Swedish Aral Sea Society

Karakalpak State University

14. Transition to a Sustainable Society: Policies and Practices

Lars Rydén
Professor Emeritus Uppsala University

Master Course on Sustainable Development and Sustainability Science For Uzbekistan by SASS and Karakalpak State University Spring 2026

There is much we need to change to become sustainable!

Use less resources
Use less energy
Recycle all we have used - ”waste”
Use things together
Travel in new ways
etc
etc
… …

I. The processes of individual change

Theories of individual change

Individual behaviour change is *not* foremost a question of knowledge and rational choice. It rather depends much on:

- **social interactions**
- **lifestyles**
- **norms and values**
- **support from tailored information**
- **policies**
- **technologies**

Resistance to change

- The natural tendency of most individuals is to **preserve what they have** rather than trying something new, even if it is expected to be better.
- **Status quo has a higher value**, change is uncertain, and requires an effort. As a result most people are habitual.
- As change does not happen the **consequence of not changing is postponed to the future**. Sometimes this is serious as in the economic crisis, but it is equally serious for many environmental issues, including the on-going global warming.

Perception of risk

- Perception of risk is mostly **very irrational** and depends on other factors than on carefully calculated data.

- Risk may be **ignored**, e.g. when it comes to car driving or bad habits for health. Risks may also be **exaggerated**. For example air travel is perceived as dangerous by many although it is far safer that the car trip to the airport.

- **Risk of climate change** has been calculated by the IPCC as very high, about 50% risk of more than 2 degrees global warming. This risk is seldom well understood.

Reactions to threat

- **Threat may be perceived as very real**. Thus when patients who had survived a heart attack were told by their doctors that they had to change behaviour to avoid an almost certain imminent death there were two kinds of reactions to threat.
- **Some faced the danger**, learned much about heart illness and changed behaviour.
- Another group was unwilling to change, **disregarded and played down the danger** and did not change. Today these patients are today offered a program to learn a new behaviour.
- A similar split have been seen for **climate change**: Some face the danger, learn about it and change, but many rather avoid the topic and play down the risks.

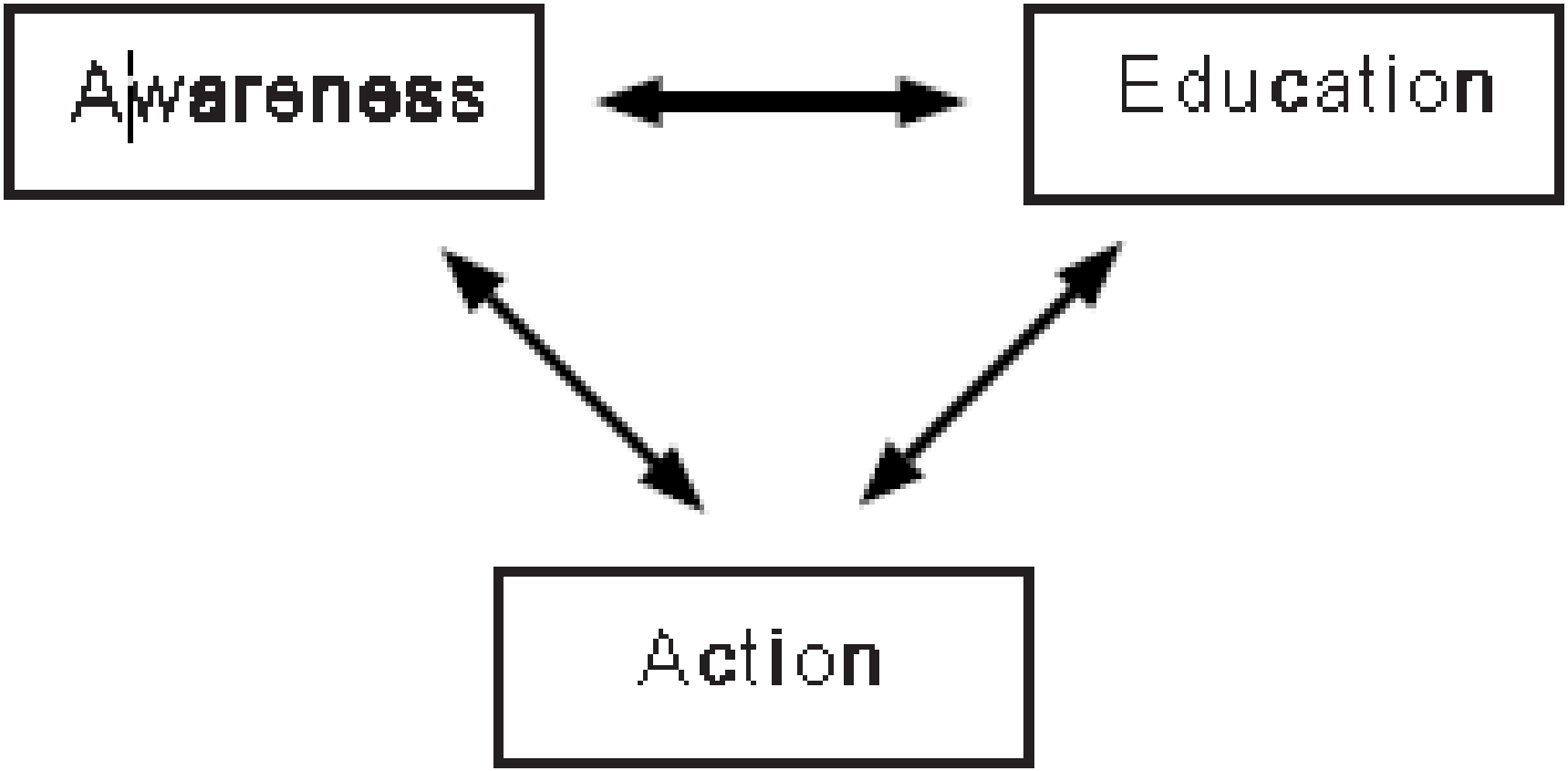
Incentives, which lead to behaviour change

