Lecture Springsemester 2015 M. Dittmar Energy and environment in the 21. century: Part II <a href="http://ihp-lx2.ethz.ch/energy21/">http://ihp-lx2.ethz.ch/energy21/</a>
May 15, 2015

## Lecture 10 Block II: Options for the future Which path into sustainability?

Examples from sustainable systems (15.5); a rational development towards sustainability, human nature and moral-ethics-earth care (22.5); The path down from the mountain: ideas for an uncertain future (29.5)

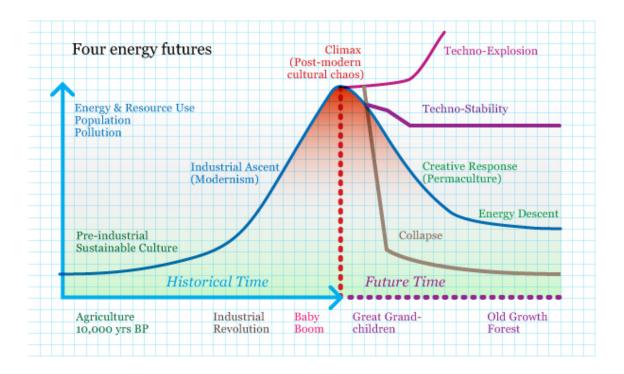
#### Sustainable systems without and with human cultures:

- old (pristine)-forests and deserts: examples from sustainable ecosystems.
- ok, perhaps sustainable systems with humans can exist, but they are not attractive!
- "Signs of hope": we are capable to repair destroyed areas!
- From the global consumer culture to a global "permaculture"?
   Can this really be attractive?
- It seems we "understand" what we should do ("Moral-Ethics-Earth Care"), but why do we (still) refuse to try the alternative theoretical ideas?
   → our problem: Sustainability and human nature? (22.5);

#### Realistic/unrealistic models for the future

The 5 phases of dying: denial, anger, bargaining, depression and acceptance <a href="http://tinyurl.com/5wevdzf">http://tinyurl.com/5wevdzf</a> and <a href="https://www.youtube.com/watch?v=G\_Z3lmidmrY">https://www.youtube.com/watch?v=G\_Z3lmidmrY</a>.

- Denial and anger (BAU = growth for ever and "après nous, le Déluge" (April 17)
- Bargaining (just a little more growth and then a green economy with qualitative growth (April 24)
- Depression and acceptance ("development towards sustainability" through the regional/global collapse of the cultural system (today May 8)
- Acceptance (our goal): "Development towards sustainability" with the help of rational local (global?) theoretical scientific principles for the (still) unknown path into a sustainable system. (May 15-22-29)



#### The limited size of our planet forbids never ending growth and to "continue as before"!

If the TINA (there is no alternative for growth) is correct, no alternative for the global ecosystem collapse can exist!

The philosophical justification of todays civilisation (a mono-culture?): http://en.wikipedia.org/wiki/Cultural\_mandate "The cultural mandate or creation mandate is the divine injunction found in Genesis 1:28, in which God (YHVH), after having created the world and all in it, ascribes to humankind the tasks filling, subduing, and ruling over the earth."

or in german http://de.wikipedia.org/wiki/Dominium\_terrae

- 1 (King James translation):
  - "And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."
- 2 Lactantius (from years 250 to 325) advisor to the first Christian Roman emperor. Often considered to be theoretical founder of "christianity" <a href="http://en.wikipedia.org/wiki/Lactantius">http://en.wikipedia.org/wiki/Lactantius</a>:
  - "Lactantius confidently stated that the beginning of the end would be the fall, or breakup, of the Roman Empire... After Rome's breakup the Antichrist would appear and after that the saints would take the kingdom...
  - the Holy City are overwhelmed by fire.., buried altogether by an earthquake ..
  - Next, God renews the earth, after the punishment of the wicked..

### The limited size of our planet forbids never ending growth .. (2)

If the TINA (there is no alternative for growth) is correct, no alternative for the global ecosystem collapse can exist!

3 Descartes "the father of modern philosophy":
"man is the ruler and owner of nature"
Thus all other species (and human cultures) have to adapt or disappear!

bequeath it in an improved state to succeeding generations."

4 Karl Marx (usually propagated that the results of economic growth should be distributed fairly) but what did he have in mind with (Volume 3 the Capital): "Even an entire society, a nation, or all simultaneously existing societies taken together, are not owners of the earth. They are simply its possessors, its beneficiaries, and have to

Is there really no better alternative to a global economic growth which can only be terminated with a global eco-collapse?

# Examples of sustainable systems: Forests and deserts without and with "primitive" tribes and their cultures

Only important for hippies and "rich tourists" interested in short adventures or important for a "future sustainable life" worth living?

