

Dealing with Climate Change through Informal Learning

Our Climate as a Regional Challenge

Lotta Hedström & Anders Nylander

Lotta Hedström

- Teacher, headmaster, public administrator, farmer, development worker (Nepal, Tanzania).
- Former Member of Parliament (comm. for Foreign Affairs).
- Former spokesperson/ partyleader of Swedish Green Party, founder of green thinktank Cogito.
- Senior Parliamentary Advisor AWEPA, Entrepreneur, writer.
- Chair of Region Skåne Committee of Climate Change, Local green politician.
- Boardmember of Swedish Afganistan Committee, of Ekobanken, of Skåne Dance Theater.

Region Skåne

- Elected by the citizens of Skåne.
- Responsible for healthcare in Skåne.
- Responsible for development of trade and industry, transportation, and culture.
- Collaborates with other regions in and outside of Sweden.
- Has approximately 33 000 employees and revenues and expenditures of about SEK 30 billion (2007).
- Skåne have about 1.2 million inhabitants

Skåne is a region

in the south of Sweden and a central region in northern Europe

Anders Nylander Energy Agencies

- Architect and energy expert
 - Strategic work on issues related to climate, energy efficiency, and renewable energy
- Secretary and author in various forums
 - Climate Change Committee of Skåne (Klimatstrategier)
 - Energy Strategy for the County Administration of Skåne
 - Commission on Oil Independence Government Offices of Sweden
 - Several reports for the Energy Safety Committee of Southern Sweden
 - Municipal energy planning, etc.
- Project leader
 - Biogas Syd
 - 'Lights OFF!' campaign
- Researcher at Chalmers University of Technology
 - Energy systems and efficiency
- Created by the European Commission in 1998 to achieve the energy goals of the European Union
- Perform work focused on energy efficiency and renewable energy
- 380 offices in Europe
- 11 regional offices in Sweden, with approx. 75 employees
- Skåne Energy Agency has 13 employees and was established in 1998 as part of the Association of local authorities in Skåne

The Programme

- The Climate Change Committee of Skåne
- Dealing with Climate Change through Informal Learning
- Short film: Skåne 2019
- The Climate Report
 - Focus issues
 - Tools
- Popular adult education & conclusions
- Questions and discussions
- Conclusions

Region Skåne Climate Committee

- Appointed by the Regional Board in October 2007.
- Parliamentary committee comprising one member from each political party of the Regional Council.
- Co-opted member of the Skåne Association of Local Authorities
- Works in collaboration with the County Administrative Board and in dialogue with a large number of people in the public and the private sector.

Members of the Climate Committee

Lotta Hedström, np, Chair
 Gunnar Jönsson, v, Deputy Chair
 Lars Thunberg, kf
 Leif Sandberg, c
 Thomas Håkansson, m

Maria Wängelin, fp
 Nina Lohman, v
 Björn Söder, sd
 Pia Aronsson, m
 Inger Nilsson, v


Association of Local Authorities in Skåne

Role of the Climate Committee

- Outline conditions and problems in Skåne from a climate perspective.
- Summarise what Skåne has done and is doing within its areas of responsibility.
- Propose measures and modes of action to be implemented by Region Skåne with the aim of reducing climate impact and adapting society to climate change.

Climate report for Skåne


- Part 1: Strategic programme for climate work in Skåne 2009-2020
- Part 2: Skåne and climate work
- Part 3: Ideas bank for possible climate actions
- Part 4: What actions are currently being taken in Skåne? (March 2009)
- Part 5: Methodology and base data report

The focus of this conference 


What conclusions have we reached?

How did we reach them?


The art of creating a common picture of climate change and reduced climate impact



- *Vygotsky* has said that, as educators, we must identify the zone of proximal development of other people.
- All communication depends on the conditions that affect the recipients.
- It is those conditions that we must comprehend, and it is the open questions that give us that knowledge.



Ms A as Mr S sees her.



Fröken A. som hr S. ser henne.

Ms A as little Johnny sees her.




Fröken A. som lille Sven ser henne.

Ms A as Ms B sees her.




