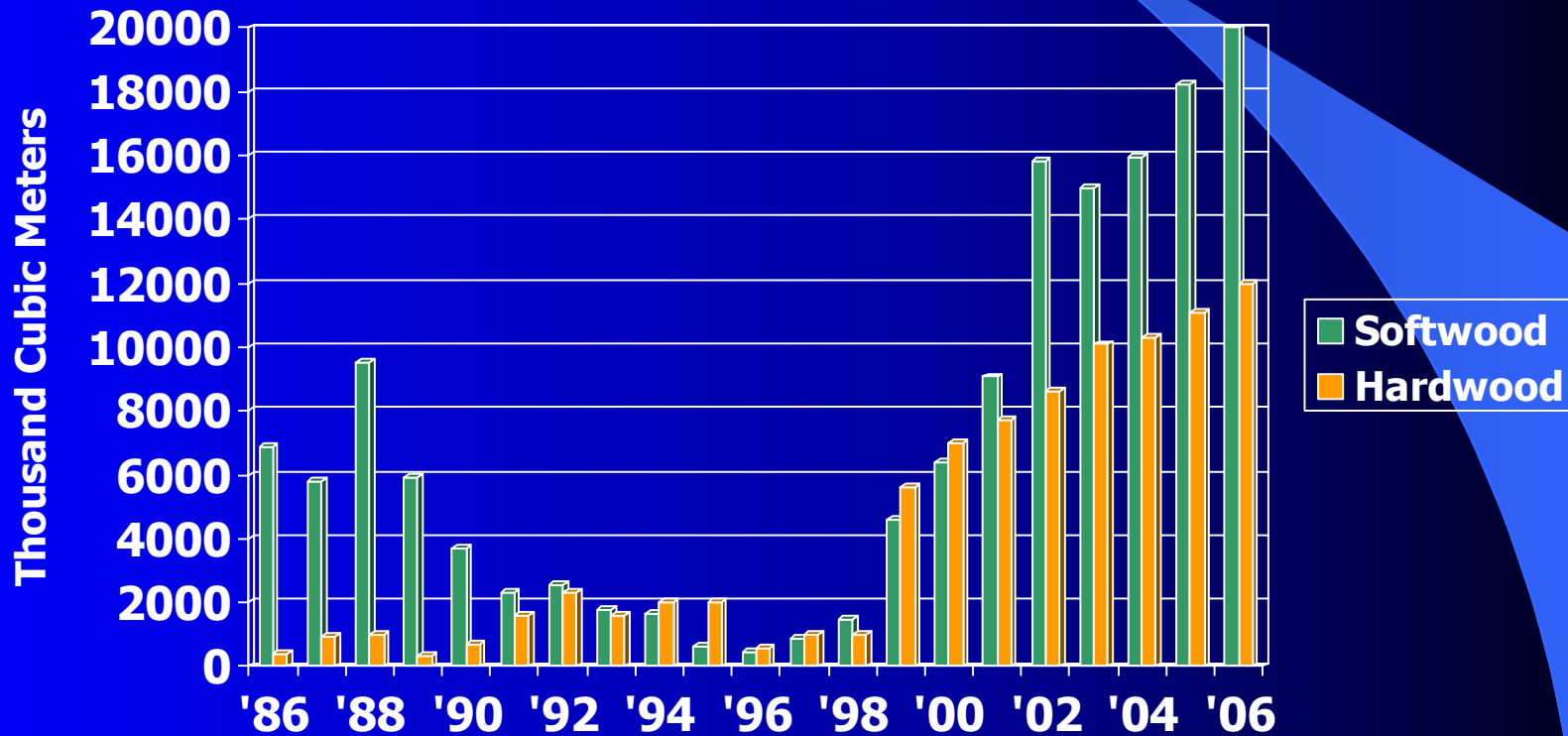
As of Jan. 2009: 80% (no less than €50 (\$65)/m³)

**These changes may dramatically affect
China, Scandinavia and other Russian trading
partners.**

China

China's wood imports continued to rise in 2006, with a 9.5% increase over 2005. Over two thirds are imported from Russia, with one-fourth from the tropics.

China Log Imports by Species Type, 1986-2006



China's imports of softwood logs have increased sharply over the past decade both in absolute and relative terms.

Year	Imports of softwood logs in relation to total log imports
1995	23%
2000	47%
2006	61%

Reducing the Forest Sector's Footprint Worldwide

Corporate Social Responsibility in the Forest Sector

A new concept, Corporate Social Responsibility, appears to be gaining traction, driven in part by development of the 26,000 series standard within ISO.