#### Of Forests and Men [US - Edward Norton]

http://www.youtube.com/watch?v=-HSaAlPRN-c

Deserts: The Best of Namibia by imvelo ART

https://www.youtube.com/watch?v=47ksi1IyPuA
Or http://www.youtube.com/watch?v=M-SWXMhcHe0

"the time when the first San started to live Southern Africa vary between 10 000 to 25 000 years. (wikipedia)

#### Examples of sustainable systems: Forests and deserts with humans

The Living Bridge of Meghalaya......

http://www.youtube.com/watch?v=T1ffu9h10Eo

What is more import: Justice for the people in the sustainable bushmen culture (they won the process!) or short term economic gains with diamonds and other resources?

more at: <a href="http://www.survivalinternational.org/tribes/bushmen">http://www.survivalinternational.org/tribes/bushmen</a> and "Without our land we die" Acceptance Speech by Roy Sesana for the Right Livelihood Awards, Stockholm (alternative noble price):

"Why am I here? Because my people love their land, and without it we are dying. Many years ago, the president of Botswana said we could live on our ancestral land forever. We never needed anyone to tell us that. Of course we can live where God created us! But the next president said we must move and began forcing us away." http://www.rightlivelihood.org/fpk\_sesana\_speech.html

Another example: people in the desert .. a 2,000 Year Old Food Forest in Morocco http://www.youtube.com/watch?v=hftgWcD-1Nw

#### Ok, sustainable systems with humans can exist, but they are not attractive! (1)

Is it true: sustainable systems with humans are not attractive?

What we find attractive?

Wikipedia http://en.wikipedia.org/wiki/Physical\_attractiveness

"Physical attractiveness is the degree to which a person's physical traits are considered aesthetically pleasing or beautiful."

"Physical attraction itself includes universal perceptions common to all human cultures, as well as aspects that are culturally and socially dependent, along with individual subjective preferences. In many cases, humans attribute positive characteristics, such as intelligence and honesty, to physically attractive people without consciously realizing it."

"Spieglein, Spieglein an der Wand! Bin ich so schön, wie mich mein Partner findet?" http://www.psychologie.uzh.ch/fachrichtungen/lifespan/erleben/berichte/mehr-berichte/attraktiv.html Or in english

The Beauty Bias: Can people love the one they are compatible with? https://www.psychologicalscience.org/media/releases/2008/lee.cfm "Lee and colleagues conducted a follow-up speed-dating study in which more attractive people placed more weight on physical attractiveness in selecting their dates, while less attractive people placed more weight on other qualities (e.g. sense of humor)... "people find a way to love the ones they can be with."

"Das heisst, auch wenn unattraktivere Personen bereiter waren, auch eher unattraktivere Personen zu treffen, fanden sie diese deswegen nicht auch attraktiver. Sie haben einfach ihr Anspruchsniveau in Hinsicht auf physische Attraktivität gesenkt. Wie man es vielleicht schon immer hoffte: Humor und andere Eigenschaften könnten schlicht wichtiger sein als nur das Aussehen, insbesondere wenn man selbst keine Schönheit ist. Irgendwie ist das doch beruhigend, nicht wahr?

### Ok, sustainable systems with humans can exist, but they are not attractive! (2)

Is it true: sustainable systems with humans are not attractive?

What do we find attractive?

http://www.bafu.admin.ch/landschaft/00522/01658/index.html?lang=de

Bundesamt für Umwelt: Sport und Tourismus

"Gesunde Luft, attraktive Landschaften und funktionierende Ökosysteme sind für Sport und Tourismus unentbehrlich...Alle Entwicklungen, welche diese Qualitäten negativ beeinflussen (z.B. Zersiedlung, Zerschneidung und Versiegelung), vermindern die Eignung von Natur und Landschaft für Erholung, Bewegung, Sport und Tourismus. Sport und Tourismus sind aber nicht nur Opfer dieser Entwicklung, sondern auch Mitverursacher

"universal" (google) "most attractive places in the world" seem to exist: <a href="http://tinyurl.com/cac6ggn">http://tinyurl.com/cac6ggn</a>

or for example: 41 Places To See Before You Die

No matter how advanced our cities and technology is, eventually we get tired of all the noise, stress and crowd of the city and want to be in the nature.

http://www.boredpanda.com/amazing-places-to-see-before-you-die/

We with very different cultural background seem to know what we find attractive!

Why do we allow that our "best culture ever" is just destroying what we find attractive?

#### Ok, sustainable systems with humans can exist, but they are not attractive! (3)

Is it true: sustainable systems with humans are not attractive?

We are also capable to restore destructed landscapes and make them again attractive!

