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• Environmental Ethics and Land Management
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• ENVR E-120
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• <http://courses.dce.harvard.edu/~envre120>
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Land Management and the Emerging Water Crisis



Timothy C. Weiskel

Co-Director, The Climate Talks Project

Session 8
9 November 2006

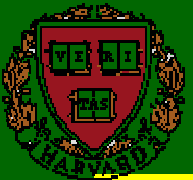
Harvard University Extension School
Fall Semester 2006



The intensification of agriculture has been made possible primarily through fossil fuel subsidies.



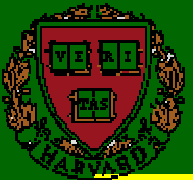
Consider how our food is grown...and how we have re-structured the whole the earth's agriculture...[40:55]



Period of Colonial Expansion and Imperial Control based upon petro-intensivity is ending...

Our cultural habit of continuous and perpetual growth, linked to the phenomena of colonial expansion and imperial control are about to come to an end for 3 reasons:

1. It is **economically unsustainable** – era of *cheap oil* is nearly over – nearly at the “peak” point, if not already past it. (26:31).
2. It is increasingly seen to be **politically and socially intolerable** – local populations object to continued colonial domination and they are asserting themselves in costly ways. (See sources on web page – *Supplements for Week 5*).
3. AND the habit of carbon-intensive growth is **ecologically suicidal** because of the ecological instabilities petroleum-based agriculture and CO₂ will engender in the entire system.



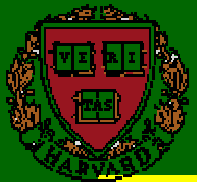




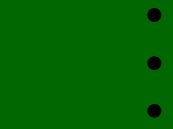


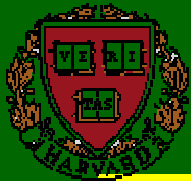


1mm Weiskel - 7



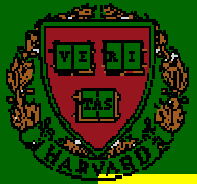


















Tim Weiskel - 16



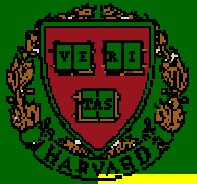








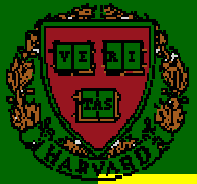






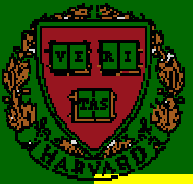


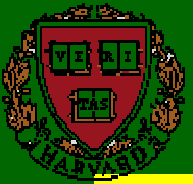




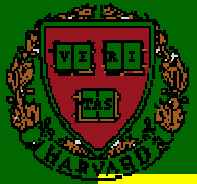


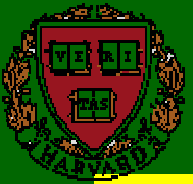


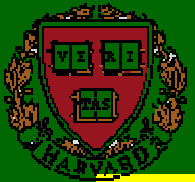


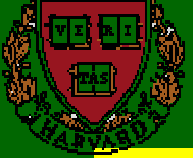












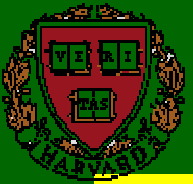
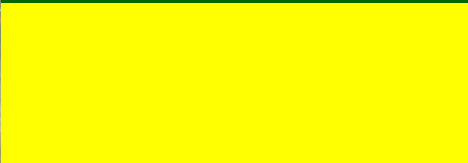








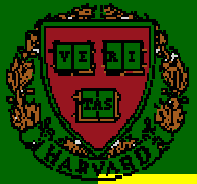
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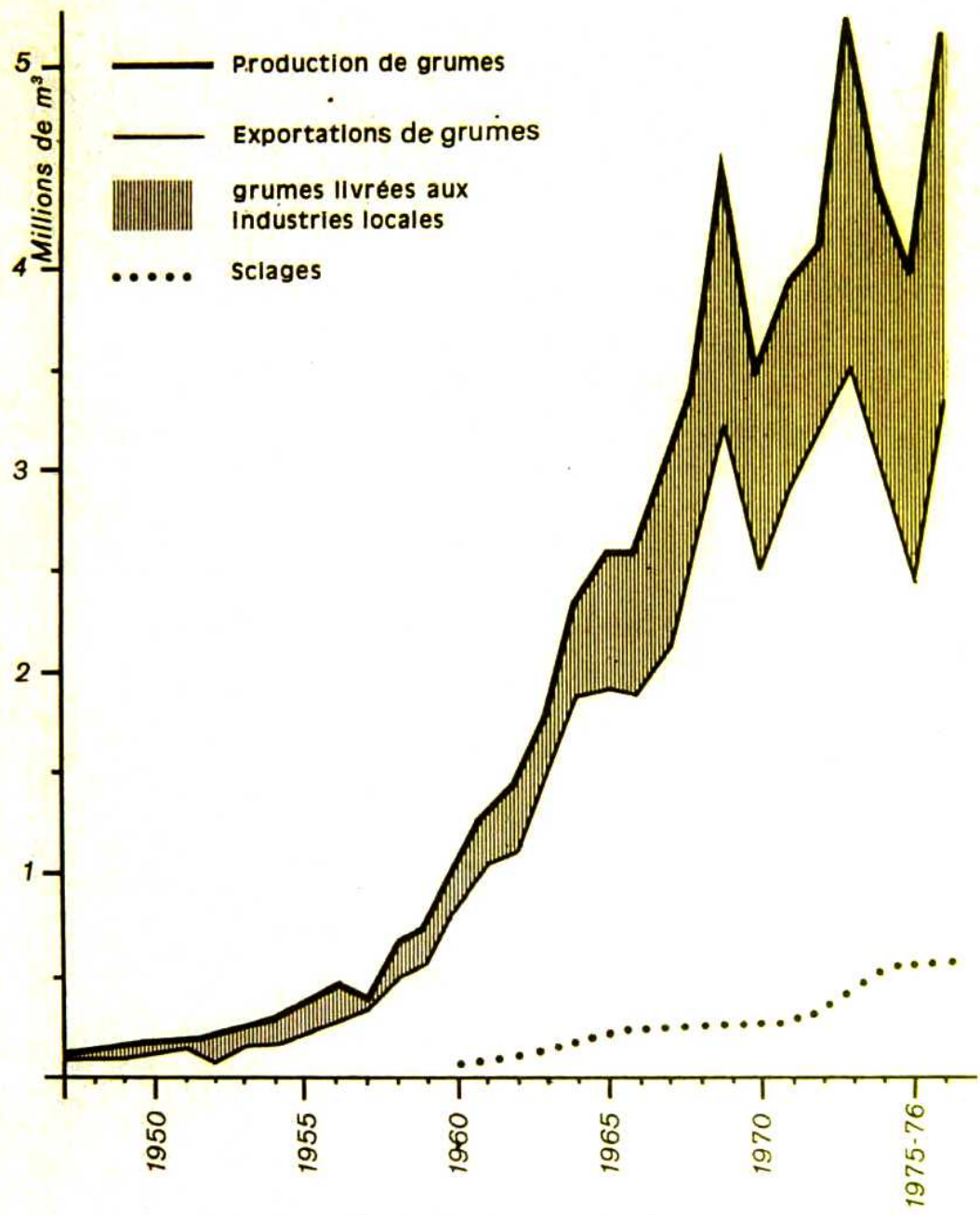
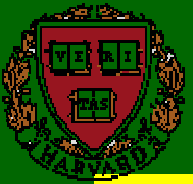
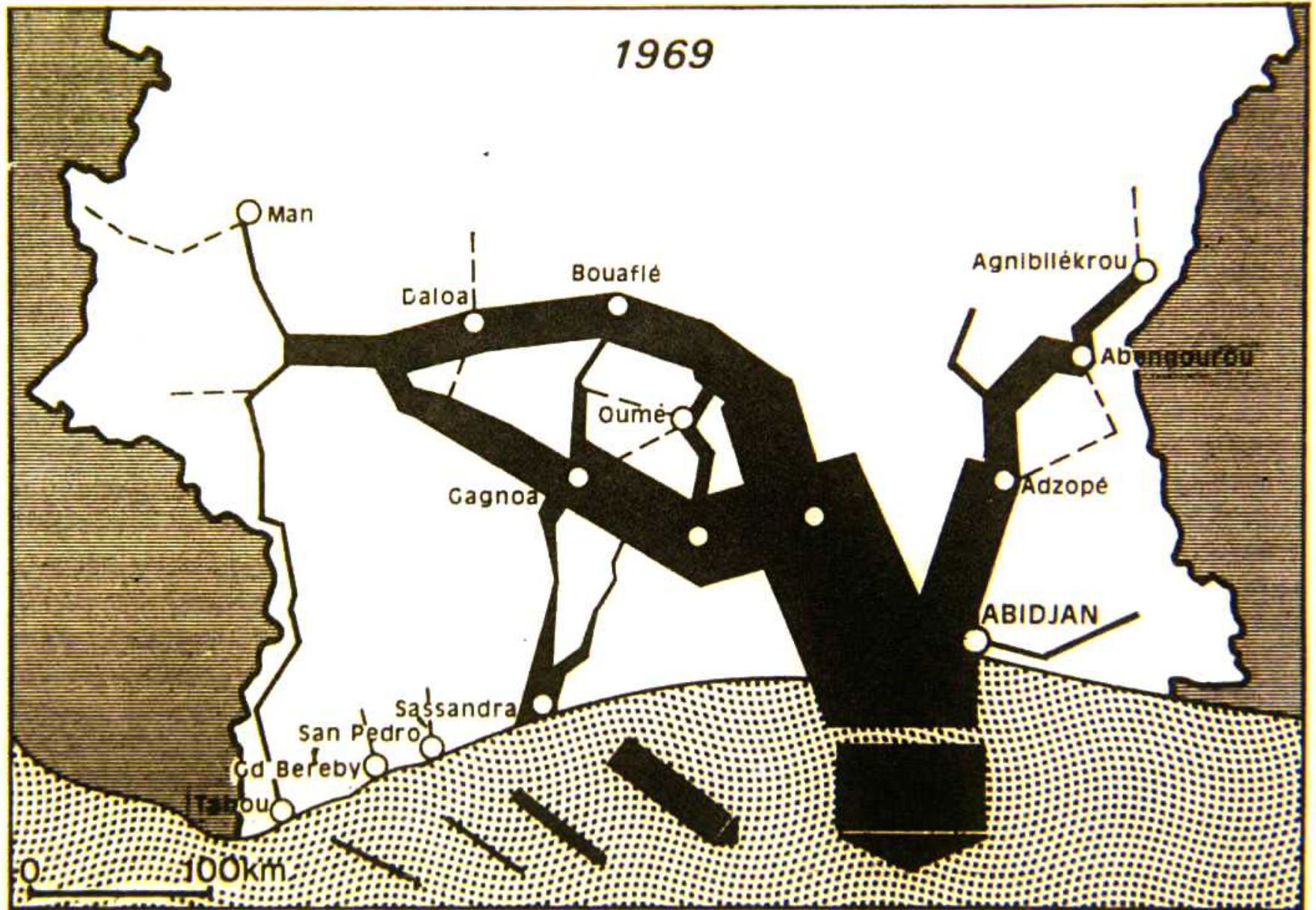


