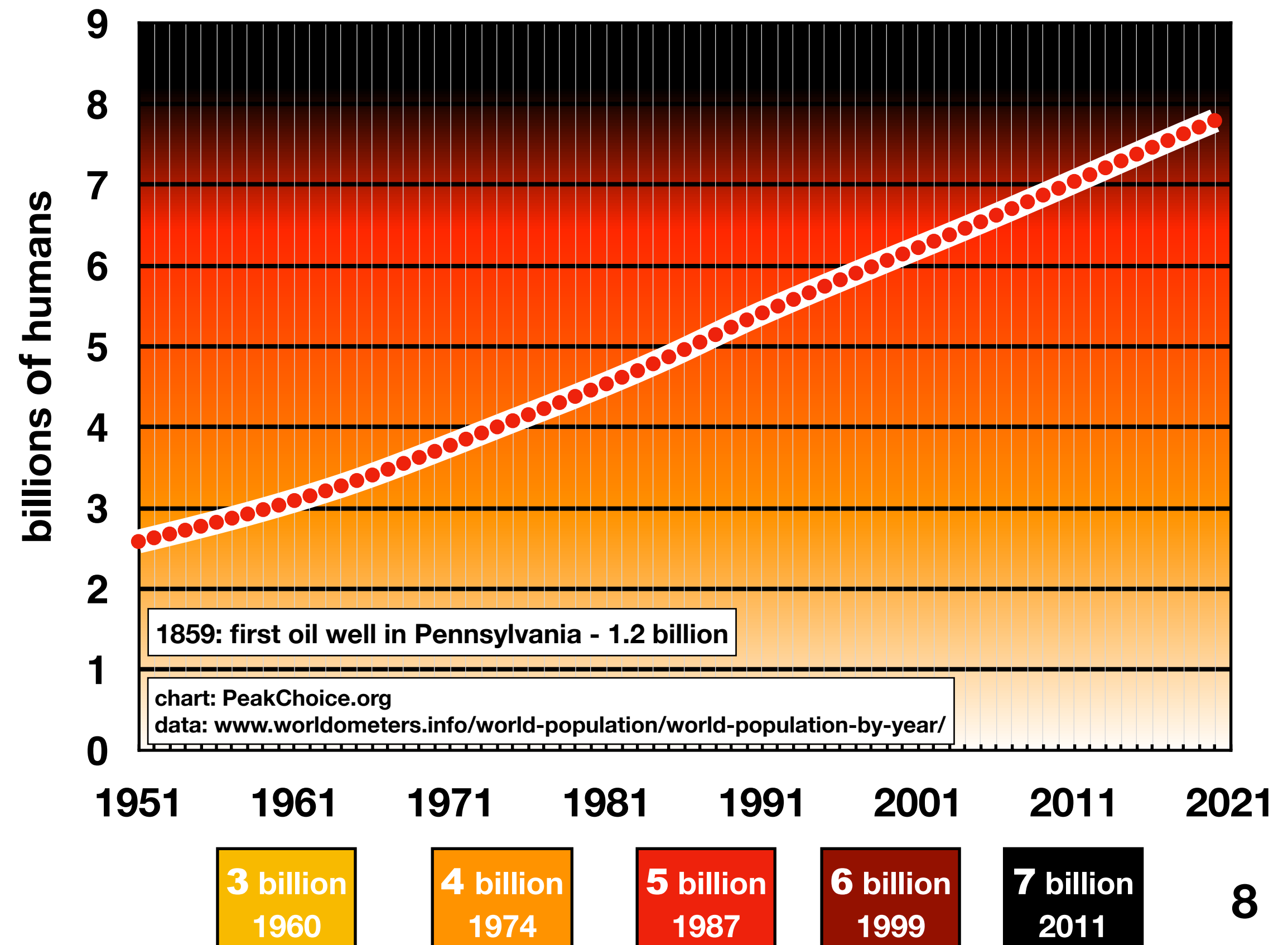


Limits to Growth - 1972

Study predicted permanent resource crisis after the turn of the century, with peak pollution coming after peak resource use. Fracking and tar sands confirm this.



overpopulation

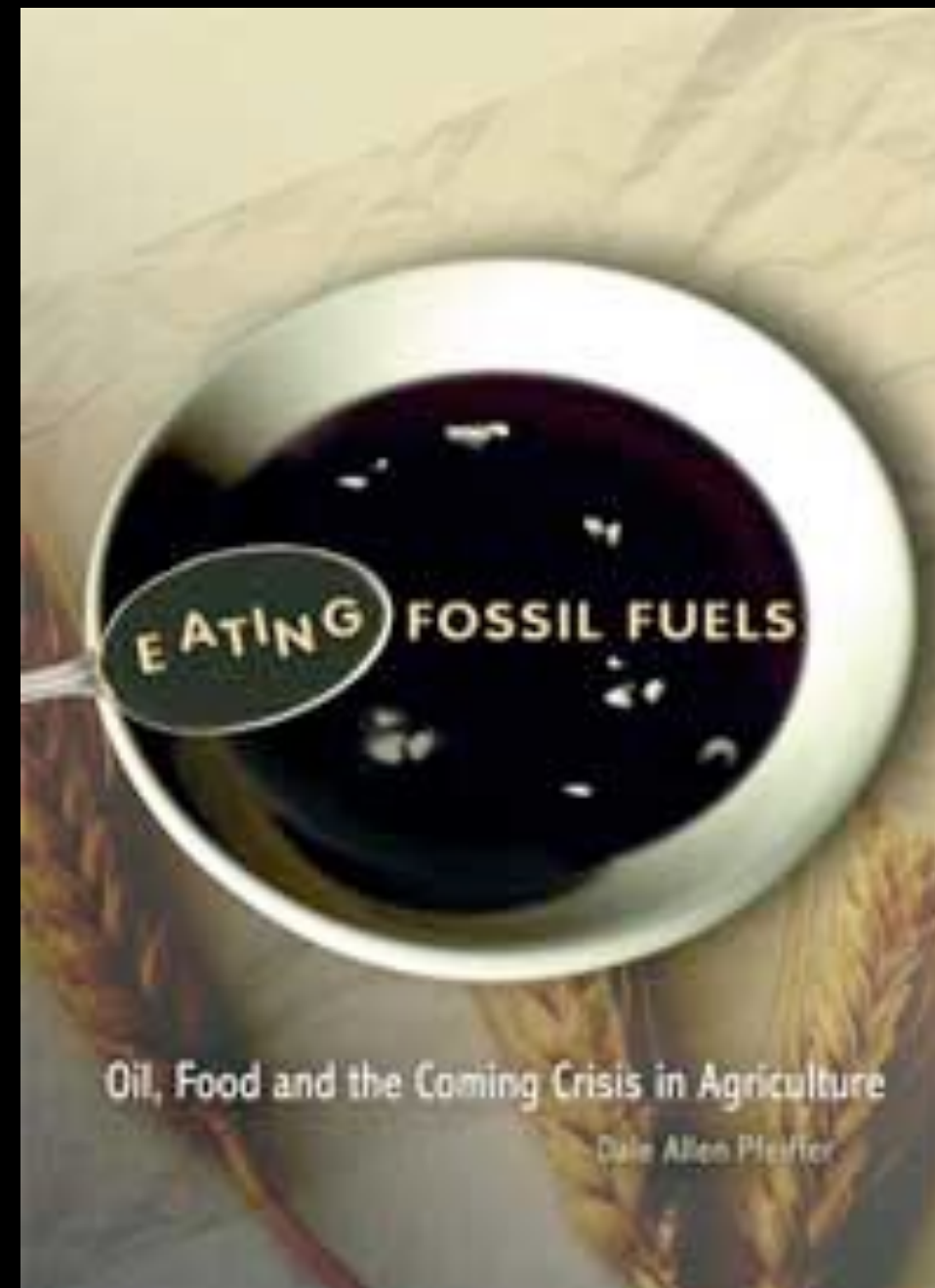


Peak Food

The biggest threat of Peak Oil is not the disruption of the inalienable right to drive as much as we want -- but the risk to the food supply. In the industrial world, nearly all food requires enormous energy inputs. Fertilizer from natural gas. Pesticides from petroleum. Diesel tractors. Even organic food is usually transported long distances and packaged with petroleum based plastics.