- Behaviour change has been studied as part of health research.
- ***Information*** that a behaviour (smoking, drinking) is damaging does not automatically lead to change. Information alone seems to have very little effect.
- ***Regulation*** by itself is neither an important incentive. For example the law on obligatory safety belts in cars did not have an immediate effect.
- Change is more readily accepted if it is ***voluntary*** and it is then also more long-lasting.

Stop smoking. A poster by the American Cancer Society.

The change process

- Environmental consequences are **typically far away, often both in time and space**, and knowing them does not lead to change. **Information** may lead to *increased awareness*, which is followed by behaviour change.
- Environmental research suggests that it is a *new behaviour,* which leads to *new knowledge*, which is followed by a *change in attitude*.



Relation of awareness, knowledge and behaviour (action) is complicated. It is not often that knowledge leads to a different behaviour. In practice, it is rather that new behaviour leads to new knowledge, which, if deepened, leads to a change in attitude.

Antecedents are important

- A typical change process starts in the **practical situation**. The concrete situation, the antecedents, before the effort to induce a change is important.
- The practical conditions should be such that the new behaviour is **easily accessible**. It is easier to stop smoking if there are no cigarettes around.
- The environmentally adverse behaviour should be difficult to carry out, while the **good behaviour should be easy.**

Easily accessible

The consequences of a behaviour change

- Since the effect on the environment itself seldom is immediate one needs to construct **"artificial" consequences** to promote behavioural changes.

- ***Economic incentives*** are extremely important. It is crucial that environmentally good behaviours should be less expensive than environmentally bad.

Proper social norms

- A first condition for change is **good practical situation**! E.g. provision of kerbside recycling will raise recycling rates without any underlying shift in culture or attitudes.

- The second most important determinant is **proper social norms.** If his/her neighbour does it it can be regarded as a proxy for the extent to which the behaviour has become a social norm.

Summary: To achieve a change in behaviour

- Arrange the **practical situation** so the new behaviour is easy to carry out.
- The new behaviour should be profitable, that is **economically better** than the old one, e.g. by new charges, taxes or subsidies.
- Enough members of the society should adopt the new behaviour, so it becomes a **social norm**.
- This may lead to knowledge of the reason for the new behaviour and a **new awareness** in society.