Fig. 3. – L'évolution de la production de bois

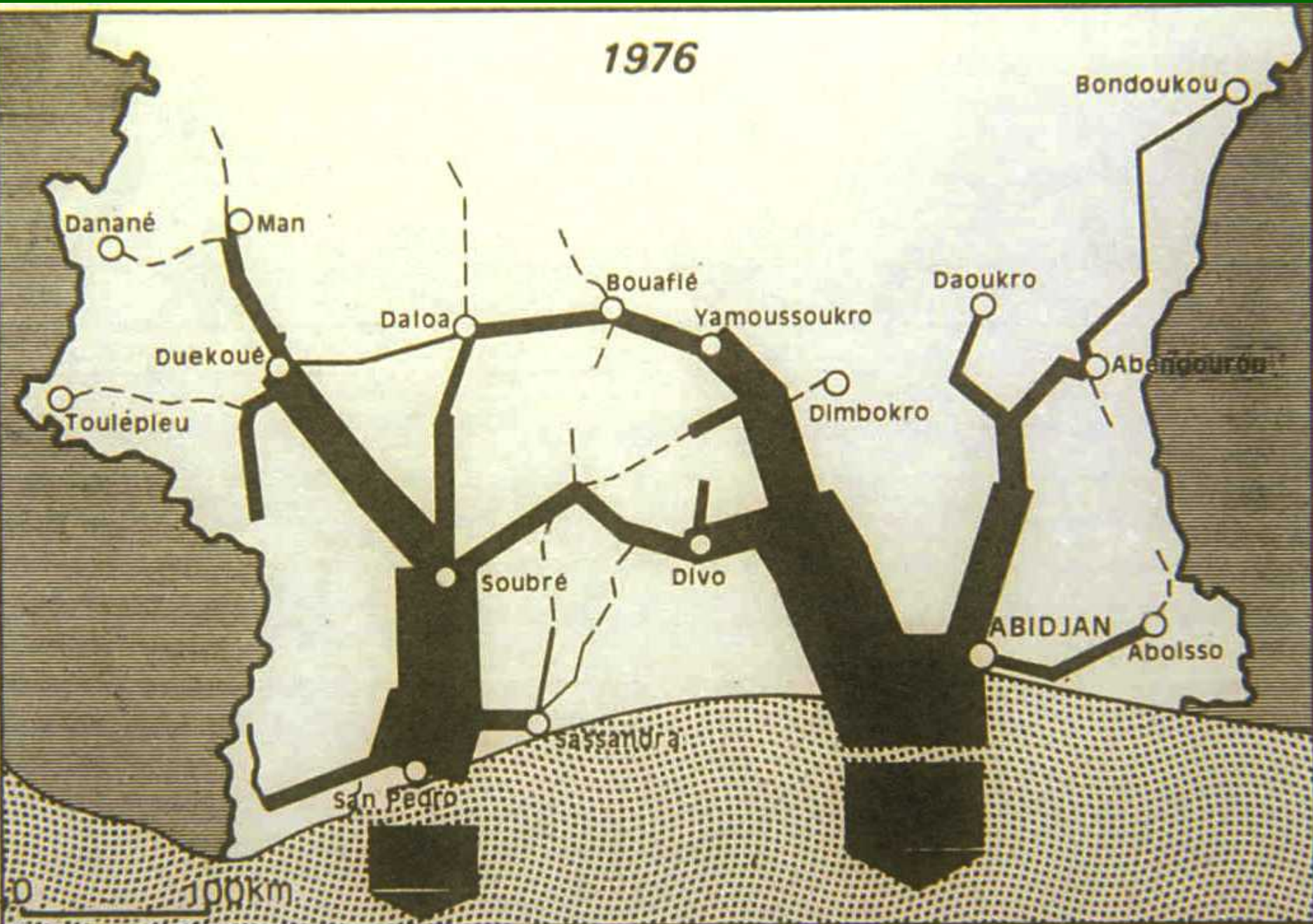


UNE RICHESSE NATURELLE EN VOIE DE DISPARITION

1969



1976

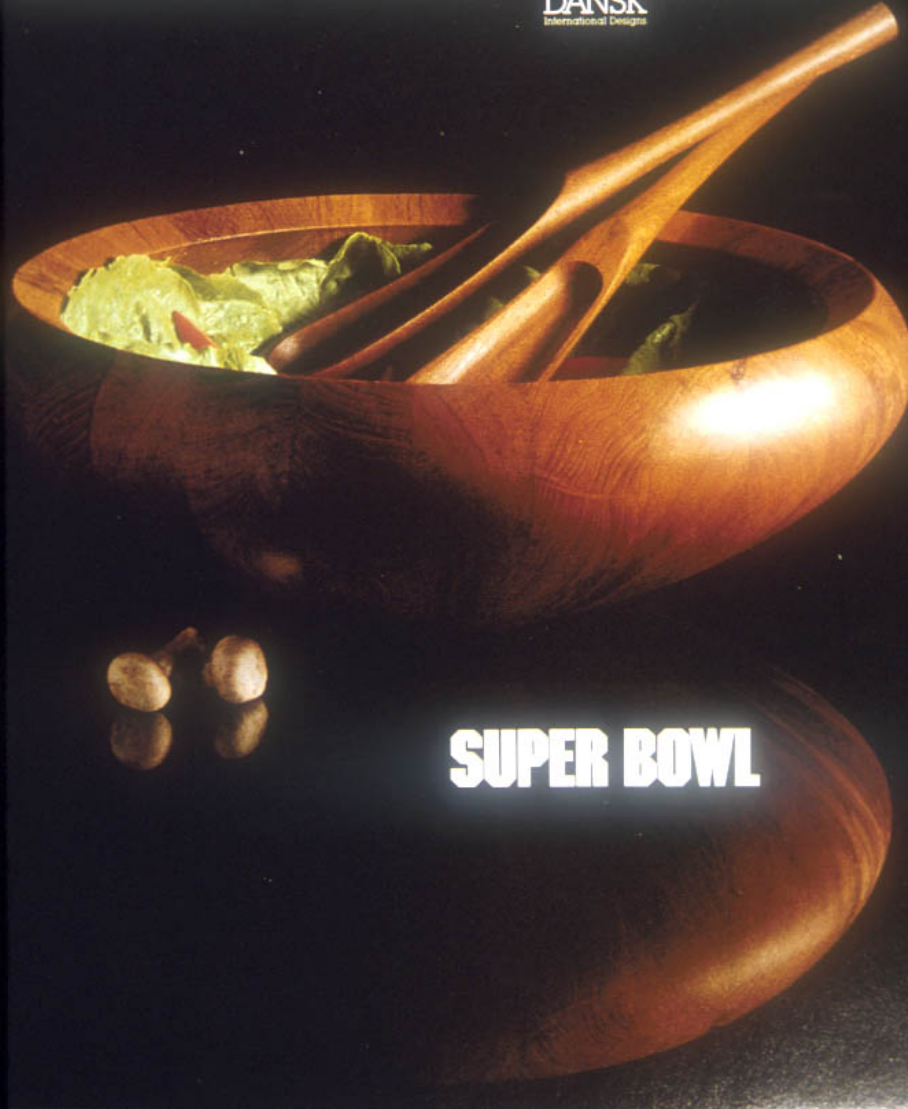


Only 350 fortunate people will get
to own our Super Bowl this year.
Each will pay \$250... a modest price
for this true piece of art from famed
designer Jens Quistgaard. His teak
bowl is a full 17 inches across and a
weighty 53 inches around the waist. It
will grace a sideboard and splen-
didly present a salad for a festive but-

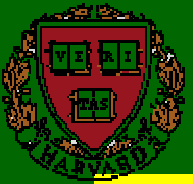
let elegantly serving six or sixteen.
It is functional art that will earn its
keep everyday.
We'd like to make more than 350
Super Bowls, but there isn't enough
flawless aged teak to be found...
nor are there enough master crafts-
men schooled in the great Dansk
tradition of woodworking.

This very scarcity suggests the heir-
loom value of each magnificent