Lester Brown's Earth Policy Institute is a great resource for tracking the global food supply. This chart shows that the per capita grain production peaked in the early 1980s.

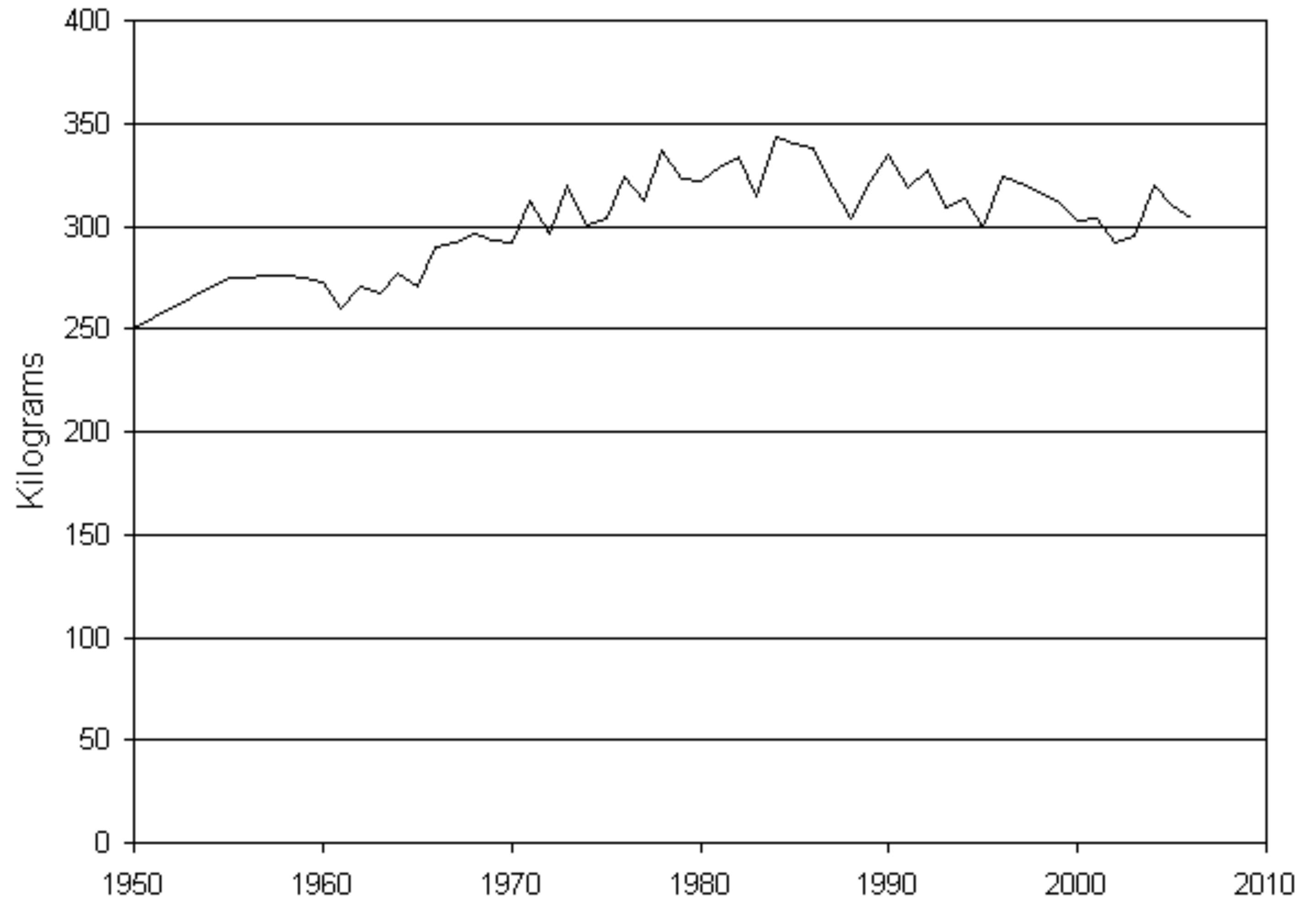
The 1970 Nobel Peace Prize was given to Norman Borlaug to honor his work for the "Green Revolution." This involved using fossil fuel derived fertilizers and agricultural chemicals to boost crop yields. This was extraordinarily effective but also further increased fossil fuel dependency. Borlaug also realized this trick, by itself, could not solve the problems of overpopulation - at best it pushed back the time when these limits would become disastrous. He spent the rest of his life warning about overpopulation.