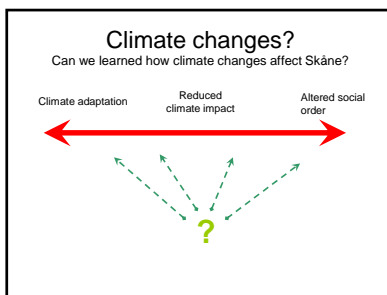
Fröken A. som fröken B. ser henne.

Ms A as Mr P sees her while on the way to the dentist.



Fröken A. som hr P. på väg till tandläkaren ser henne.

We have to identify the zone of proximal development for co-actors
What do they think lies ahead when considering the climate issue?

Climate Changes

External causes

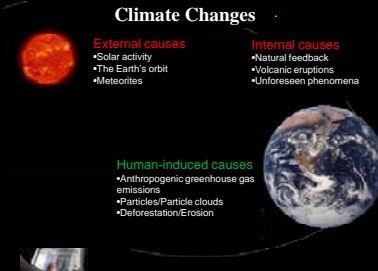
- Solar activity
- The Earth's orbit
- Meteorites

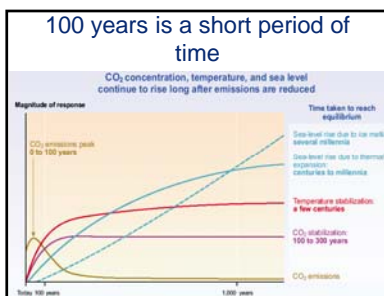
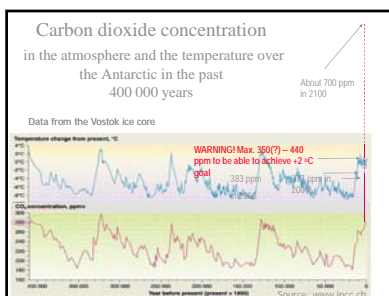
Internal causes

- Natural feedback
- Volcanic eruptions
- Unforeseen phenomena

Human-induced causes

- Anthropogenic greenhouse gas emissions
- Particles/Particle clouds
- Deforestation/Erosion





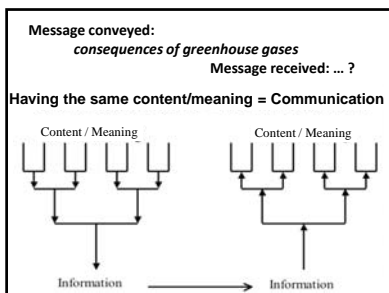
Consequences

Increase in mean temperature

Change in weather patterns
When, where, how often, how much...

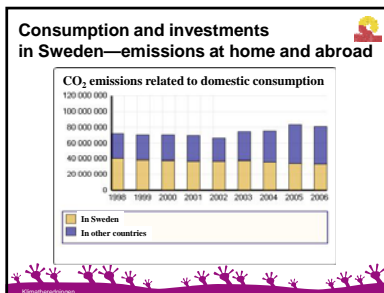
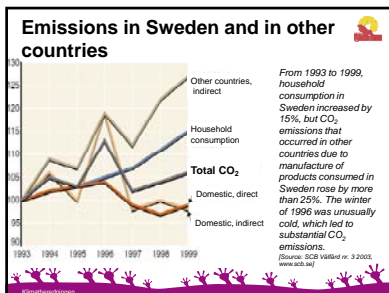
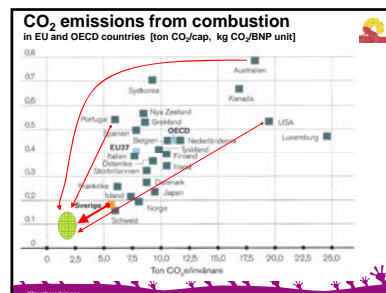
More and heavier precipitation
Floods, landslides...

Increased evaporation
Droughts, soil erosion, forest fires...