bowl. We think with pleasure of the
generations of family meals and
parties each Super Bowl will attend.
So although only 350 people can
own one, thousands will enjoy it.
For free color catalogs, write: Dansk,
Department 40, Mt. Kisco, N.Y. 10549.

DANSK
International Design



SUPER BOWL



Only 350 fortunate people will get to our Super Bowl this year.

Each will pay \$250... a modest price for this true piece of art from famed designer Jens Quistgaard. His teak bowl is a full 17 inches across and a stately 53 inches around the waist. It will grace a sideboard and splendidly present a salad for a festive buf-

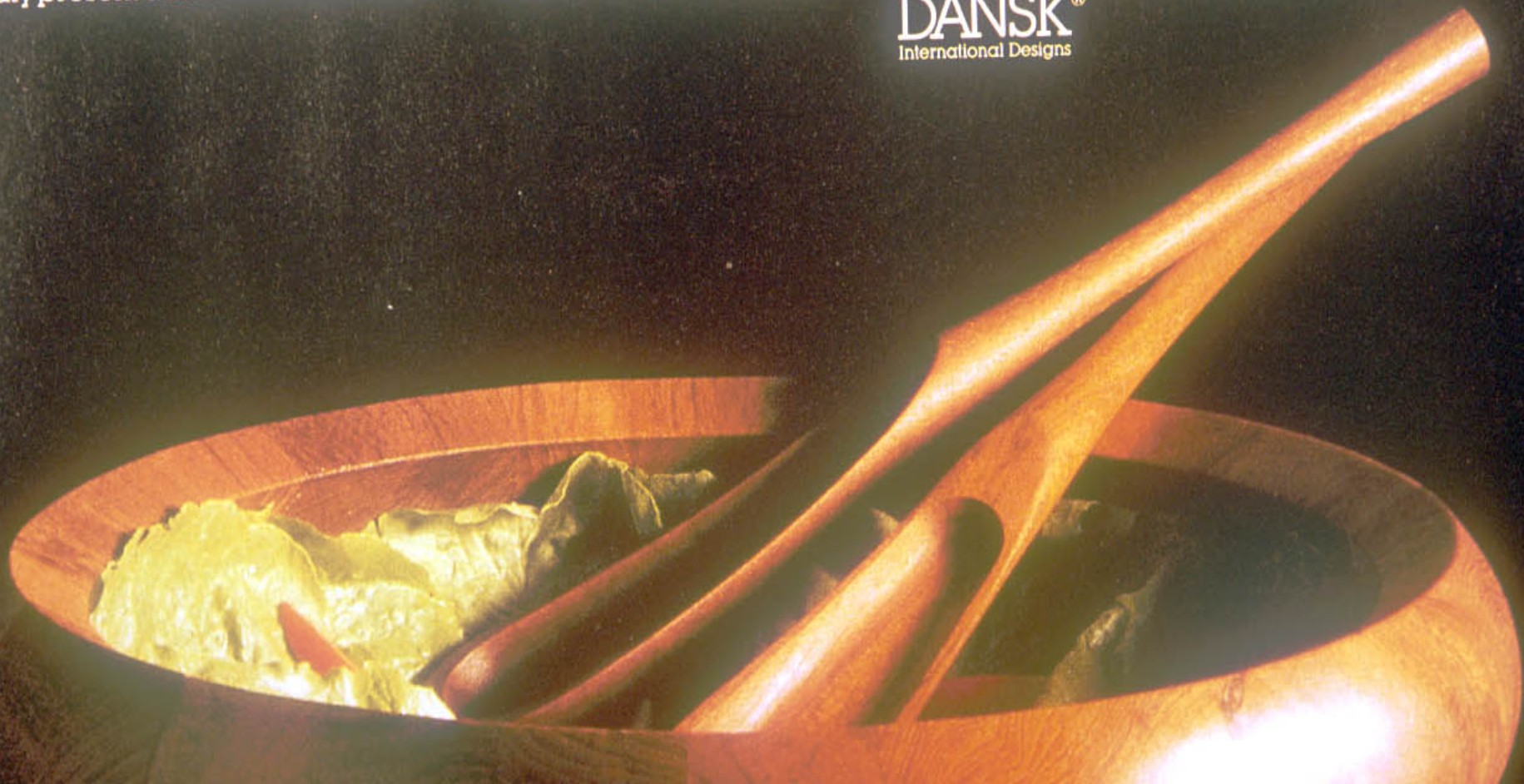
fet elegantly serving six or sixteen. It is functional art that will earn its keep everyday.

We'd like to make more than 350 Super Bowls, but there isn't enough flawless aged teak to be found... nor are there enough master craftsmen schooled in the great Dansk tradition of woodworking.