Oil, Food and the Coming Crisis in Agriculture
Dale Allen Pfeiffer

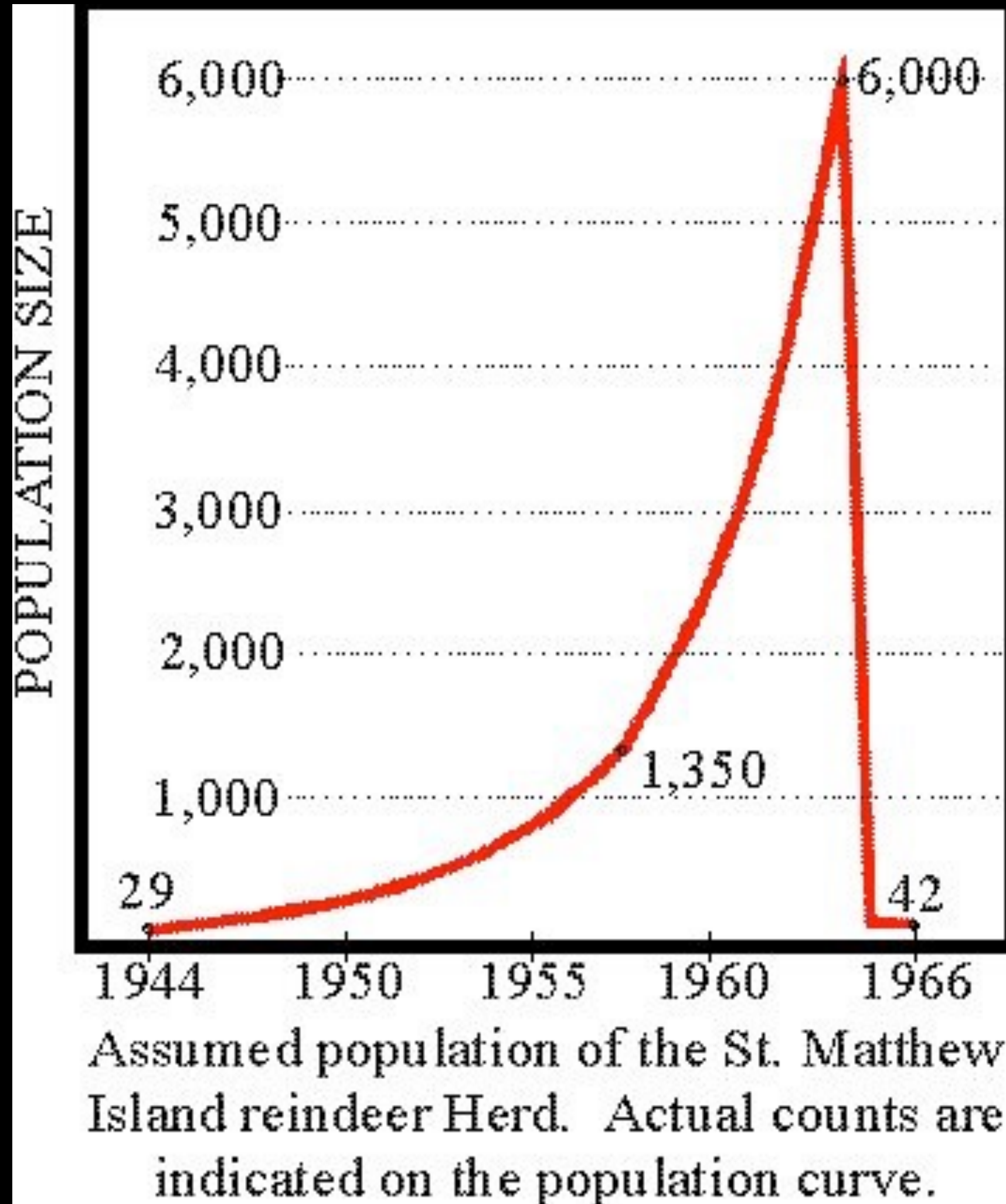


World Grain Production Per Person, 1950-2006

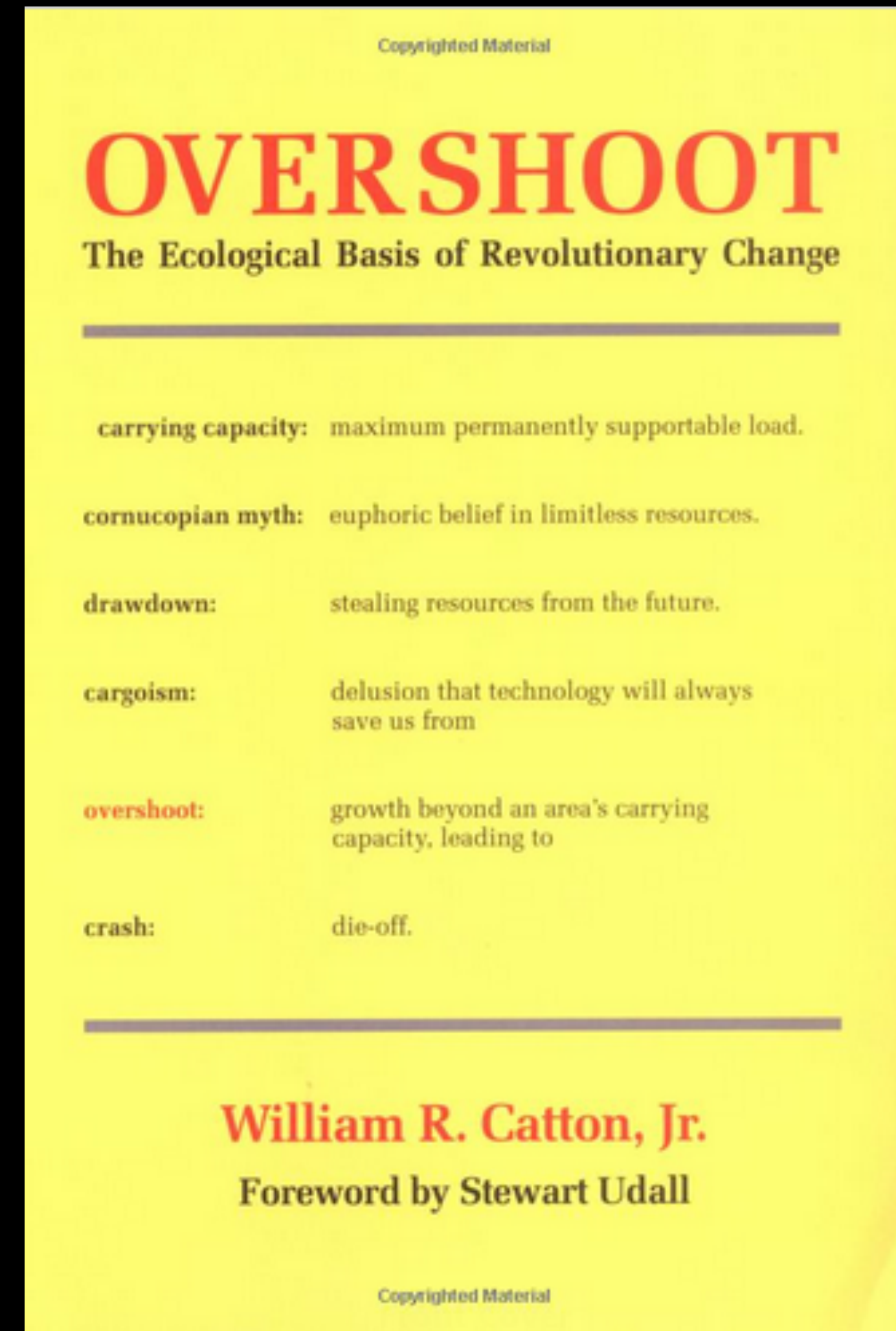


Earth Policy Institute

Source: USDA, United Nations



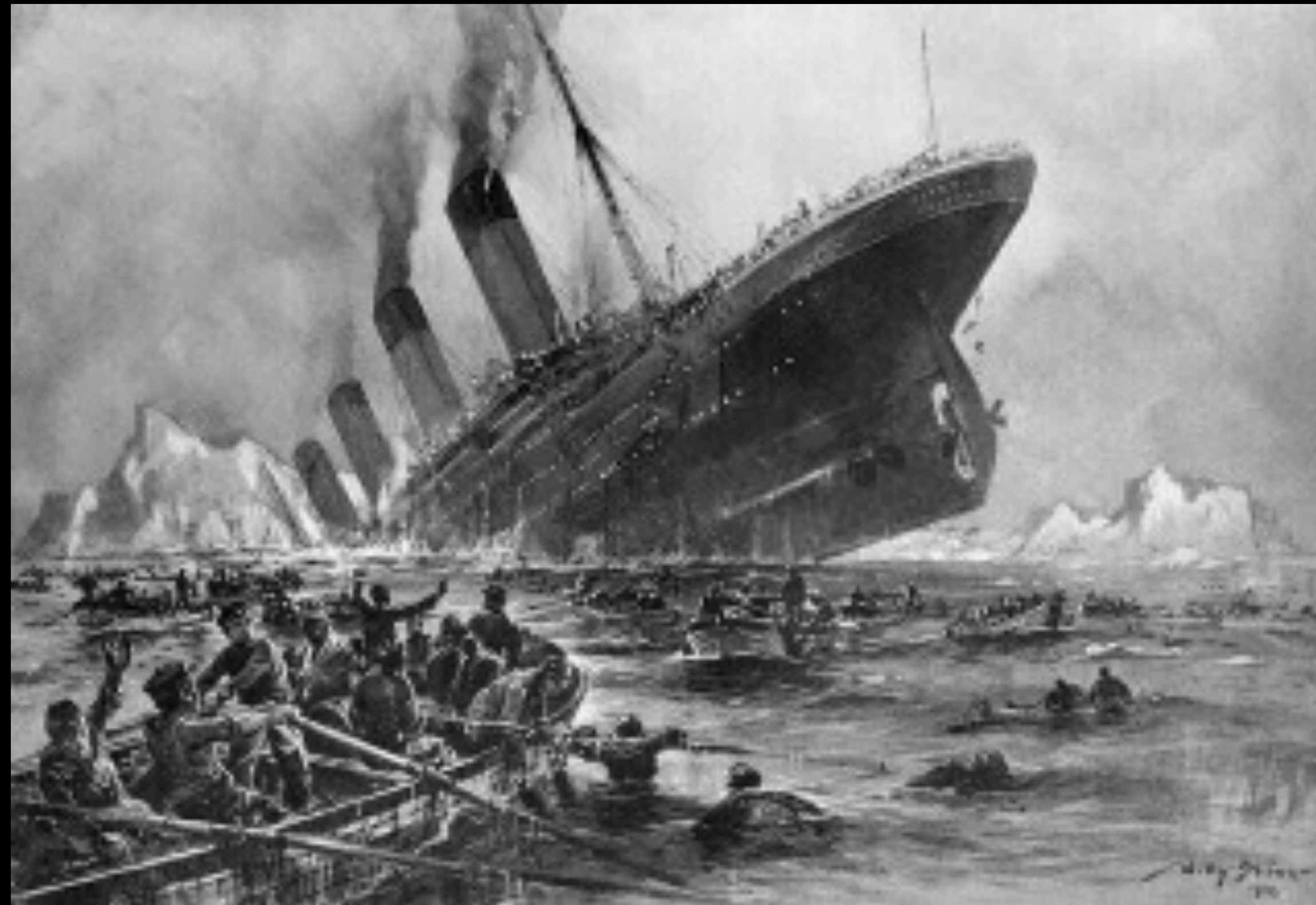
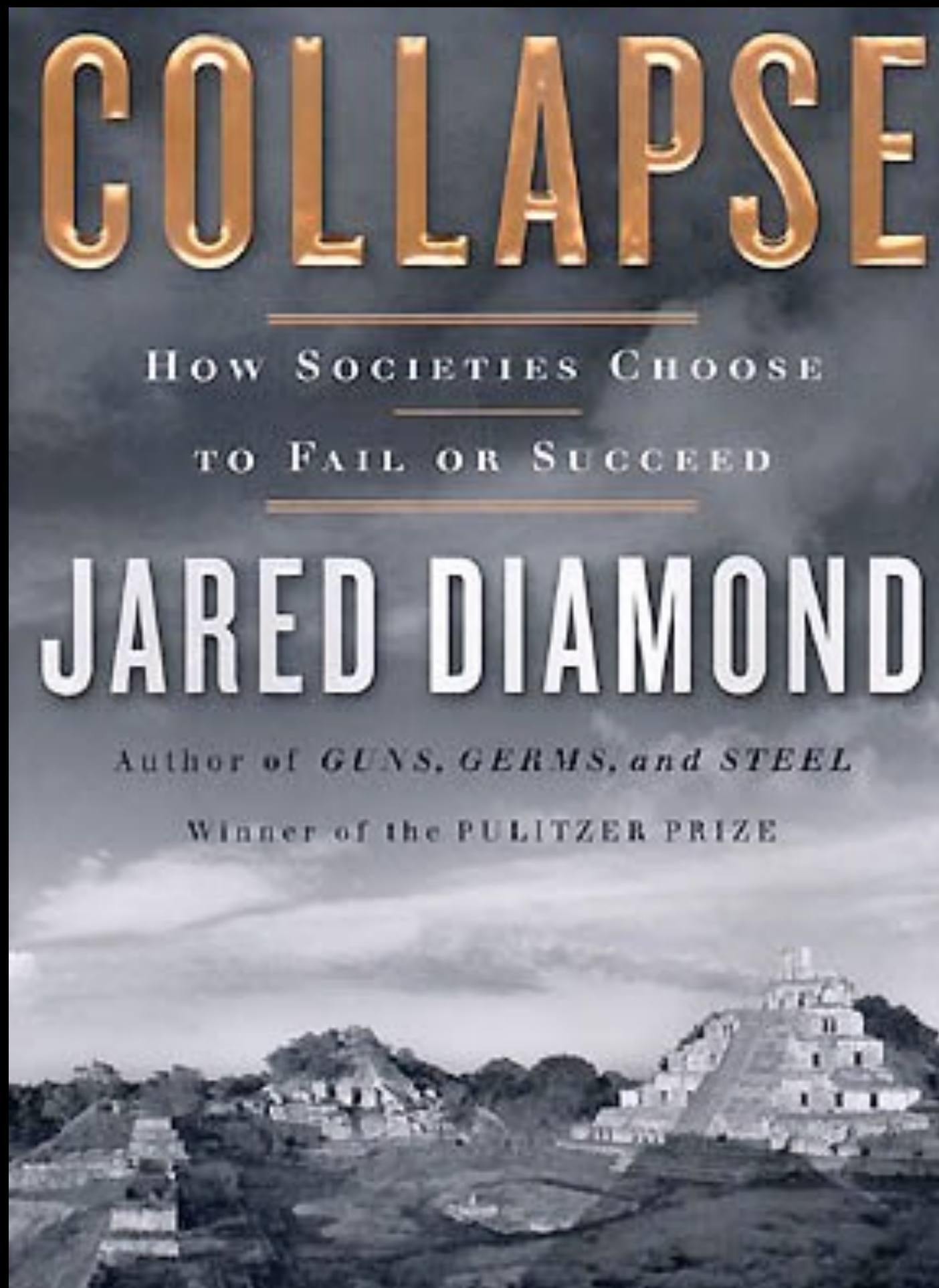
**overshoot
population crash
and dieoff happens
when species
exhaust their
carrying capacity**



Unsustainable does not mean that something is a bad idea, it means that it cannot continue. The chart shows what happened to a reindeer herd introduced to an Alaskan island - their population crashed after they overgrazed the island's food supplies.

Carrying capacity refers to the ability of ecosystems to support the diversity of life. It does NOT mean the ability of "woke" liberal activists to care about various political concerns (as a climate activist recently suggested to me).





the unsinkable Titanic

The story of the Titanic shows the futility of arrogance, the importance of adequate preparation and the need to have an equitable approach to the disaster. The ship's owners refused to consider the possibility of disaster and ignored the obvious need for enough lifeboats for all of the passengers. Once the ship hit the iceberg, many of the poorer people on board were locked below decks to enable the first class passengers to have priority for the lifeboats.