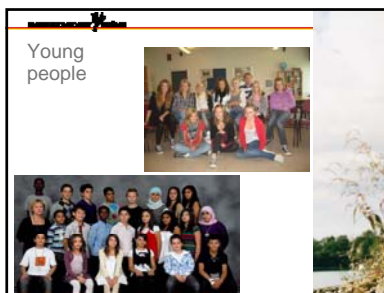
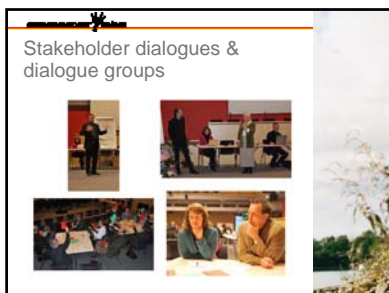
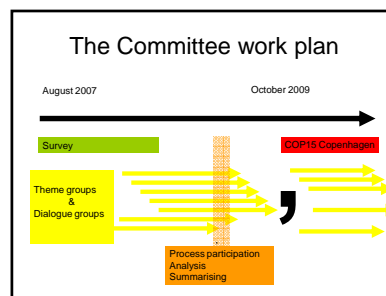
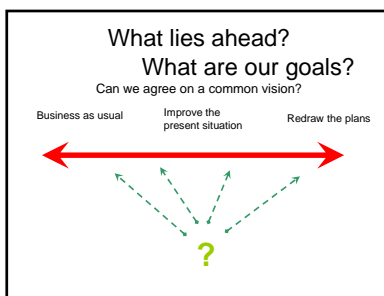
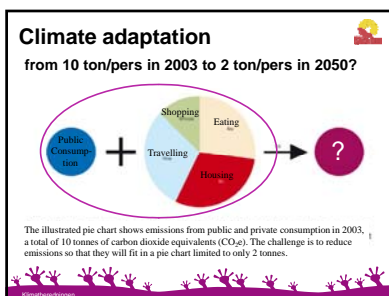
Weather, Climate, and GHG

- Weather = nature's way of balancing the forces in the atmosphere
- Climate = weather statistics, average weather patterns over approx. 100 years
- Climate changes = significant changes in weather patterns over a period of approx. 100,000 years
- Greenhouse effect = a phenomenon on all planets that have an atmosphere
- Greenhouse gasses
- CO₂ is a strong greenhouse gas



Goals and perspectives for greenhouse gas emissions

- Skåne as a geographical area can use the climate reporting model for all point sources. (the Kyoto model)
- All enterprises, organisations, companies, and families should adopt an LCA perspective on how their activities affect the climate.




- ### Dialogue groups & theme groups
- Agriculture, forestry, fishing etc.
 - Species and ecosystems
 - Biogas
 - Change sources and use of energy
 - More efficient use of energy in buildings
 - Health issues
 - Infrastructure and transportation
 - Climate and energy advisors
 - Consumption and lifestyle
 - Trade and industry
 - Young people
 - The Ven Proclamation (*Venuppropet*)
 - 33 municipalities

- ### Interim report spring 2009
- After the groups had concluded their work, the results were compiled
 - The Climate Change Committee analysed the results and sought for support continuously
 - The results of the analysis were presented to all politicians in the Regional Assembly
 - Among other things, this film was shown



- ### Climate report for Skåne
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Strategic programme for climate work in Skåne 2009–2020



- Principles of climate work in Skåne
- Visions for a climate neutral and climate adapted Skåne 2020
- Strategic areas of climate work in Skåne
- Auxiliary tools
- Skåne climate interaction
- Follow-up and evaluation

Basic approach

- Significant changes must be made and measures taken, which must be fully realistic and possible to implement.
- The climate crisis is not only a threat but also an opportunity for Skåne. Regional conditions benefit the development of global solutions.
- The programme does not include all possible or desirable actions, but it does provide a strategic direction and prioritisation of proposals.

Vision for a climate neutral and climate adapted Skåne 2020

- It is not difficult to live a sustainable life in Skåne.
- Skåne is one of the leading regions in the world with regard to developing lasting and sustainable energy and transport systems that have a minimal impact on the environment and climate.
- Researchers and companies based in Skåne can contribute solutions to combat the regional and global climate crisis.
- Agriculture, forestry, and other land use activities in Skåne are climate adapted and aimed at preserving natural resources.