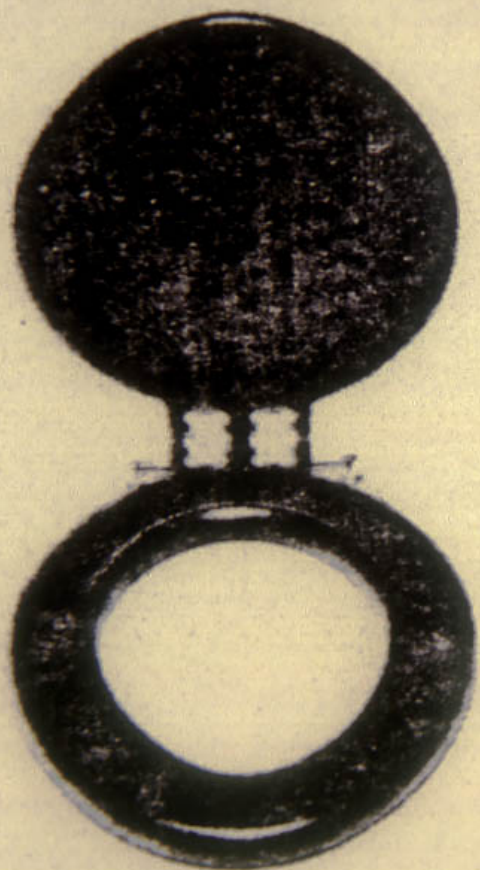
This very scarcity suggests the heirloom value of each magnificent bowl. We think with pleasure of the generations of family meals and parties each Super Bowl will attend. So although only 350 people can own one, thousands will enjoy it.

For free color catalogs, write: Dansk, Department 40, Mt. Kisco, N.Y. 10549.

DANSK[®]
International Designs



Feel the warmth of solid mahogany.



For years, it's been well nigh impossible to find a loo seat that isn't mass produced in plastic. Now once again, you can buy a seat carved from a single piece of exquisitely grained solid mahogany.

Each Chilternhurst seat is individually sanded and french polished to give a warm, rich satin finish and protection against any moisture absorption.

The hinges and fittings are made of brass, and we offer as an option at no extra cost a brass plaque recessed into the lid for your personal inscription.

The seat measures 18" x 15" and fits any standard loo in minutes. Our price of £39.50 includes VAT, packing and delivery. Money back if not satisfied.

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Dept 5, 14A Station Road, Harpenden, Herts, AL5 4SE
Tel: Harpenden (05827) 60281.



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OPERATION DE CONSTRUCTION
DE LOGEMENTS BORAUX
DANS LA S/P DE YAMOUSSOUKRO

VILLAGE DE BONZI

SOGEFIHA MAITRE D'OUVRAGE
SOCIETE DE GESTION FINANCIERE DE L'HABITAT



MAITRE D'OEUVRE
SOPIM

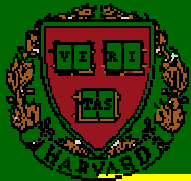
FINANCEMENT

BANKER'S TRUST
NEW YORK



CABINET D'ARCHITECTURE
MICHEL GOLY KOUASSI
ARCHITECTE D.E.S.A

ENTREPRISE GENERALE
E.I.B B.P.89 YAMOUSSOUKRO



SO.GE.FI.HA. MAITRE D'OUVRAGE
SOCIETE DE GESTION FINANCIERE DE L'HABITAT



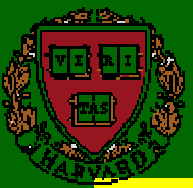
MAITRE D'OEUVRE
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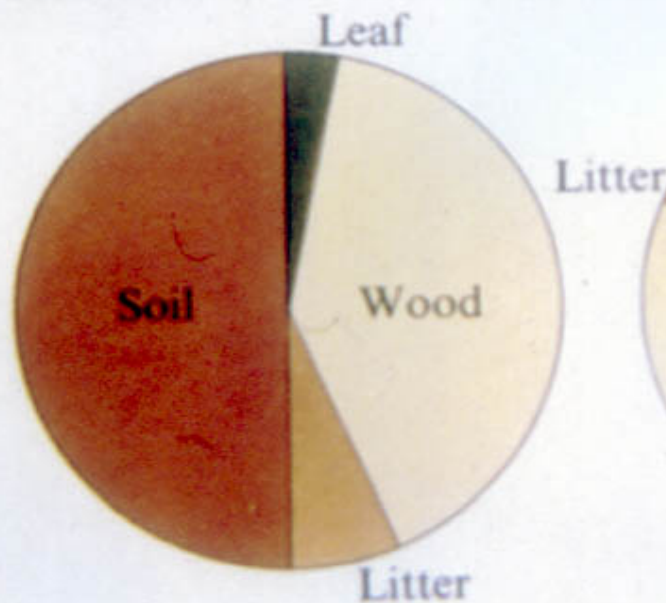
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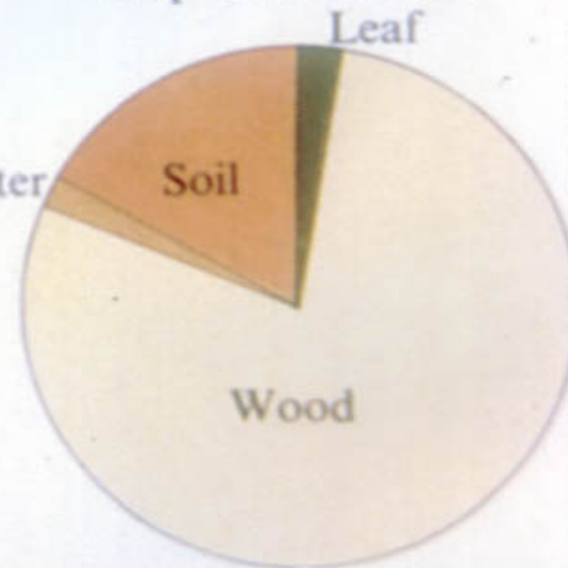
NUTRIENT CYCLING

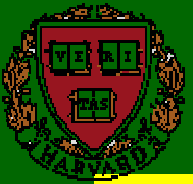
In the tropical rain forest most of the mineral nutrients are not held in the soil. When a plant or animal dies, soil fungi, the micorrhiza, quickly break down the dead organic litter and transfer it to the living cells of plant roots. This rapid recycling allows few minerals to be leached out of the soil by the high rainfall. Nutrient distribution in a northern coniferous forest and a tropical rain forest is shown below.