Ⅱ. Social change and transitions of societies

Civilisation changes

- Large social transformations occur repeatedly in history.
- From an **agricultural society** to an **industrial society**
- From an **industrial society** to a **service society**.
- This development has been caused by technological and organisational developments, such as large-scale production, new machinery, and automation, but equally important is access to new resources not the least fossil energy. The transitions are also characterised by a **steadily increased use of resources**.

Change in the social order

But social change also refers, equally important, to a change in the organisation of society.

- from **authoritarian** to **democratic** government
- from **feudalism** to **capitalism** and market economy
- the development of the **welfare** state
- rise of the civil rights movement and acceptance of **human rights**
- development of the **environmental protection** movements
- **globalisation**, and large-scale use of information technologies

All these changes may be included in ***modernisation***, the processes that take a society from traditional to a modern. Modernisation eventually seems to replace the key position of the family in society with the individual, and reduces the role of the church and see a growth of a more secular culture.

Revolution or evolution

- The question of social change has since eternity occupied thinking.
- Is it a sudden change, **a revolution,** by struggle and fight?
- Or is it a slow change, **an evolution**, by political activism and persuasion?

Political changes

Political changes include

- ***de-colonisation***,
- increased ***global cooperation and trade***
- ***less concern*** with military power
- ***economic growth*** as a primary political goal

- After the end of the Cold War a majority of inhabitants in CEE were all positive to the changes, but very soon sentiments changed and many missed the old system. It has taken close to a generation to adapt to the new social order, an adaptation still going on.

Fall of the Berlin Wall, November 1989. An Eastern guard speaks to a Westerner through a broken seam in the wall. Both were smiling, representing the jubilant spirit of the day.

Source: Wikipedia. CC
Photo: Sharon Emerson

Future shock

The future shock concept was introduced by Alvin Toffler in 1970 to describe when persons perceive

"*too much change in too short a period of time*"

- The accelerated rate of technological and social change and information overload could leave people disconnected and suffering from "shattering stress and disorientation".
- A similar concept is *culture shock*. It is the alienation and anger, which may occur when a person is transferred to a new culture. Culture shock is most often used in connection with migration.

How many are needed to achieve a change?

- One study proposes that when just 5% of a society accepts a new idea, it becomes "embedded".
- When 20 % adopt the idea, it is "unstoppable."
- The study also showed that it normally requires 50 % of the population to be "aware" of the idea in order to reach the 5 % who will adopt it.

Diffusion of innovations

The main elements that influence the spread of a new idea are the innovation itself, communication channels, time, and the social system. It progress through several actors known as:

- innovators,
- early adopters
- early majority
- late majority
- laggards

Actors in social change

- **Social movements** play a vital role as discontent members of society push for a change.

- **Those with vested interests** protest when they understand that they will suffer in case the proposed change is brought about.

Transition to a sustainable society

- Instead of adapting to the existing limits to growth and resource flows which the environment can cope with policies in the world is promoting economic growth, as an overarching goal.

- It would be more reasonable to focus on energy and demography than growth. The economist Nicholas Stern concluded (2006) that it is far better to invest about 1% of GDP in mitigation climate change now, instead of suffering much worse costs in 20 or so years.

- But the world is postponing changes. They are perceived as costly and less pleasant even if some may accept them as unavoidable in the longer term.

- In this way the transition to a more sustainable society is similar to the economic crisis. Loans are taken to keep lifestyle unchanged. In the meantime, consequences become more serious, as the change is postponed.

BREAK

When did you make a major change in your life? What did you change?

Why did you change? Was it difficult?

Identify a change in your society which led to increased sustainabilty!