Supporters of the “endless growth” suggest that economic growth will take care of poverty and gross inequality -- a rising tide lifts all yachts. If growth is ending, then pressure for a different economic paradigm might increase substantially. Social justice advocates are desperately needed to be part of the global discussion of how to cope with Peak Everything in a compassionate way. Traditional leftist politics are focused on how to share the economic pie more fairly. Resource depletion means that the size of the economic pie is going to get smaller, which makes equity an even more difficult goal.



CHARLTON HESTON LEIGH TAYLOR-YOUNG

SOYLENT GREEN



It's the year 2022... People are still the same.
They'll do anything to get what they need.
And they need SOYLENT GREEN.

Hollywood has prepared us for collapse for a long time.

Mel Gibson's ultraviolent film *Mad Max* shows a world where fighting over oil is the primary preoccupation. Charlton Heston's film *Soylent Green* depicts an overpopulated world where ecological support systems have crashed -- and the corporate conglomerate feed the masses a very special food ...

The only recent movie I know of from a major studio that even comes close to a permaculture theme was "the Martian," where Matt Damon is marooned on Mars and has to learn to grow his food. It would be nice if Hollywood made a movie about people relearning food skills on a planet that still has a breathable atmosphere.

WORST CASE SCENARIO:
ECOLOGICAL DISASTER.



**Worst Case
scenario**

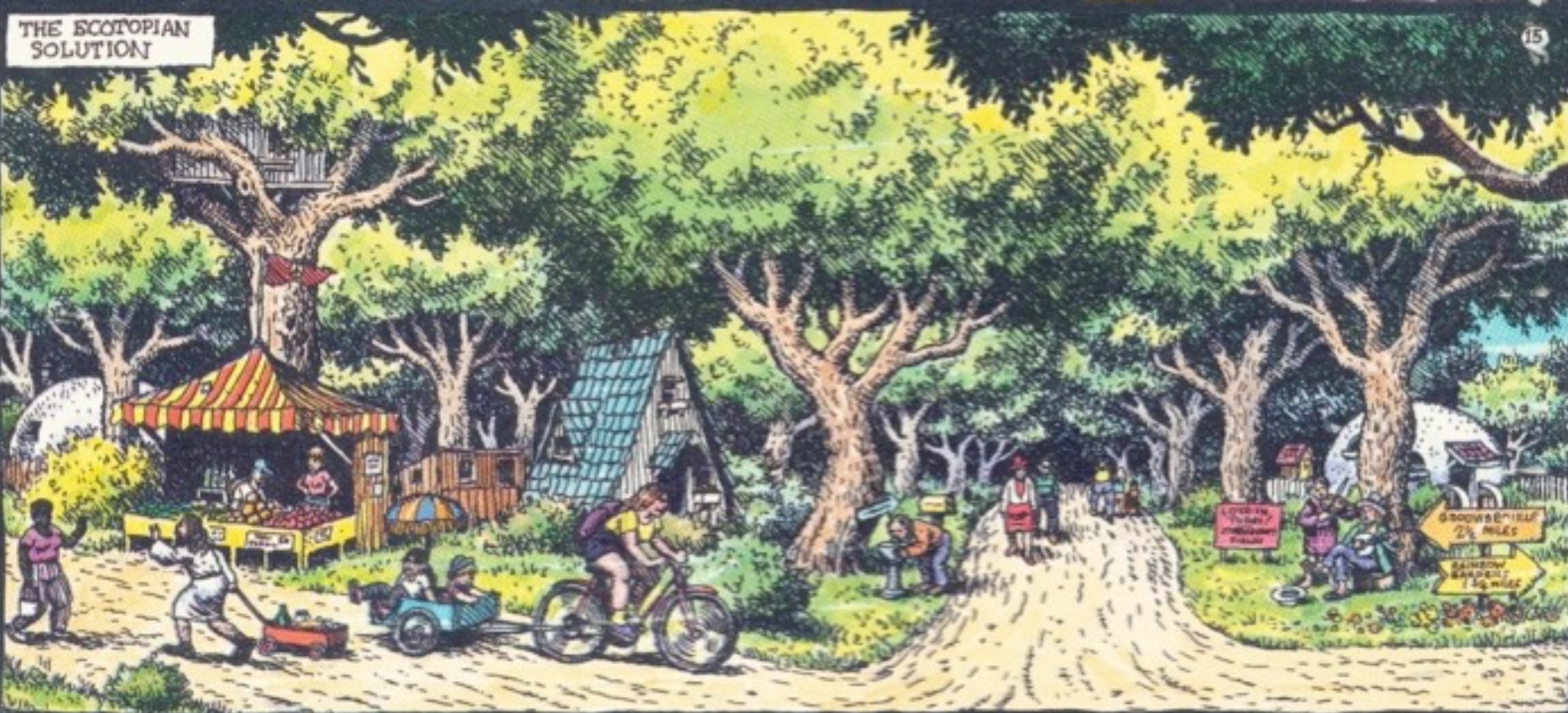
The artist R. Crumb created these excellent cartoons showing three potential futures. I think the first two, the “worst case” and “techno fix” scenarios, are ultimately the same.



THE FUN FUTURE:
TECHNO-FIX ON THE MARCH!

The Fun Future

probably the same as Worst Case



The Future according to Robert Crumb. (For his Historical vision, see p. 34.)

The Ecotopian solution would require major changes to our political systems, the way that money works and perhaps most important -- to our psychology.

To use the remaining oil for peaceful purposes (renewable energy systems, relocalization of production, etc) we need to understand why these solutions have been ignored and sabotaged in previous decades despite countless warnings that they were needed.