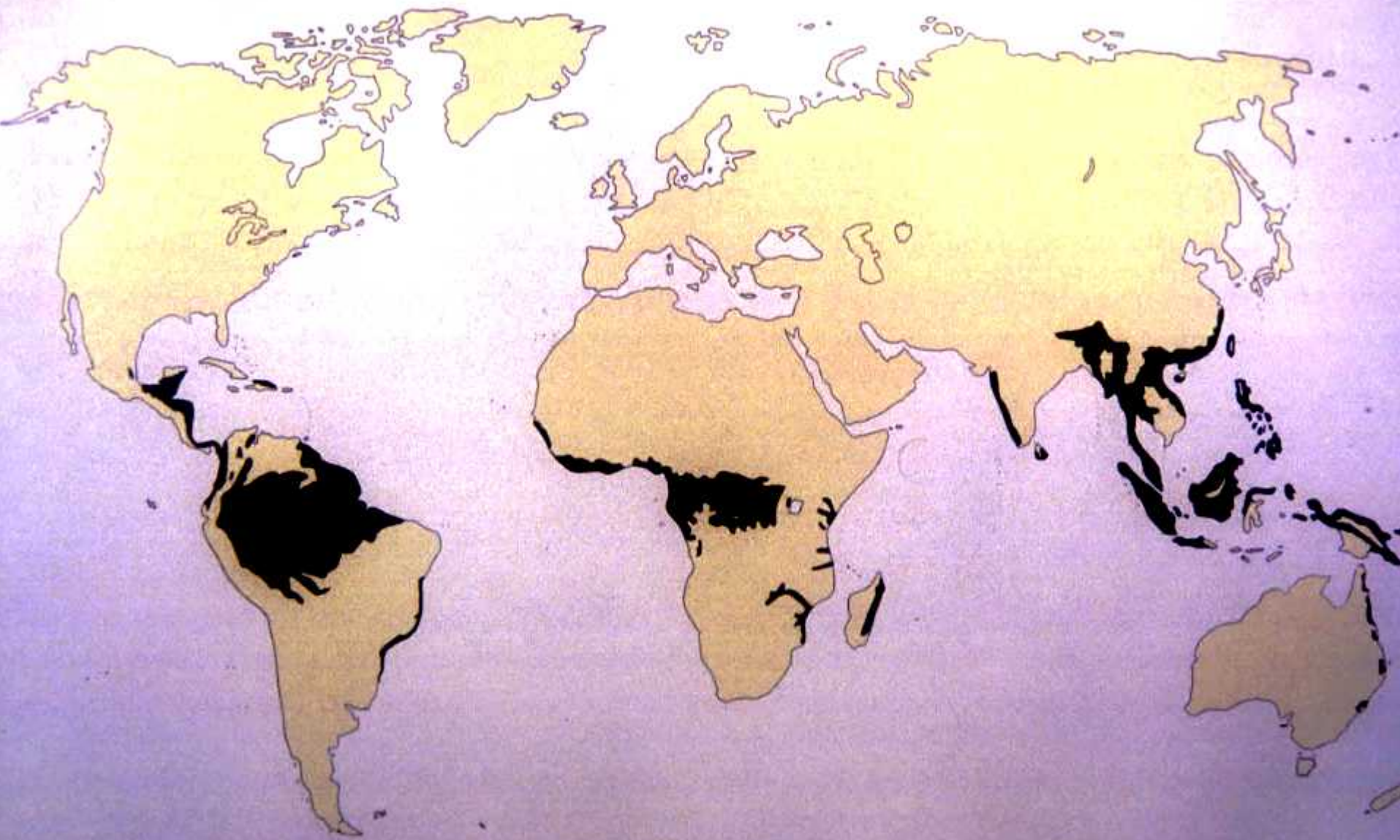
Northern coniferous forest



Tropical rain forest







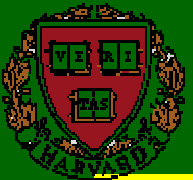
This kind of tropical deforestation is occurring as well in Indonesia: "Haze health warning issued," *BBC News Online*, (8 October 2006).

And

in Brazil with similar ecological consequences.

"Fears over huge forest disappearance," *BBC News Online*, (3 April 2006).

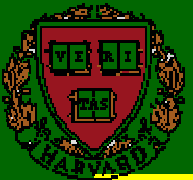
"Amazon damage 'worse than feared'," *BBC News Online*, (21 October 2005).



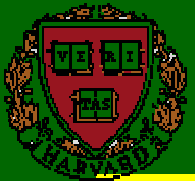
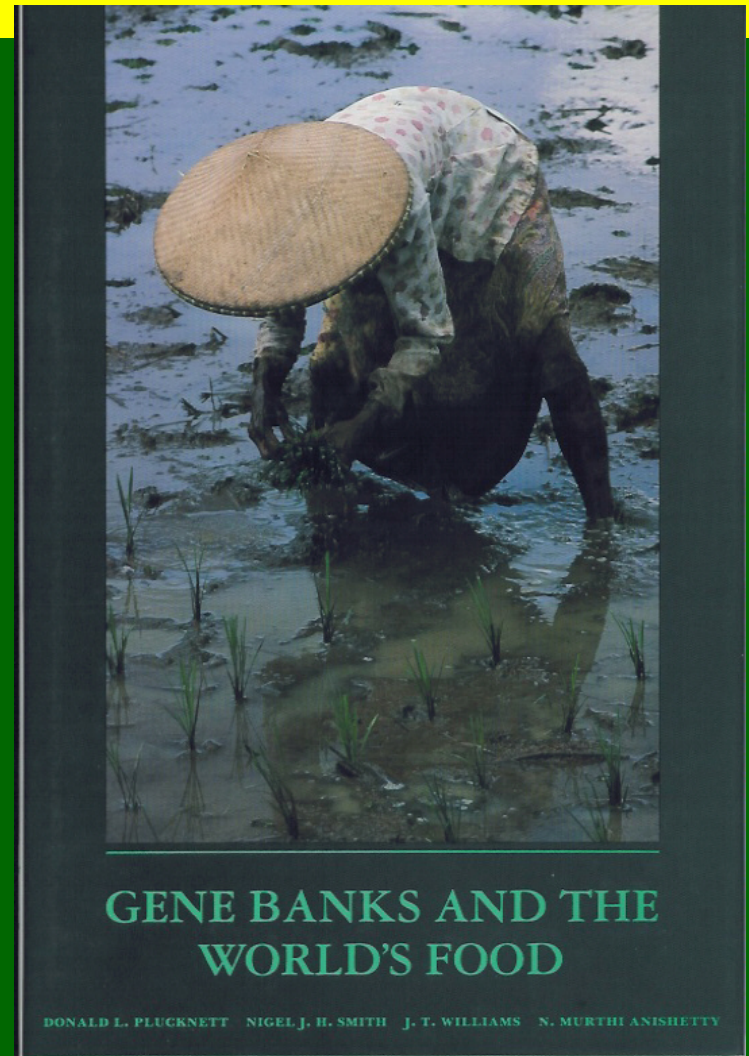
Land, Agricultural Control, & Ownership

In the recent evolution of agricultural systems concepts of "ownership" have been extended from land to the crops themselves -- and more particularly to the genetic material that they "express."

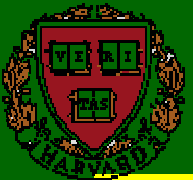
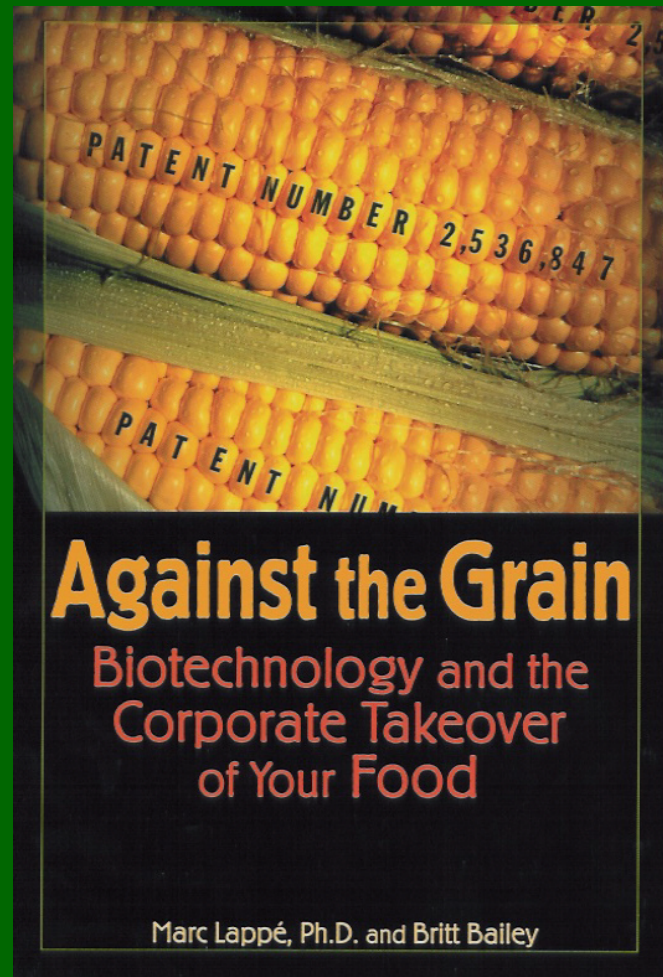
Genetic materials of the world's major cultigens are being collected and stored in "gene banks" -- both private and public.

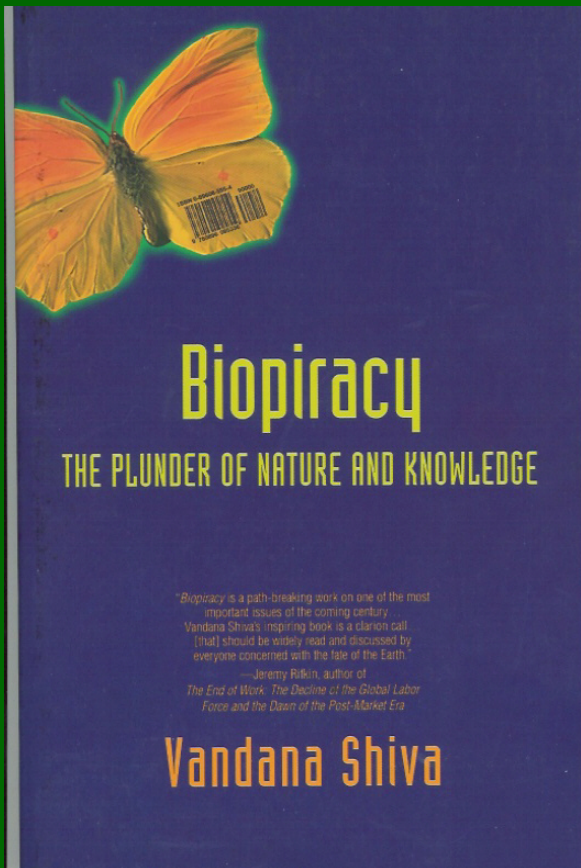


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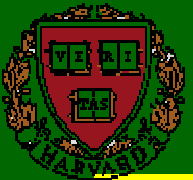


- Agribusiness corporations and many governments argue that this is necessary to assure the world's future food supplies.