Strategic areas of climate work in Skåne

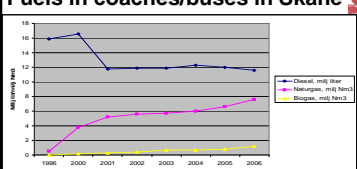
- Transport systems
- Biogas
- Energy use
- Agriculture and forestry
- Urban and rural planning
- Climate adaptation

Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Energy use
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- Climate adaptation

- Approximately 94 per cent of public transport in Skåne today is run on fossil fuels. There is great potential for alternative solutions, but these must be implemented at a faster pace.
- Reduce the number of transports—focus on availability instead of mobility.
- Promote the development of fossil-free fuels.
- Increase rail services.
- National, regional, and local economic instruments are needed.

Fuels in coaches/buses in Skåne



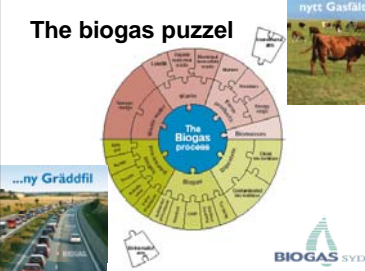
- Goals, biogas:
 - 2015, all city buses
 - 2018, all regional buses
 - 2020, all motor vehicles

Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Use of energy
- Agriculture and forestry
- Urban and rural planning
- Climate adaptation

- Biogas emits less greenhouse gases than any other fuels. Skåne's agriculture, forestry, and infrastructure offer great potential. Half of all vehicles in Skåne could be running on biogas.
- An integrated strategy is needed to expand biogas in Skåne with respect to production, distribution, and the filling station network.
- Research, development, and entrepreneurship should be given support.
- Biogas strengthens Skåne's competitiveness and creates jobs, i.e., it builds an eco-efficient economy.

The biogas puzzle



Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Energy use
- Agriculture and forestry
- Urban and rural planning
- Climate adaptation

- In Skåne, 38 per cent of all greenhouse gas emissions originate from the use of energy in homes, public buildings, and industries. There is great potential to reduce the level of emissions, since many energy efficient measures would have an immediate and positive effect.
- Significant measures are needed and should be combined with information and tangible support for both the public and the private sector.
- Increased demands for energy efficiency in new buildings.
- Wind or solar energy for all buildings/facilities run by Region Skåne.

Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Energy use
- **Agriculture and forestry**
- Urban and rural planning
- Climate adaptation

- *Responsible for 17 percent of greenhouse emissions, primarily methane and nitrous oxide, climate changes are likely to reduce cultivation in southern Europe, and therefore agricultural production in Skåne will become more important.*
- Greater energy efficiency and decreased dependence on fossil fuels are needed in this area.
- A strategy to protect land for the purpose of producing food.
- Increased support for research.

Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Energy use
- Agriculture and forestry
- **Urban and rural planning**
- Climate adaptation

- *Effects on climate can be reduced by planning our housing, industry, and transport systems. Climate changes increase the need for land used to produce food and energy.*
- In a long-term perspective, it is essential to significantly improve coordination of planning and adopt a clear-cut regional strategy for land use in Skåne.
- Sustainable urban development and smart climate exploitation.
- Planning of housing, operations and traffic.

Strategic areas of climate work in Skåne

- Transport systems
- Biogas
- Energy use
- Agriculture and forestry
- Urban and rural planning
- **Climate adaptation**

- *Heat waves (elderly and sick people specifically at risk)*
- *Increased risk of contagion*
- *Flooding of water supply systems, roads, tunnels, and bridges*
- *Raised sea levels*
- Requires emergency planning and preparedness.
- Requires a regional overview of significant threats and necessary actions.
- A very long-term perspective must be applied when planning houses, roads, and water supply systems.
- Planning for possible relocation of buildings and entire communities.



Climate coordination in Skåne

- Region Skåne, the County Administrative Board, and municipalities in Skåne are joining forces to combat climate change.
- The work is to be conducted primarily by existing organisations and networks in both new and ongoing collaborative projects.
- Skåne climate coordination is a platform for useful collaboration and essential exchange of experiences aimed at providing an overview and a global approach.

Auxiliary tools

- Research and development
- Procurement
- Dispersal of knowledge

How can we induce millions of people to become "climate workers" in Skåne?

Out of the boxes

with extended concepts:


- Environment → "Sust. Development"
- Learning → "Participatory change"

Green Flag


decision, knowledge, active implementation

Pedagogy and Politics
are about
COMMUNICATION!

(Not drill...)