GREAT TRANSITION INITIATIVE

TOWARD A TRANSFORMATIVE VISION AND PRAXIS

Big History and Great Transition

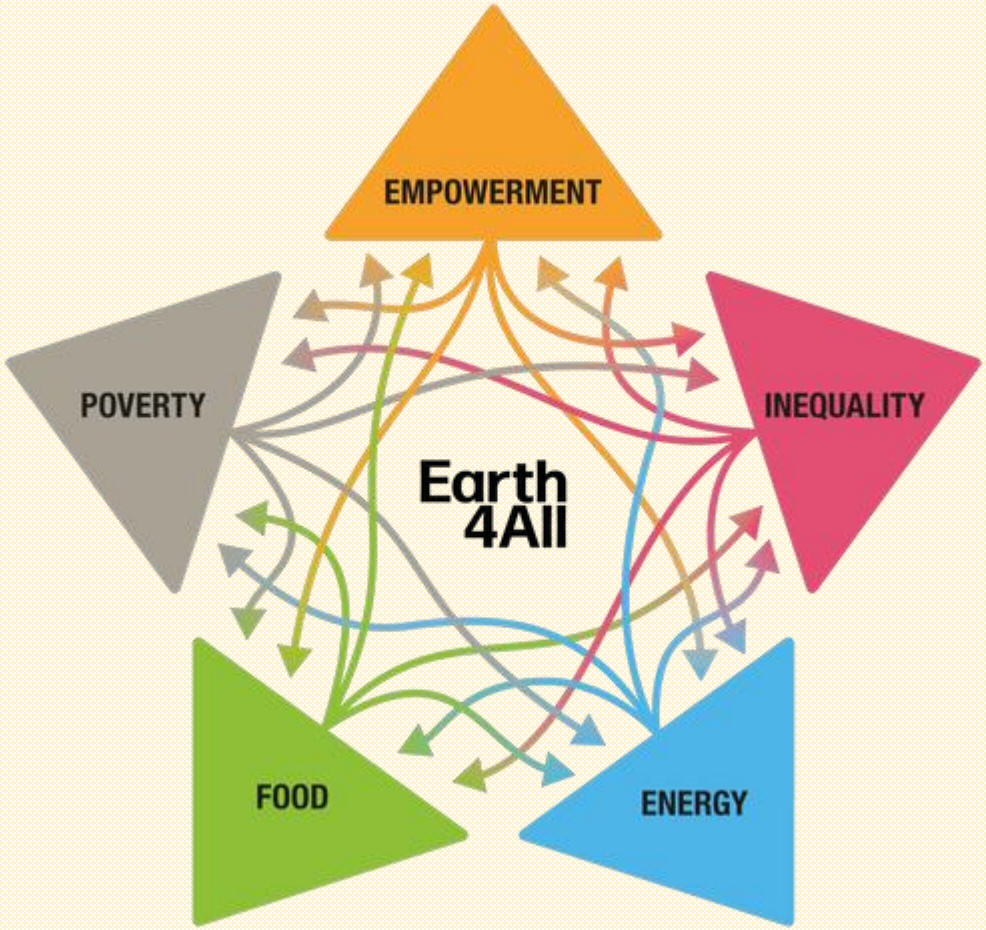
A platform of ideas and international network for shaping our global future

Journey to Earthland: The Great Transition to Planetary Civilization

https://www.greattransition.org/

Earth 4All

The dominant economic model is destabilising societies and the planet.
It is time for change.



Wellbeing for all on a stable planet is possible.

It's time to transform our economic system.

https://earth4all.life/

A leading group of scientists and economists from around the world present five extraordinary turnarounds to achieve prosperity for all within planetary limits in a single generation.

- Analysis to determine the applicability of Earth4All principles within the unique context of each country, identifying opportunities and formulating policy recommendations related to the five extraordinary turnarounds.

- Five system-shifting steps that can upend poverty and inequality, lift up marginalized people, and transform our food and energy systems by 2050.

1. Eliminate poverty

- The poverty turnaround focuses on the solutions to raise the national average income to USD$15,000 per year. At this level, if inequality is restrained, the majority of people can enjoy higher wellbeing, greater economic security and more economic opportunities.

- The old strategies to drive growth, driven by energy from fossil fuels, are a dead end. New economic models for low-income countries are necessary. New models can help reverse historic injustices and open the doors for unprecedented investment in clean energy, sustainable food and sustainable cities.

- **Goal** GDP growth rate of at least 5% for low-income countries until GDP per person is greater than USD$15k per year.