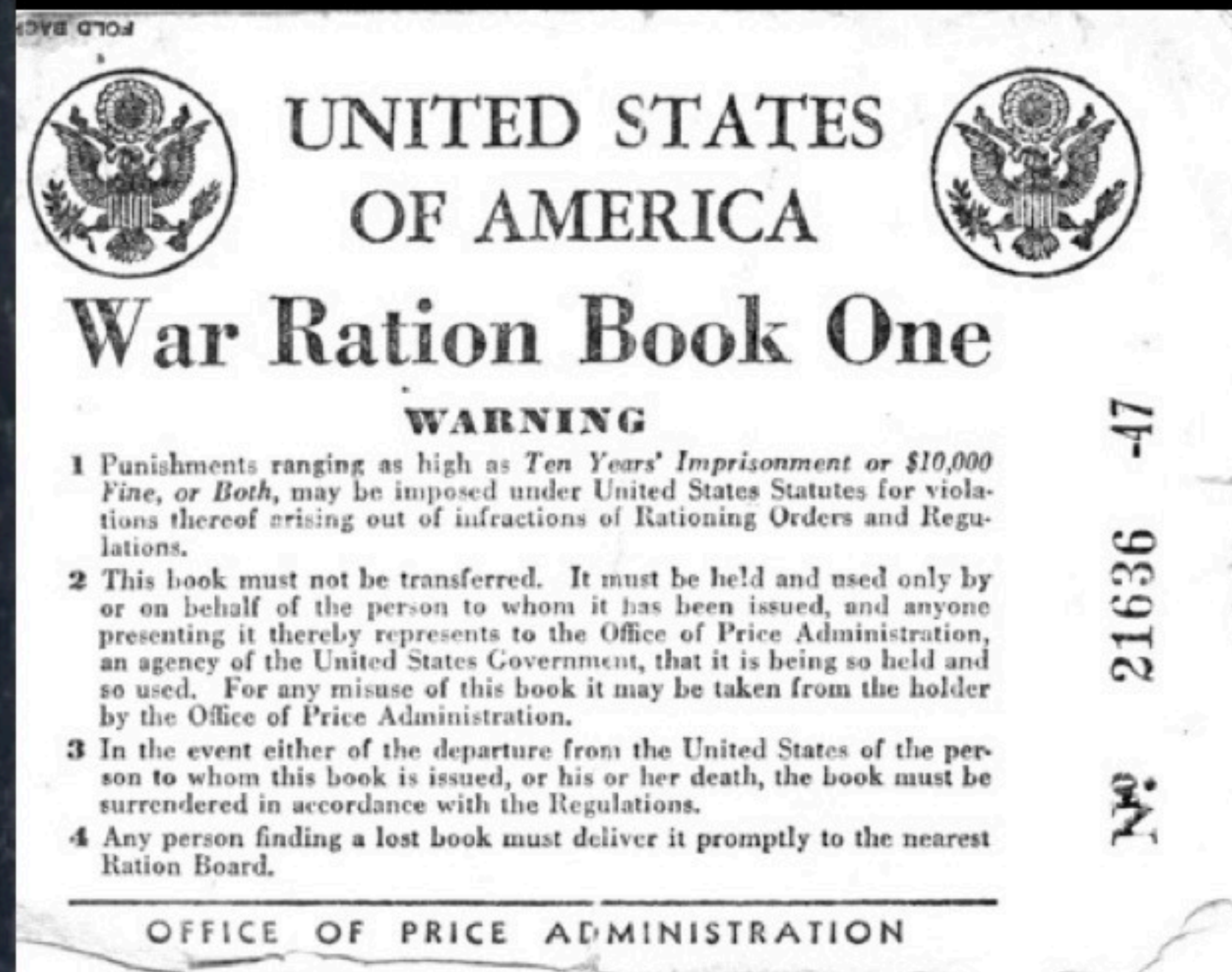
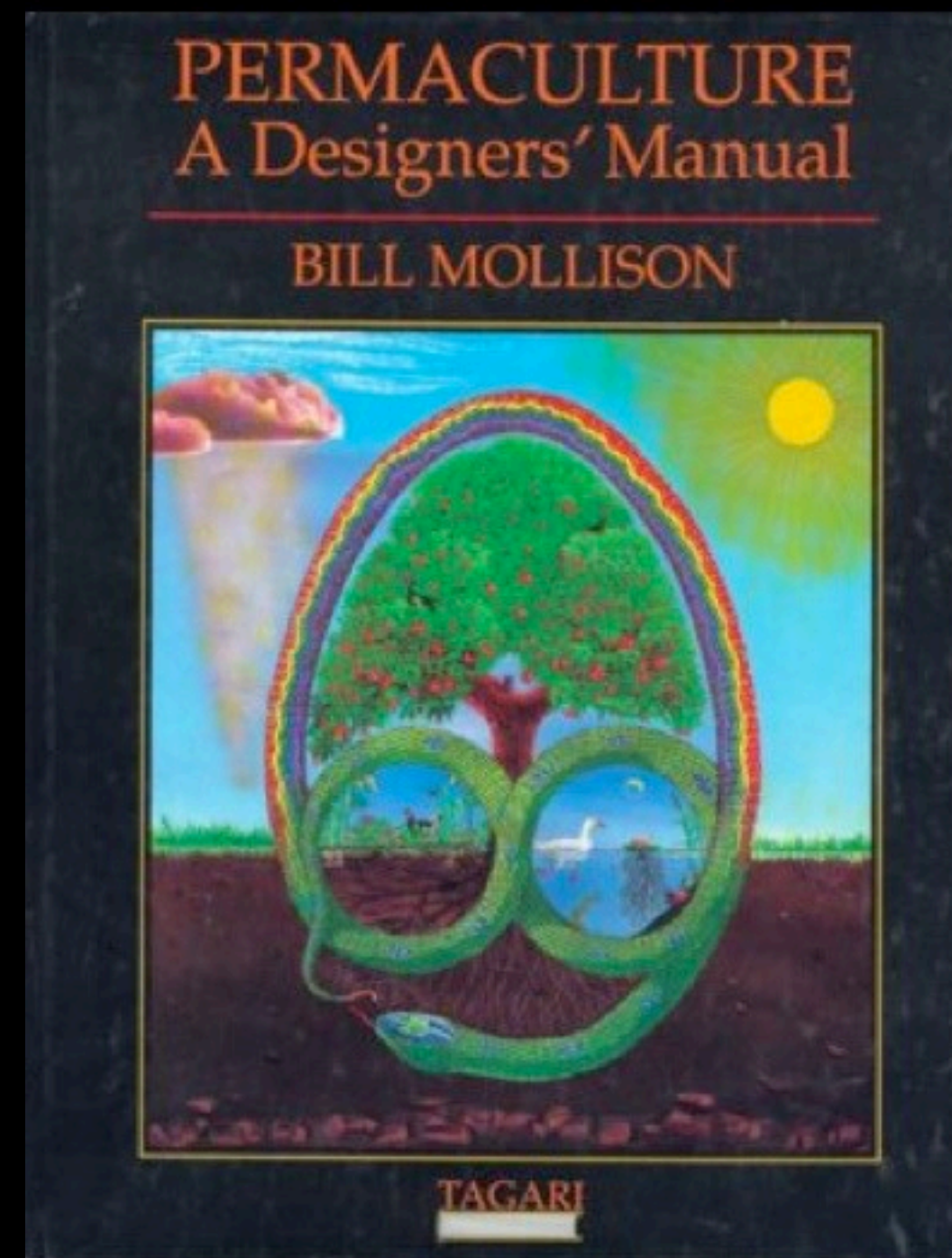
The solutions are decentralized and therefore not of interest to most of the elites nor even most of the public.