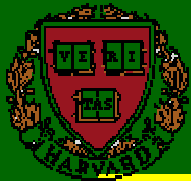
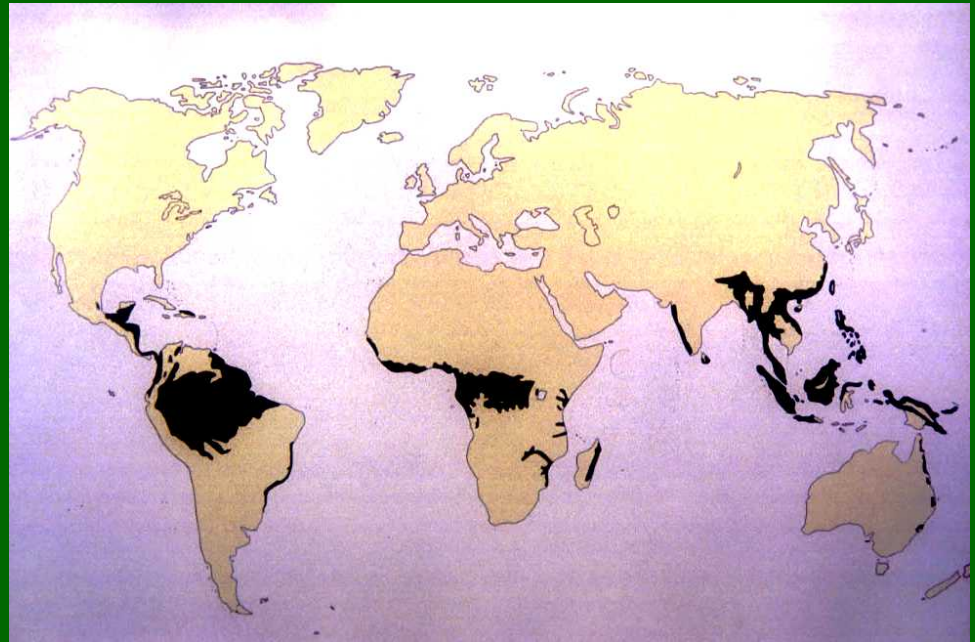


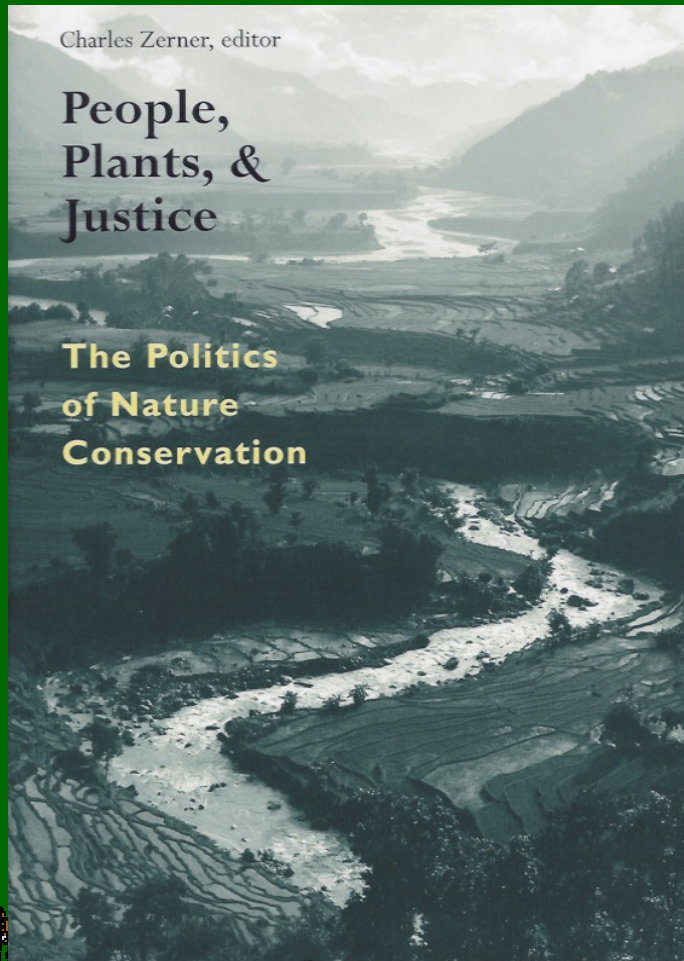


Others from the Third World regard the "privatization" of global plant genetic material as a form of "biopiracy" and fear that this form of private control over public resources is both socially unjust and ecologically destructive.



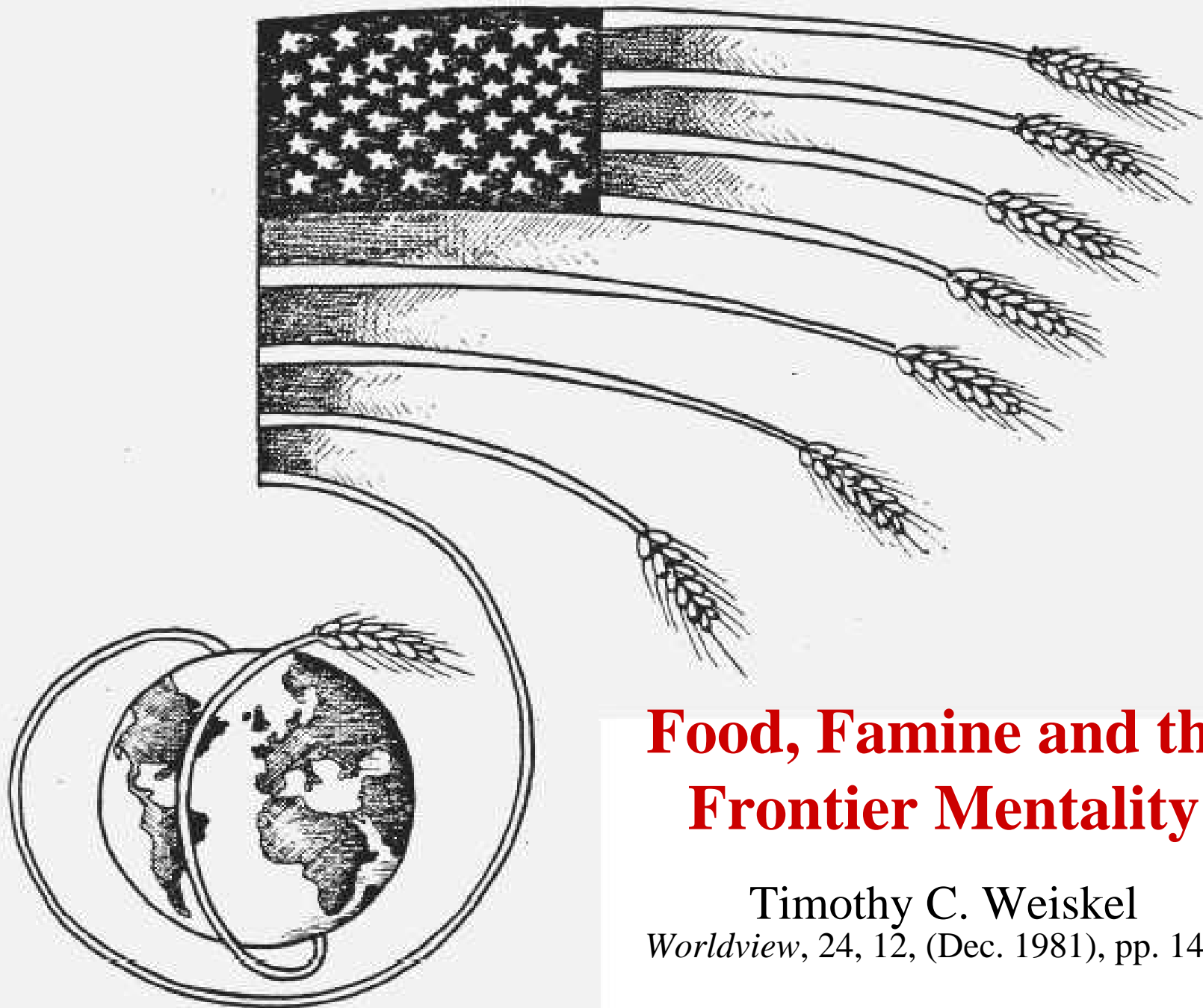
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- Local land management decisions around the world in the agricultural sector are in many cases made in reference to these larger global market considerations.