2. Reduce inequality

- Decade by decade, countries have become more unequal in most regions of the world. In many places, the 10% richest take over 50% of national incomes.

- **A key goal** of the Earth4All inequality turnaround is to ensure the wealthiest 10% take less than 40% of national incomes.

3. Empower women

- Massive investment in education for girls and delivering economic security for women are both critically important for a good life within planetary boundaries. This is how we create fair and just societies.

- There is an important additional benefit. As women have more control over their future, they choose to have fewer children.

- **Goal** Full gender equity in terms of agency, rights, resources, and power in both law and employment.

4. Transform food systems

- The last fifty years have witnessed an astonishing turnaround in food security, with a dramatic reduction in the number of deaths as a result of famine. Progress has, however, come at a cost.

- The way we farm, transport and consume food affects more planetary boundaries than anything else. Agriculture is one of the biggest sources of greenhouse gas emissions. It is also the biggest driver of deforestation, biodiversity loss and the creation of vast dead zones in our streams, lakes and oceans.

- **Goal** A regenerative, sustainable food system that works for all within planetary boundaries

5. The energy turnaround

- The energy system is at the beginning of the most disruptive transformation in a century. Within a generation most countries could achieve energy security for the first time. This brings with it many more benefits, from clean air and better health to zero fossil-fuel emissions.

- The Paris Agreement's goal to stay well below 2°C requires approximately halving greenhouse gas emissions globally every decade from 2020, to reach close to zero in the 2050s. Solutions to halve emissions in a decade are available, affordable and ready to scale rapidly.