Signs of hope: 300% Increase in Agricultural Income on 8.6 Million Acres - Loess Plateau in <a href="http://www.youtube.com/watch?v=sK8JNXHcBMA">http://www.youtube.com/watch?v=sK8JNXHcBMA</a>

#### "Why don't we do this on a global scale?"

More at: "What if we change series" - Hope in a Changing Climate by John D. Liu http://whatifwechange.org/index.php#/stories/159

### Signs of hope, different and better! (1) "Why don't we do this on a global scale?"

few "humans" with the right ideas can achieve incredible good results:

- terminate slavery, <a href="http://en.wikipedia.org/wiki/Abolitionism">http://en.wikipedia.org/wiki/Abolitionism</a> (Wikipedia: important people in the abolition movement)
- terminate child labor;
- Establish and guarantee the equal rights of women (according to the wishes of the women).
- terminate dictatorships; (sometimes one does not even need heroes!) http://www.youtube.com/watch?v=s3FjYRRCMdE http://www.youtube.com/watch?v=l0eiw\_BJPas http://www.youtube.com/watch?v=02MJxj06kho
- living sustainable and better http://www.youtube.com/watch?v=2Lv3R4HrY6w

"I've made an odd discovery. Every time I talk to a savant I feel quite sure that happiness is no longer a possibility. Yet when I talk with my gardener, I'm convinced of the opposite." Bertrand Russell

Why is still so difficult to be active and engaged for a better and sustainable culture? A problem of human nature? (more next week 22.5.2015)

### Signs of hope, different and better! (2) "Why don't we do this on a global scale?"

Despite good ideas, what we are doing wrong (again and again): "learning not for the school but for our life" but

"We are faced with the paradoxical fact that education has become one of the chief obstacles to intelligence and freedom of thought." Bertrand Russell

Education is what remains after one has forgotten what one has learned in school. Albert Einstein

In reality in school we learn rarely to think critically and independent. Instead we mostly learn how to achieve a "good" and patriotic place within an abstract large cultural group (nation, state, empire or the global economy).

"Patriots always talk of dying for their country and never of killing for their country." Bertrand Russell

### Signs of hope, different and better! (3) "Why don't we do this on a global scale?"

"We cannot solve our problems with the same thinking we used when we created them." Albert Einstein

For a sustainable future on our planet we need a new and different culture (or better many 1000 sustainable cultures!):

A culture where the "economy" is serving for humans and the biosphere of the planet!

"The good life is one inspired by love and guided by knowledge.

Bertrand Russell

Can we solve the problems, we have created, with the Ansatz "permaculture"?

### From a global consumer culture to a global permaculture? (1)

Can we solve the problems, we have created, with the Ansatz "permaculture"?

"I think we ought always to entertain our opinions with some measure of doubt. I shouldn't wish people dogmatically to believe any philosophy, not even mine."

Bertrand Russell

- What is permaculture? What do we have to give up? What do we get? Is permaculture attraktive? What does permaculture mean for Switzerland? Introduction and overview: http://en.wikipedia.org/wiki/Permaculture and http://www.permakultur.ch/index.php/permaculture/erklaerung.
- Sustainable and healthy? Can one feed the population of "Switzerland" using the methods of permaculture?
- Can the methods of permaculture also solve the problems of "human nature" (22.5)
- Do we have to accept a smaller life expectancy? (22.5)

### From a global consumer culture to a global permaculture? (2)

Sustainable and healthy? Can one feed the population of "Switzerland" using the methods of permaculture?

If one accepts that: (1) todays industrial agriculture and (2) that the food import system are unsustainable then we need in any case a different and "local" system.

How much fruits, vegetables, wheat, meat and milk products do we eat on average/year?

http://www.landwirtschaft.ch/de/wissen/agristatistik/,
http://www.sbv-usp.ch/de/
about 5 people are fed from one hectar agricultural area (industrial agriculture!)

- 100 Kg vegetables/capita = 40 m² and 100 Kg fruits/capita = 30 m² about 50 Kg potatoes = 20 m² other things = 10 m² In comparison: Breed (wheat) = 70 kg/year = 300 m² (0.25 Kg/m²) plus animal wheat, meat and animal products another 1000 m²
- with a well applied (bio)-gardening and good soil one gets even higher yields (1-3 times more per m<sup>2</sup>!)
   100 m<sup>2</sup> essentially enough to feed one person with healthy fruits, vegetables and potatoes. (roughly 1 hour hand labor work per day and m<sup>2</sup>) ("potatoes" replace "wheat", is this a problem?)

#### **Summary and outlook**

#### Ok, theoretically it seems that the permaculture methods could achieve:

- a sustainable way of life and simultaneously some restauration of the destroyed natural capital;
- give some new space for biodiversity and wilderness;
- obtain sufficient and healthy food, locally and globally!

#### but (next week!):

- Do we have to accept a shorter life expectancy?
- Can the permaculture methods also solve the "human nature" problem?