- All decisions in this realm have embedded ethical implications.



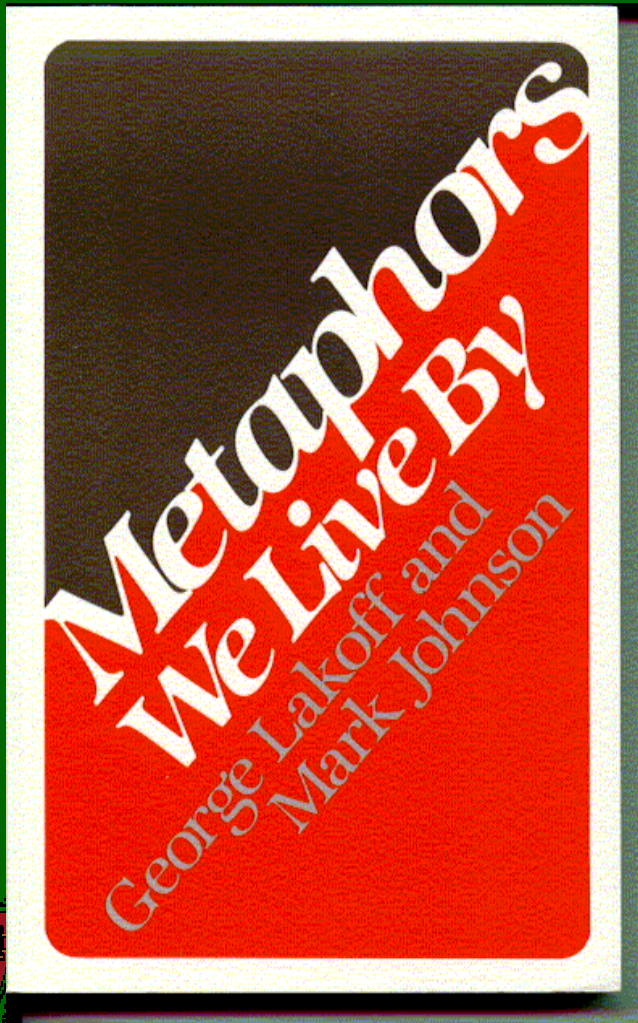


Food, Famine and the Frontier Mentality

Timothy C. Weiskel

Worldview, 24, 12, (Dec. 1981), pp. 14-16.

Our long term survival will depend upon our moral imagination and *beliefs*

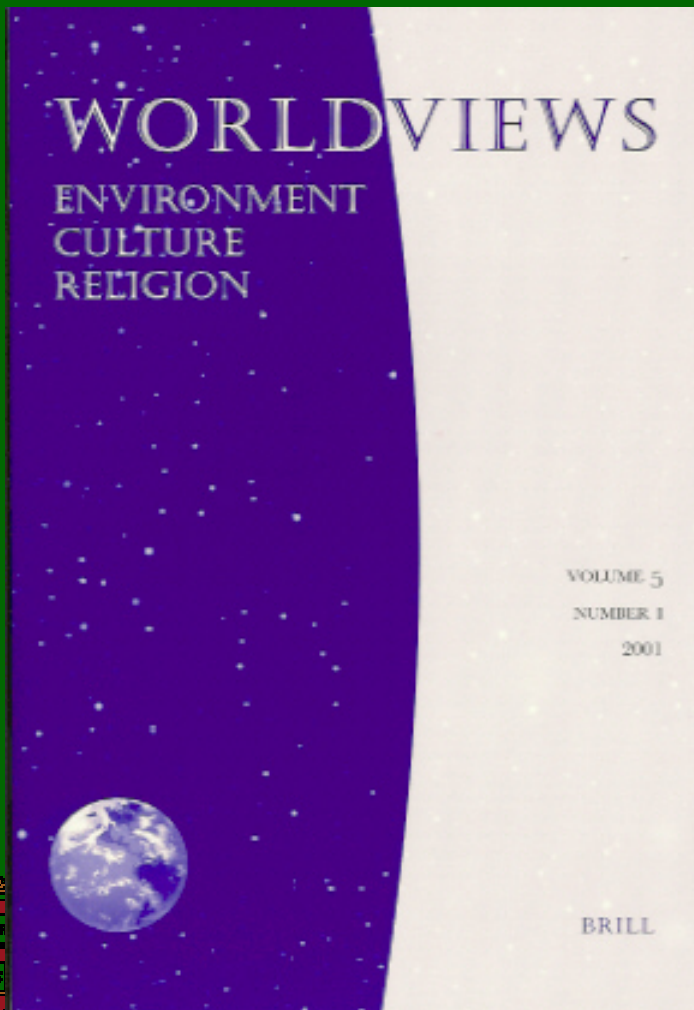


In effect our collective ‘choice’ about the future will come down to a question of the way we live “unconsciously.”

The *metaphors we live by* will determine our fate.

What are our metaphors? What are our beliefs? Can they change in the time frame we have left?



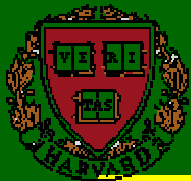


An academic study of worldviews is no doubt sorely needed and eventually academics might conclude that our environment will challenge us to change our cultural beliefs and religious concepts in order to “think” about the world in a different way.

....meanwhile....



ZIEGLER





You are in: Africa

News Front Page

Tuesday, 20 August, 2002, 02:00 GMT 03:00 UK



World 'ignoring' African food crisis

- Africa**
- Americas
- Asia-Pacific
- Europe
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- South Asia
- UK
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- Talking Point**
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- In Depth
- Programmes

- BBC SPORT**
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Some 7,000 children are in immediate danger (Pic: IFRC)

The head of the United Nations Children's Fund (Unicef) says the world is ignoring the food crisis in southern Africa.

Carol Bellamy, Unicef's executive director, appealed for \$30m in aid for the region when she visited Malawi, where three million people face starvation.

"Without help from the international community, things will get out of hand," she said at a feeding centre in the shanty town of Ndirande on the



WATCH/LISTEN REAL MEDIA

ON THIS STORY

The BBC's James Cowling
"The situation in Malawi... is particularly devastating"



Regional hunger

Key stories

- ▶ What went wrong?
- ▶ Aid worker's diary

Affected countries

- ▶ Zimbabwe's hunger
- ▶ Double Swazi jeopardy
- ▶ Zambia's famine road
- ▶ Angolan famine fears
- ▶ Ailing Mozambique
- ▶ Malawi's struggle
- ▶ Lesotho needs food

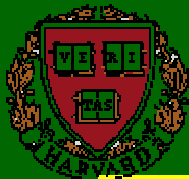
Ways to help

- ▶ Agencies' appeals

CLICKABLE MAP

- ▶ Famine trail

TALKING POINT



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•

For the time being, these assumptions
are likely to predominate...

Implicit theories

Financial "Investor's" Worldview

Community

The moral community is made up of those who share in capital to undertake investments in industrial capacity and trading ventures

System

The system consists of investors engaged in differential strategies of investment throughout the world. The world as a whole is available as a theater for profitable investment. Financial resources knit the system as a whole together.

Authority

Authority is vested in trans-national and multinational alliances and agreements that work to facilitate the unimpeded movement of capital

Change

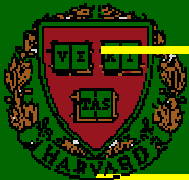
Change occurs through the identification and investment in new ideas.. Change is good and has become essential for competitive survival of rival financial groups. Growth is both good and necessary.