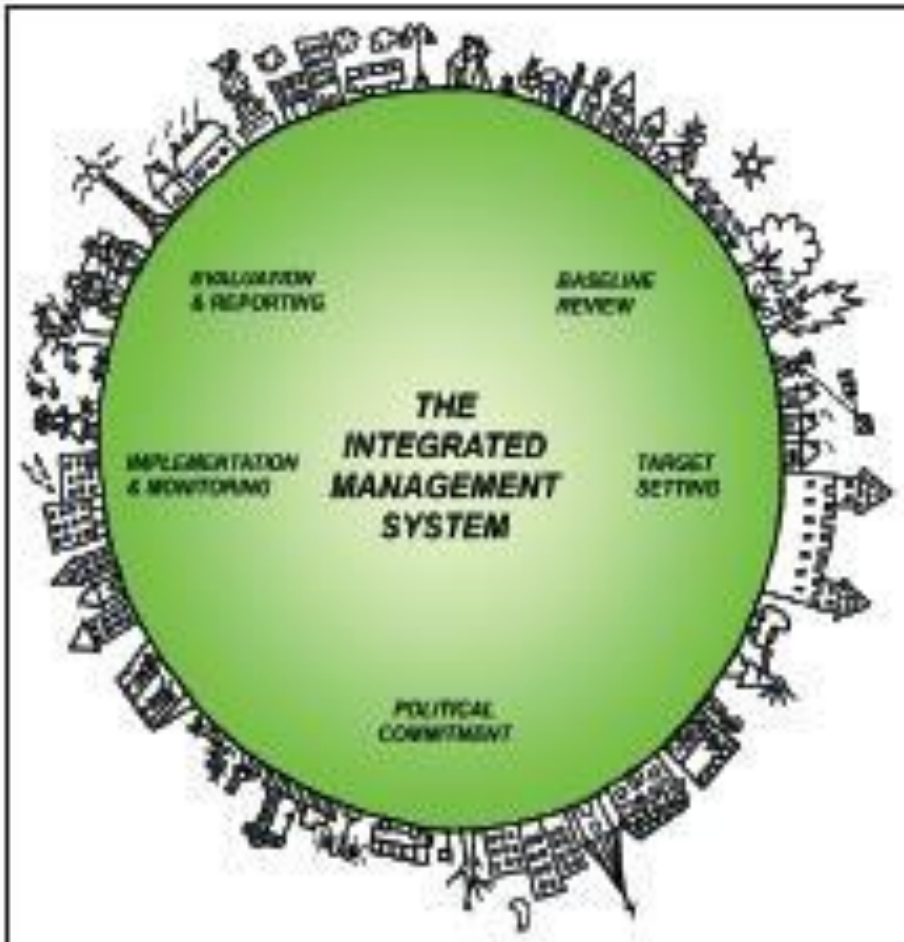
- **Goal** Net-zero emissions by 2050

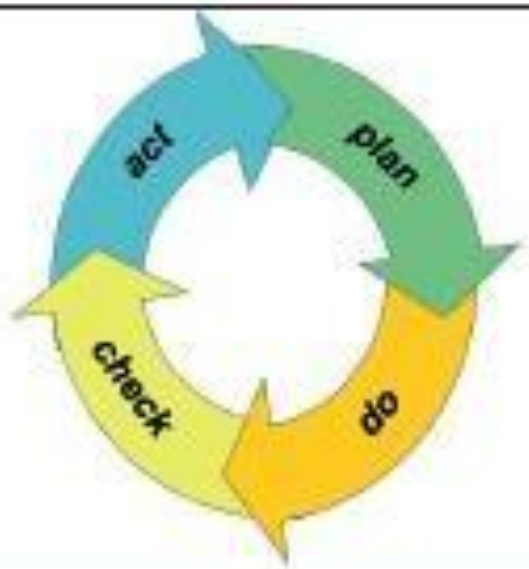
Ⅲ. Managing change

Work conditions for an organisation in change

- The whole organization need ***strong support from the leadership***.
- ***institutional learning***, as a crucial work strategy.
- ***Integrated work*** from all sectors.

Management systems





Managing Urban Europe (MUE 25) developed a five-stage management cycle (left) for uraban sustainability work based on the original Deming circle (right).
http://www.localmanagement.eu

Natural Step Foundation

- Another well-known method for managing a change to increased sustainability has been worked out by the **Natural Step Foundation**.
- The basis of the method are the four so-called **systems conditions** developed at Chalmers University of Technology in the early 1990s.
- Ways to fulfil the system conditions are worked out and a **plan for how to proceed**. Back-casting is made to identify partial goals in the project.

Successful change processes

There are several ways to try to inspire and influence a person or a group to change. Scott Geller model of *actively caring* includes three factors:

1) self-esteem – I am valuable
2) empowerment and optimism – I can make a difference
3) belonging and ownership – I belong to a group

- These factors may induce individuals to choose a new lifestyle. They may also make people actively recruit others to a new lifestyle, that is, to become **change agents** and help them to influence others to become involved.

IV.
Education for Sustainable Development
ESD

"Education is the most powerful weapon you can use to change the world."

Nelson Mandela

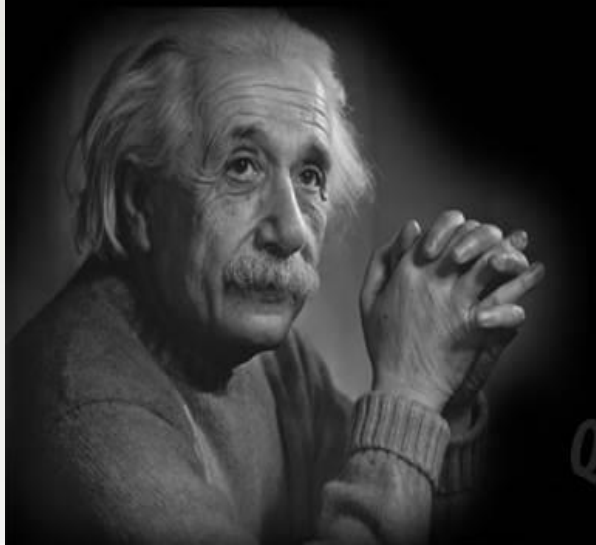
8 Key competencies essential for sustainable development

- *Systems thinking*
- *Futures thinking / Anticipatory Competence*
- *Values thinking*
- *Strategic thinking*
- *Collaboration competence*
- *Critical thinking*
- *Personal competence*
- *Integrated problem-solving*

Relevant content?