the Ecotopian solution

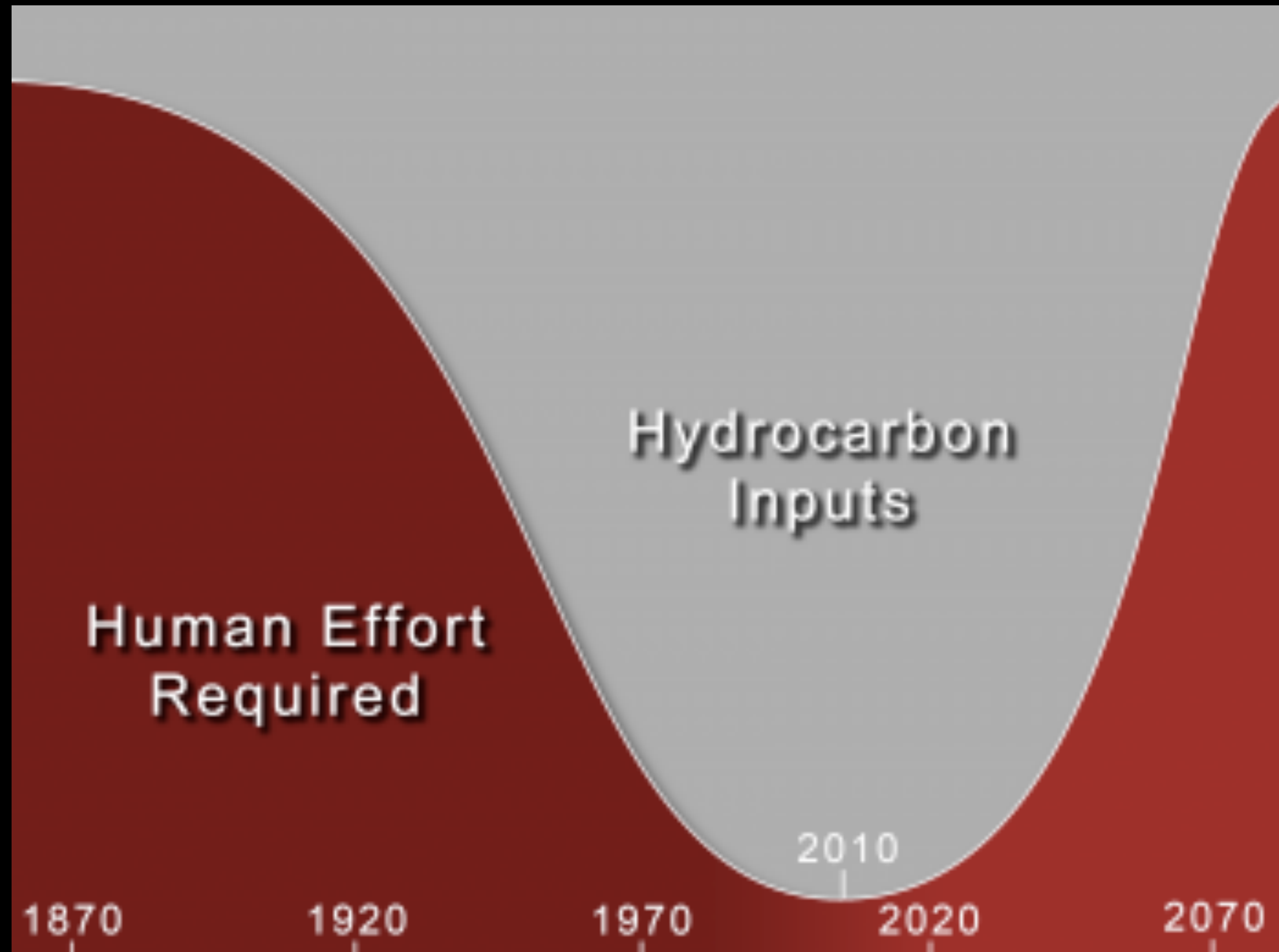
“The Future according to Robert Crumb”
Whole Earth Review, Winter 1988

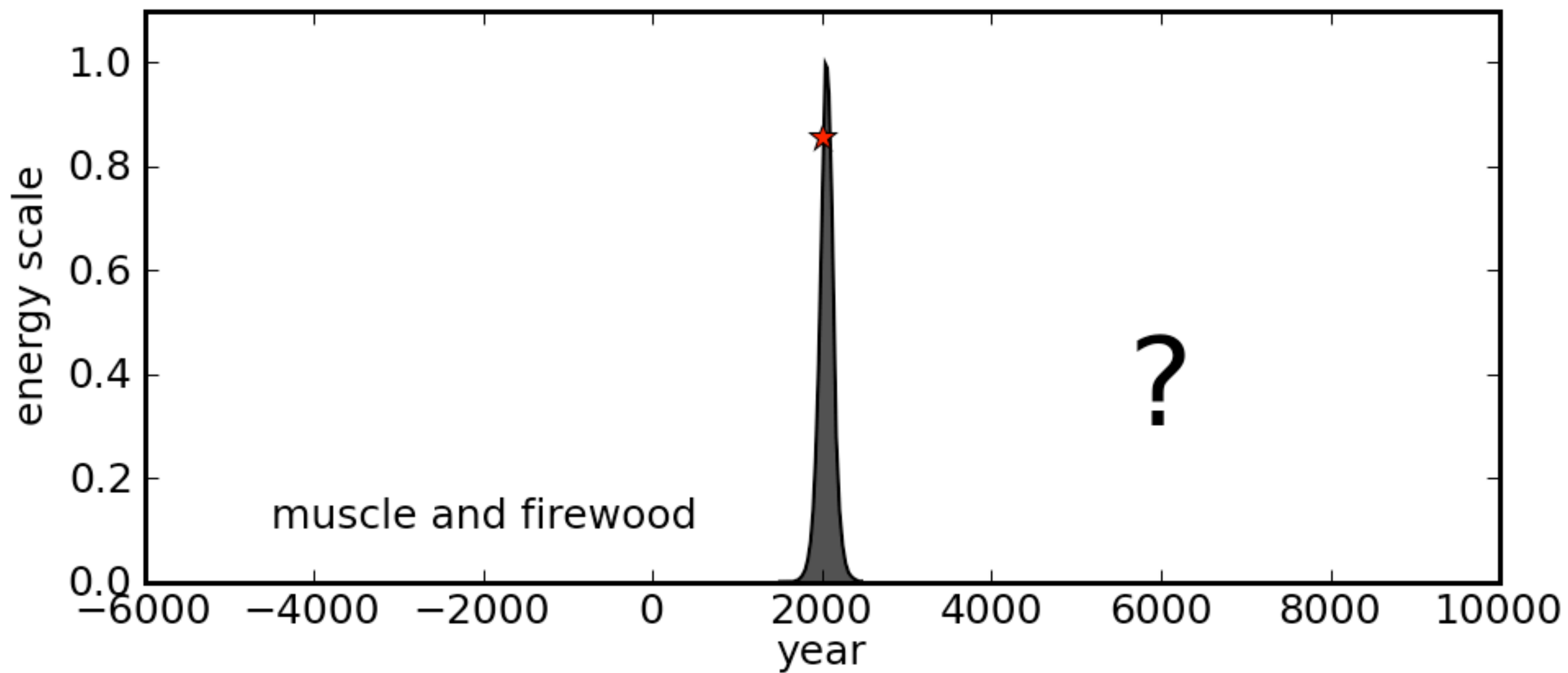
two responses to resource depletion

RATIONING imposed by military force
PERMACULTURE to shift society toward sustainability



fossil vs. human power





Are YOU a Victory Canner?