Agency

The investor is the agent of change in the system. The state should act to facilitate and “free up” the potential for the global movement of financial resources.

Time

The focus is upon the next “quarter” or a shortened time horizon determined by a calculation of the annual average rate of profit. Rapid “turnover” of capital is necessary for maximum profit generation. “Time is money.”





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Tuesday, 14 May, 2002, 19:14 GMT 20:14 UK

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Africa 'needs GM crops to survive'



For some farmers, GM crops mean new hope despite the uncertainties

By Alex Kirby
BBC News Online environment correspondent

Many African scientists believe genetically modified (GM) crops offer the only hope of avoiding mass starvation on the continent.

The claim is made in a TV programme. It says that in dozens of African countries, "biotechnology has sparked a mood of optimism".

The programme recognises the long-term fears of anti-GM campaigners, but says Africa's dilemma is acute.

And it says many people in Africa think biotechnology can offer better health and

See also:

- ▶ 22 Apr 02 | Europe
GM talks seek to protect environment
- ▶ 17 Apr 02 | Sci/Tech
UN moves to curb bio-piracy
- ▶ 02 Apr 02 | South Asia
GM crops win new friends

Internet links:

- ▶ [Convention on Biological Diversity](#)
- ▶ [African Biotechnology](#)
- ▶ [ITDG](#)

The BBC is not responsible for the content of external internet sites

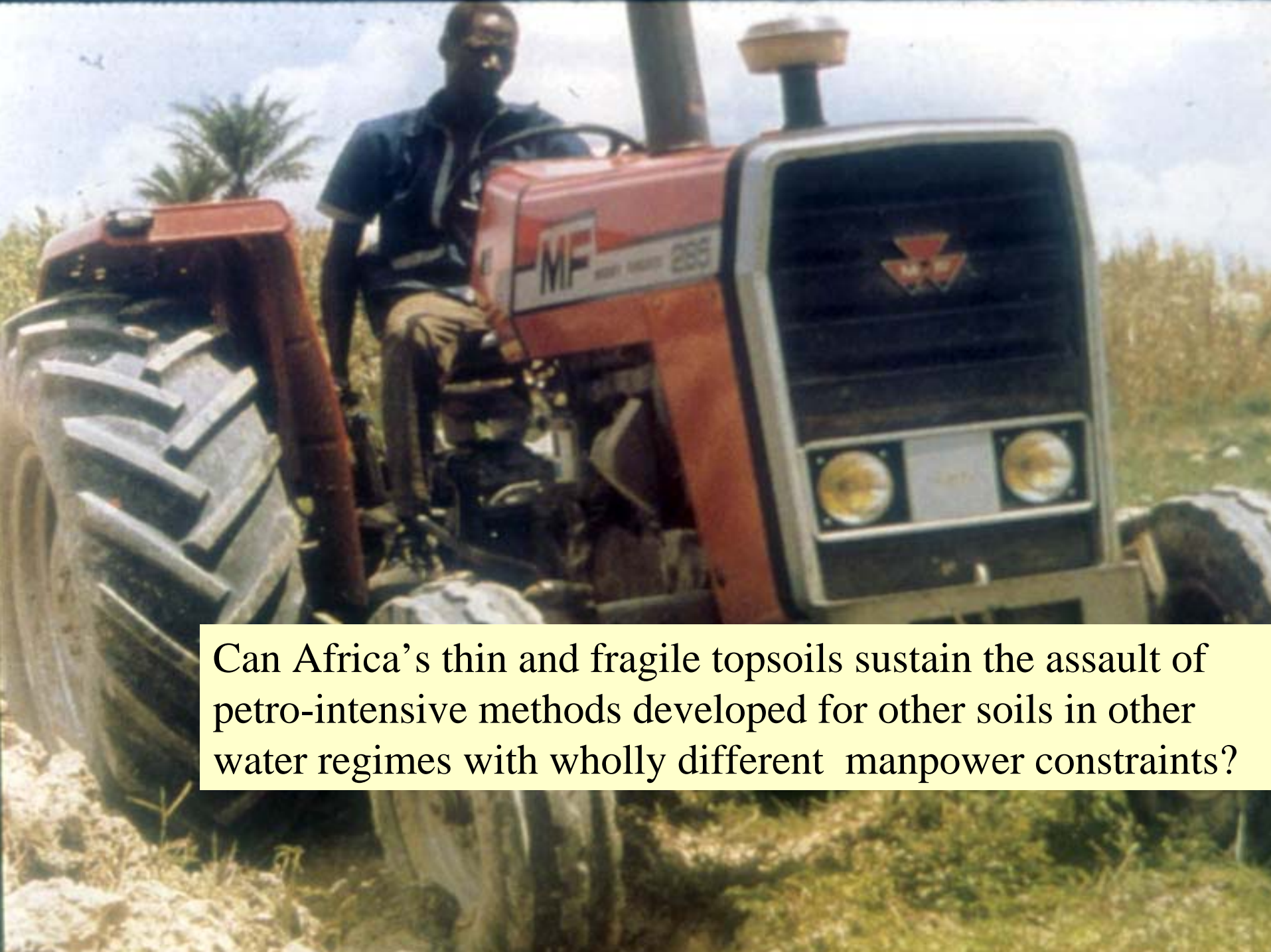
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Africa is said to *need GM crops* because that most closely fits our worldview of what agriculture should be in the "modern" world...

But is this kind of capital-intensive agriculture going to help? Or hurt?





Can Africa's thin and fragile topsoils sustain the assault of petro-intensive methods developed for other soils in other water regimes with wholly different manpower constraints?

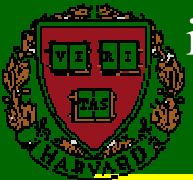




American engineers have a solution to these problems and it has to do with constructing new “infrastructure” – roads, bridges, dams, water delivery and sewage systems.

Consider “How Water Won the West,” *Bureau of Reclamation*, (1986).

The logic and habits of mind of the “empire builders” has dominated America’s entire foreign policy toward the “Third World.” (see, for example, the “confessions” in Week 5 Supplementary material)



Beyond Africa...

What about the struggles over agriculture and water in other parts of the world....

"The Battle over Blue Gold," *WBUR - The Connection*, (27 August 2002).

South America – "Leasing the Rain"

India? – "Seeds of Suicide" – The fate of Indian farmers + Vandana Shiva

World Water Crises – "Water Refugees"

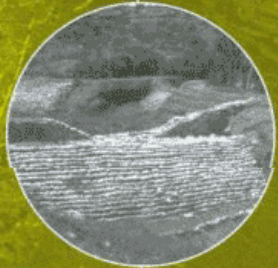
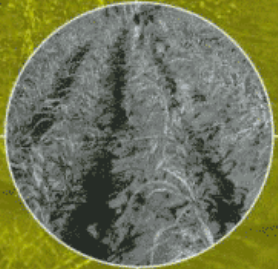
BBC's Directory to "The Water Debate"



Copyrighted Material

Balancing Water for Humans and Nature

The New Approach in
Ecohydrology



Malin Falkenmark and Johan Rockström

Copyrighted Material

The Alternative....

There are alternatives being proposed for Africa. They have to do with re-inserting ecological process within the hydrological system. So far, however, they are not as yet *financed* and are not likely to be so in the near future because of our values and beliefs about capital intensive agriculture.

Tim Weiskel - 79

The Hague Meetings and Aftermath...

Conflicting opinions emerge among delegates on the “pricing” of water as a result of “The Hague Statement.”

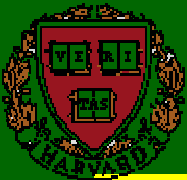
Water as *‘Human Right’* vs. a *Priced Commodity*

One official position - Head of World Water Commission.

Evelyn Herskin’s (Conference Chairwoman and South African position - water-scarce country). (BBC Report)

NGOs, including The Council of Canadians have opposed the “commoditization” of water at the Hague and through NAFTA. Maude Barlow has led the struggle and created a “Blue Planet Project.”

One year after the Hague Conference (2000), The Council of Canadians organized a global conference in Vancouver, B.C. to alert the world to the “privitization crisis.”



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Land Management and the Emerging Water Crisis



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