"Social and economic development within planetary boundaries creating a decent and healthy life built upon fairness and social justice"

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



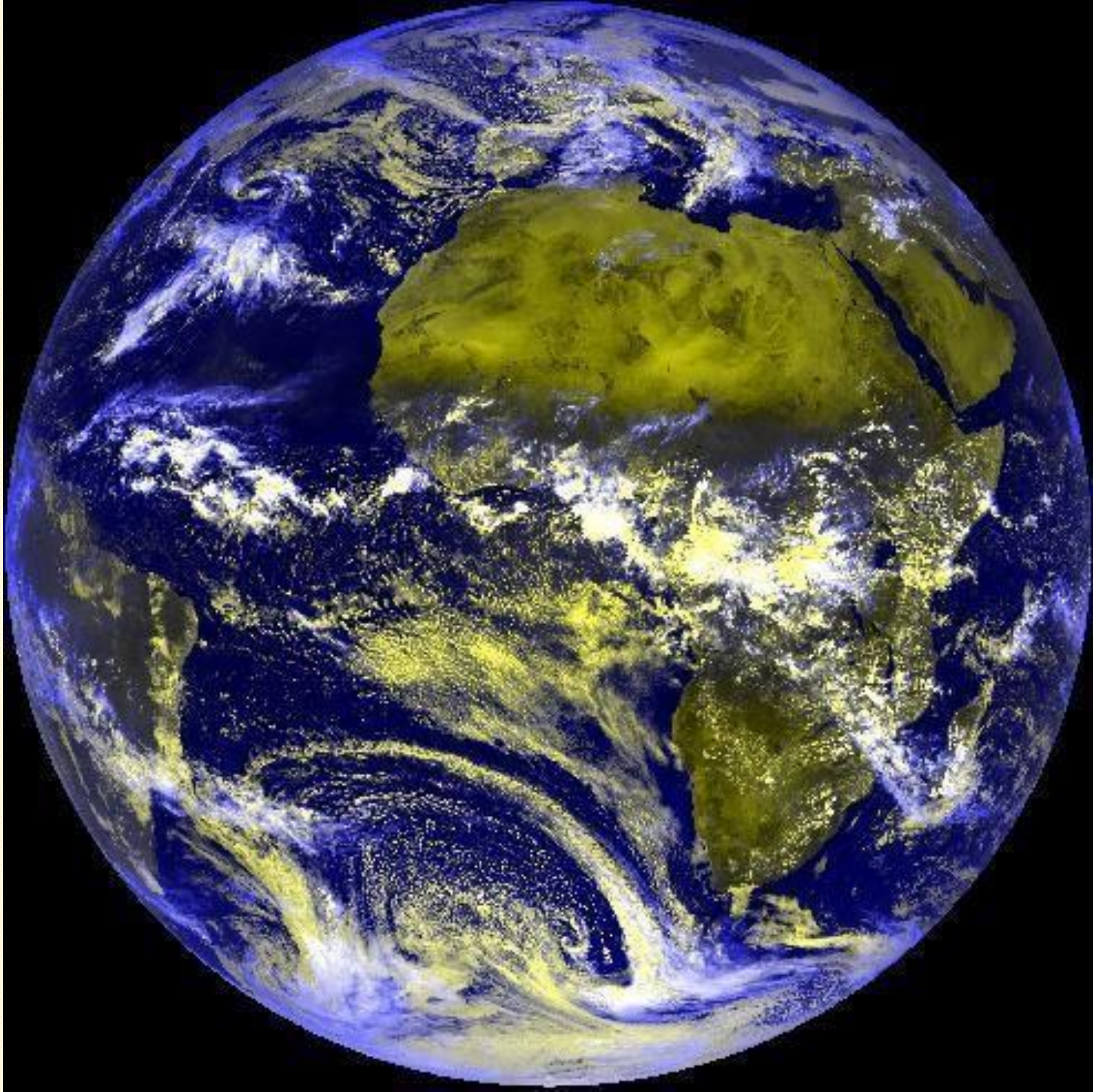
Albert Einstein

German Theoretical-Physicist

(1879-1955)

We are not passengers

– We are the crew



Thank you for your attention during all these 14 lectures in Sustainable Development and Sustainability Science.

Do not forget the homepage where you have all material for the course:

http://www.aralsjon.nu/en/