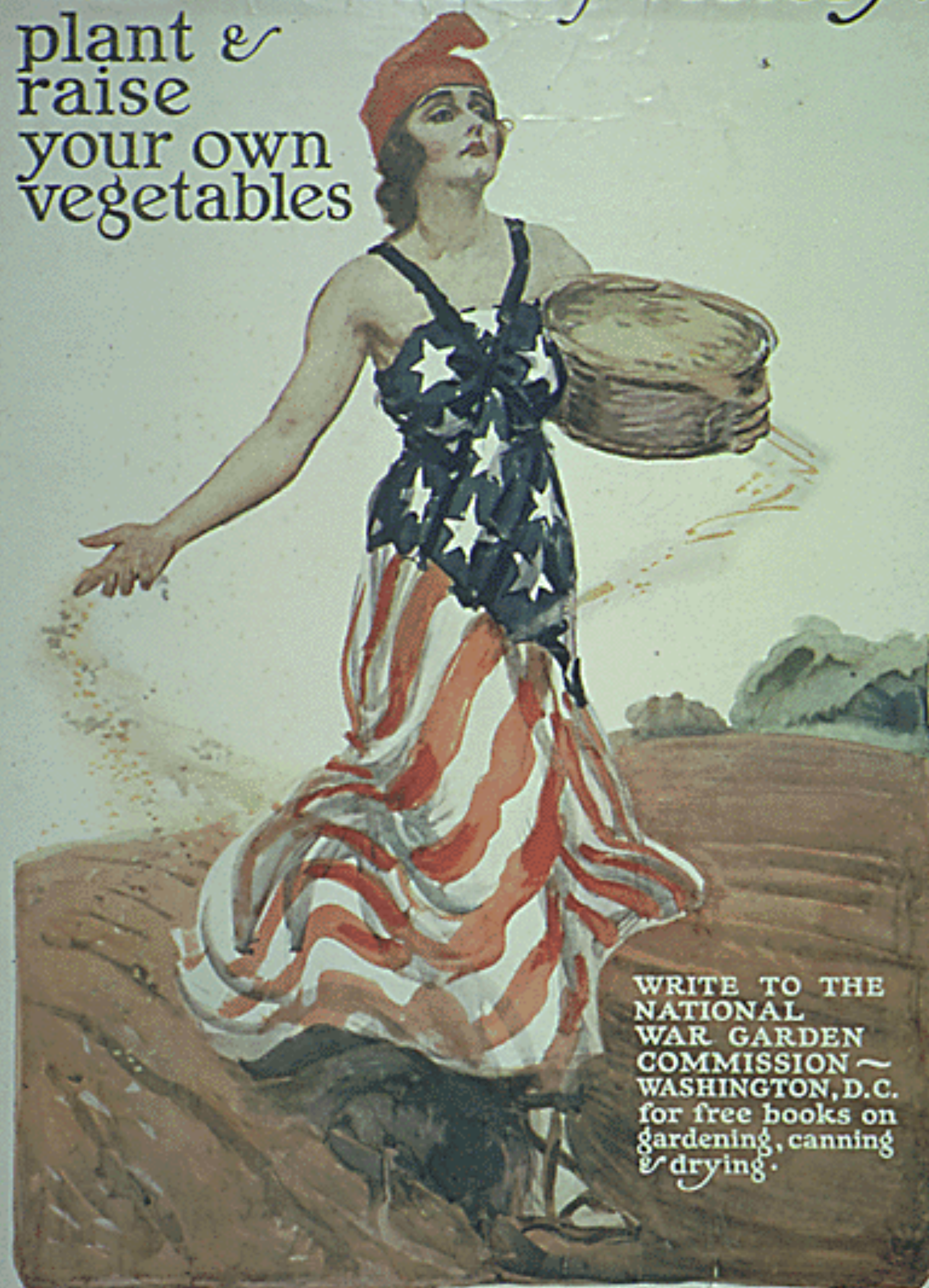
Write for Free Book to
National War Garden Commission
Washington, D. C.

Charles Lathrop Pack, President

P. S. Ridsdale, Secretary

Sow the seeds of Victory!

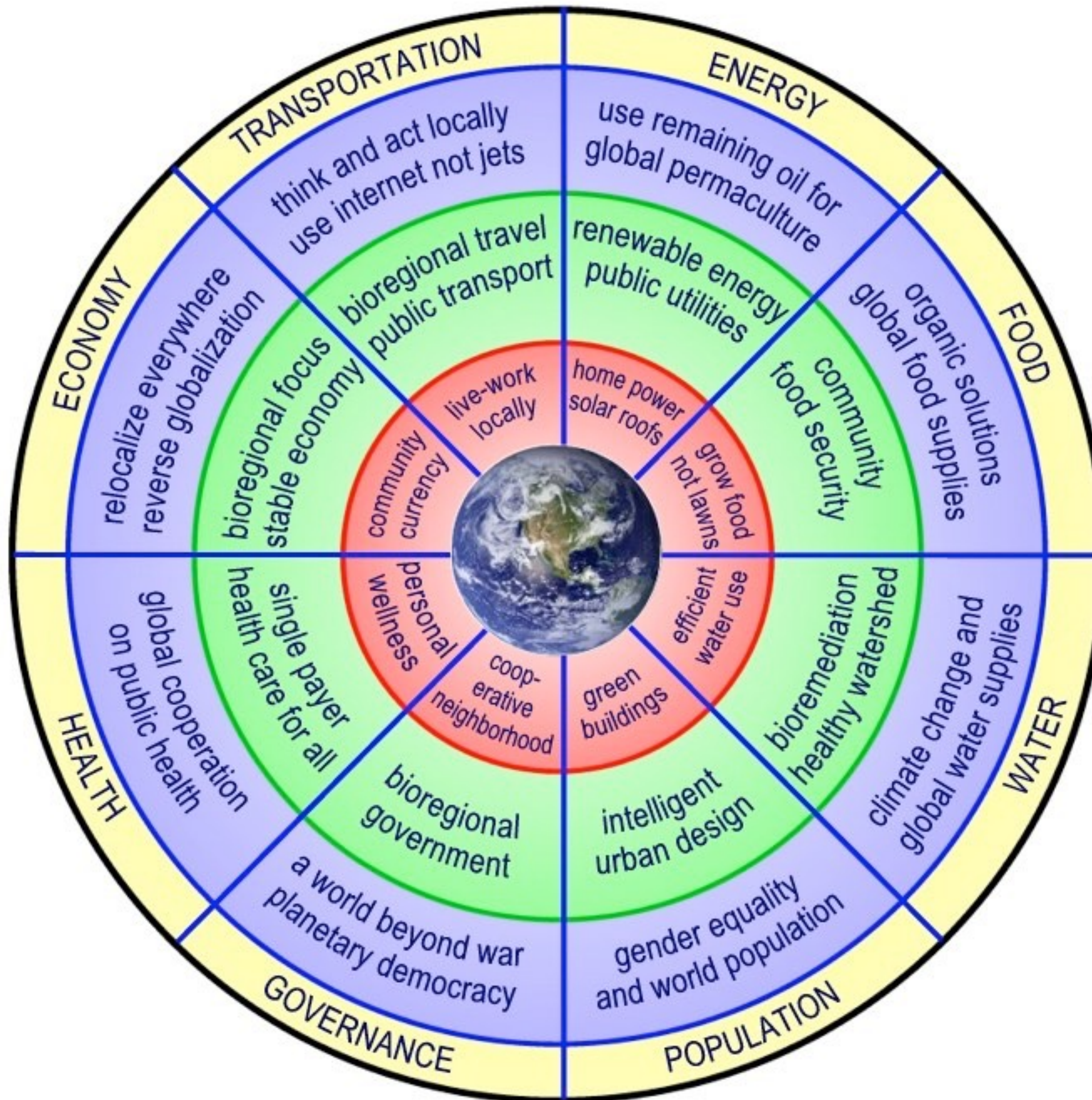
plant &
raise
your own
vegetables



WRITE TO THE
NATIONAL
WAR GARDEN
COMMISSION ~
WASHINGTON, D. C.
for free books on
gardening, canning
& drying.

“Every Garden a Munition Plant”

FRACTAL PERMACULTURE



**zones
and
sectors**

**local
bioregional
global**

**endless
growth**



**abundant
finite planet**



choose one