Paulo Freire:




- The process is important
- Enhancing community and building social capital
- To act in ways that make justice and human flourishing.
- "Conscientization" - developing consciousness,
- Get the power to transform reality

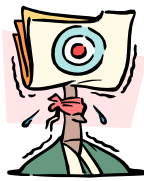
Obstacles:

- Myth of scientific dispute
- Putting away the responsibility
- Wrong selection of target group

Analyse stakeholders
implementors, decisionmakers, users, experts



Select target group



- Not all, not mixed, not simultaneous.
- Asset Will and Ability to act.
- Setting:
School?
Public life?
Private life?
Business?
NGO?


Swedish Env. Protection Agency:



Swedes are:

- 8% skeptics
- 23% passive
- 25% recently awakened
- 26% moderate
- 18% engaged (febr. 2008)

Think - know -do!



Transition Network was set up in spring 2007 to support *Transition Initiatives* around the world to inspire, encourage, to network, to support and to train communities as they consider, adopt, adapt and implement the transition model in order to establish a Transition Initiative in their locale.

And cover aspects of life that a community needs in order to sustain itself and thrive, by significantly rebuild resilience (in response to peak oil) and drastically reduce carbon emissions (in response to climate change)


"It is time to involve them as equal partners!"

says UN Secretary-General Ban Ki-moon in a message to an event in New York on peace and security through women's leadership.

He noted that with their skills, perspectives and experiences, women are already responding to the impacts of climate change.

Women are especially vulnerable to the impact of climate change, urging that they be given a greater say in addressing the challenge.

Women must have greater say in tackling climate change.



The Programme

- The Climate Change Committee of Skåne
- Informal learning and climate change
- Short film: Skåne 2019
- The Climate Report
 - Focus issues
 - Tools
- Popular adult education & conclusions
- Questions and discussions
- Conclusions




Climate work gives Skåne a head start 

- Development potential
- Competitive advantages
- Business opportunities
- Growth





Malmberg COMPACT; Könnern 




References, Malmberg upgrading 

<p>1999</p> <ul style="list-style-type: none"> • Kristianstad Municipality, 175 Nm³/h <p>2000</p> <ul style="list-style-type: none"> • Jönköping Municipality, 150 Nm³/h • Laholm Sydgas AB, 200 Nm³/h <p>2002</p> <ul style="list-style-type: none"> • Uppsala Municipality, 400 Nm³/h • Kristianstad Municipality(expansion) 280 Nm³/h <p>2003</p> <ul style="list-style-type: none"> • Stockholm Vatten AB, 600 Nm³/h • Laholm, Sydgas AB (expansion), 500 Nm³/h <p>2004</p> <ul style="list-style-type: none"> • Norrköping, Sydskraft Gas AB, 250 Nm³/h • Stockholm Vatten AB GR2, 800 Nm³/h <p>2005</p> <ul style="list-style-type: none"> • Skellefteå Municipality, 250 Nm³/h • Kristianstad Municipality(GR2), 600 Nm³/h 	<p>2006</p> <ul style="list-style-type: none"> • Östersund Municipality, 200 Nm³/h • Örebro Municipality, 300 Nm³/h • NSK AB, Helsingborg, 650 Nm³/h <p>2007</p> <ul style="list-style-type: none"> • Göteborg Energi (Falköping), 200 Nm³/h • Helsingborg Municipality, 250 Nm³/h • Agri Capital GmbH, Könnern, Germany, 1250 Nm³/h • OKOBIT Darmstadt, Germany, 300 Nm³/h • Erdgas Schwaben, Mahlingen,Germany, 1250 Nm³/h <p>2008</p> <ul style="list-style-type: none"> • Agri Capital GmbH, AC1, 1250 Nm³/h • Agri Capital GmbH, AC2, 1250 Nm³/h • Agri Capital GmbH, AC3, 600 Nm³/h • Agri Capital GmbH, AC4, 600 Nm³/h • Linz GAS/WARME GmbH, Austria, 800 Nm³/h • Bio Raffinerie Magdeburg GmbH, Germany, 1250 Nm³/h • Kåppalaförbundet Stockholm, 1000 Nm³/h • Biogas Homborg GmbH, Germany, 800 Nm³/h
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Thank you for your attention!