Corporate Social Responsibility for the forest sector today means:

- * Trading only in verified legal timber.
- * Certification of forest operations and chain of custody.
- * Striving for social equity in forest and manufacturing operations and in local communities.

It is too early to predict the impact of CSR on the forest sector.

Research and Development

Topic Four

Research and Development Policies

Universities Increasingly Teaming
Up With the Energy Sector to
Develop Biofuels Technology

A \$500 Million Initiative to Develop New Sources of Clean, Renewable Energy

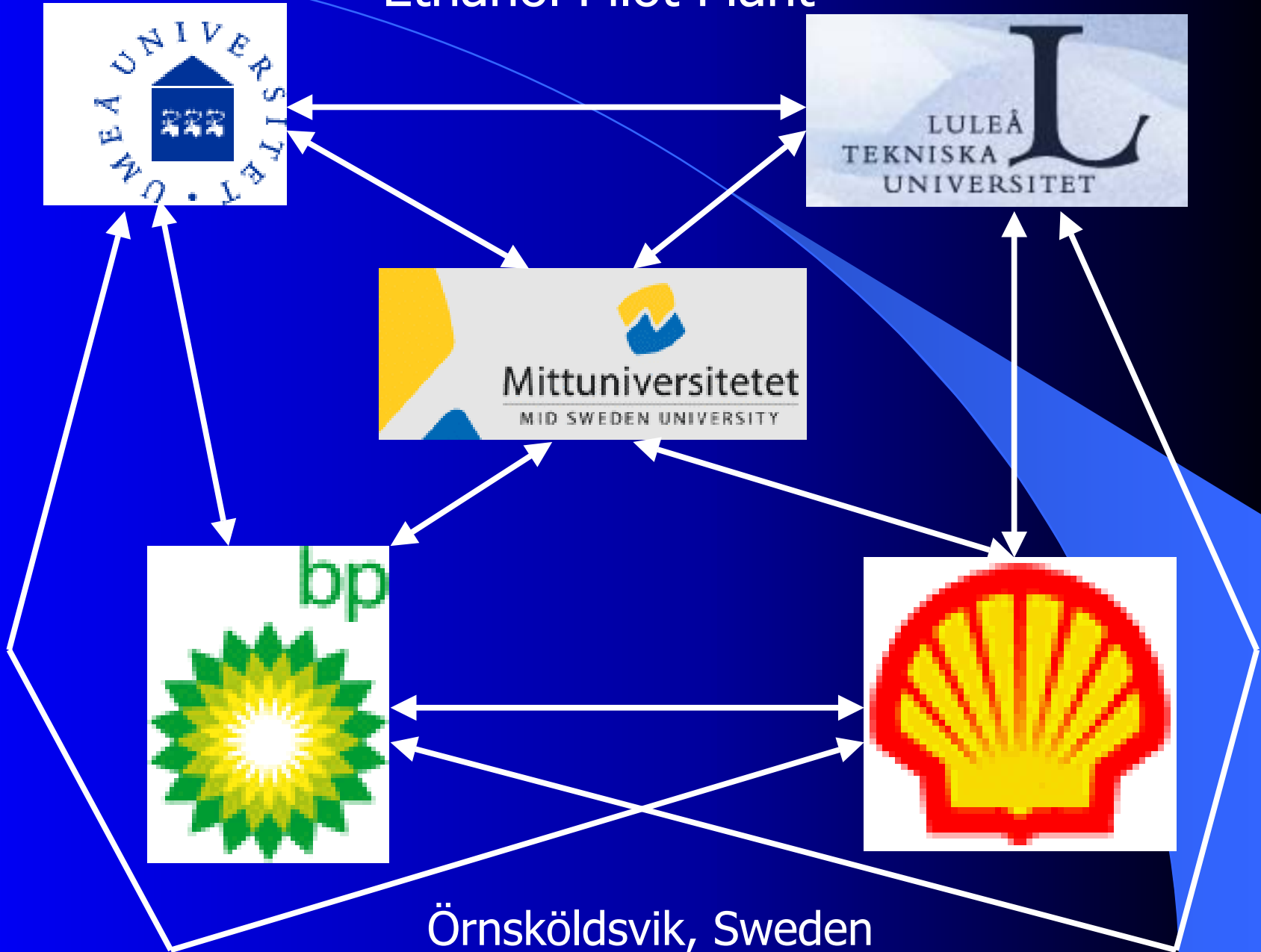



**University of California,
Berkeley**

University of Illinois

**Lawrence Berkeley National
Laboratory**

Ethanol Pilot Plant





Support of research may be the single most effective thing that governments can do to foster positive change.

With funding of research an ongoing challenge, establishment of mechanisms to encourage further public/private sector cooperation in research seems to make sense.

Questions?