

Regional climate and energy work

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Presentation 20130122

- Short information about the county administrative board of Västerbotten and the county Västerbotten
- Organization for climate, energy and environmental issues – collaborative counsel
- The regional climate- and energy strategy of Västerbotten
- Coordination of the regional climate adaptation
- Questions?

The County Administrative Board

Public authority

Represents government and the Parliament

The best interest for the County

An authority with knowledge and responsibility for 13 policy areas

The County of Västerbotten is our working area



258 000 inhabitants

55 200 km² (1/8 of Sweden)

0.4 – 48.4 inhabitants per km²

80% lives by the coast

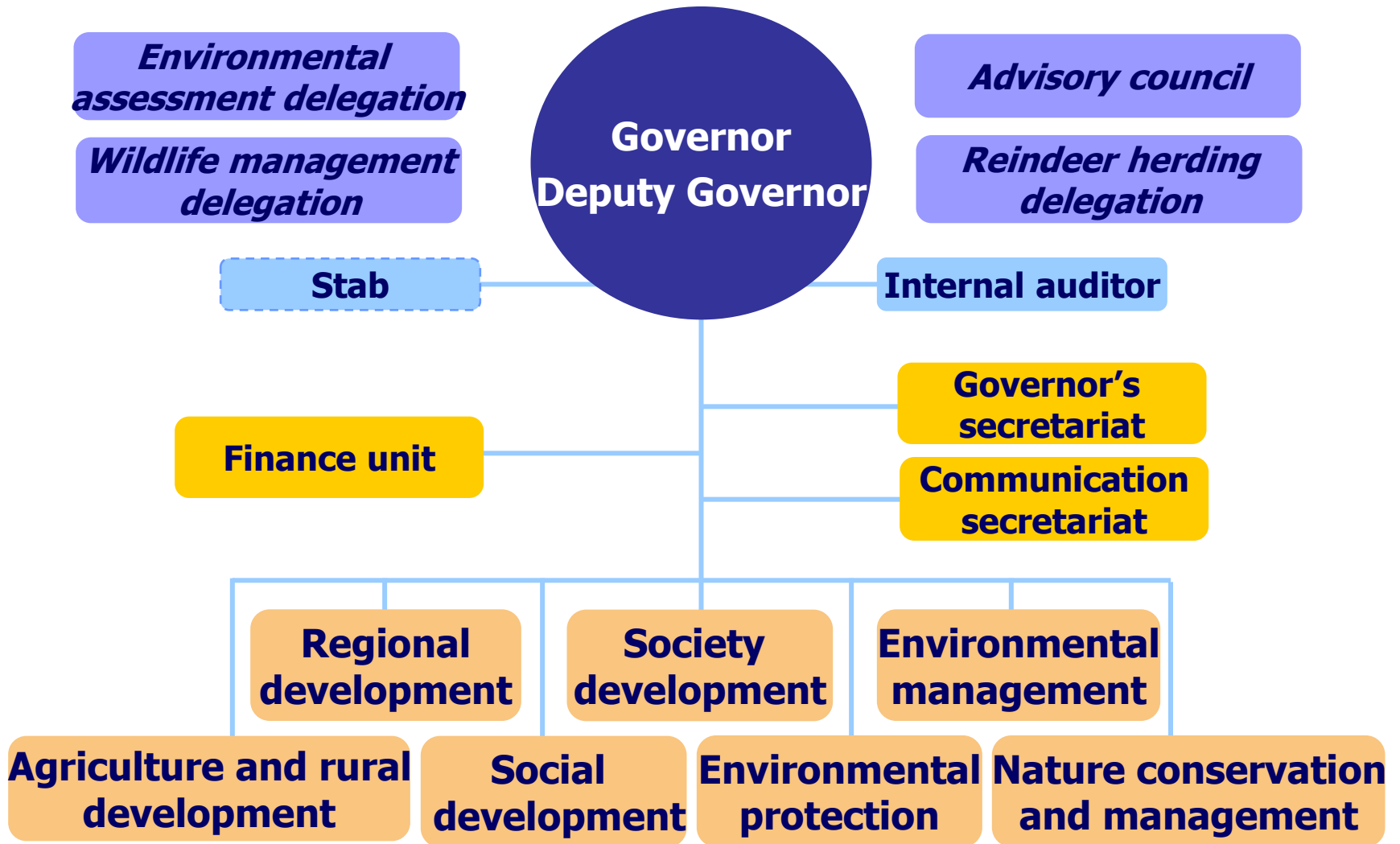
15 municipalities

6 airports

Organisation



The County Administrative Board



Our tasks

Tillsammans gör vi det hållbara möjligt



Länsstyrelsen
Västerbotten

Main tasks of the County Administration

- **Monitoring the situation and requirements of the county.**
- **Develop the county in the best interest of its population.**
- **Implement national goals in various sectors.**
- **Central government administration in where no other authority is charged**
- **Promote issues that are of importance also to adjacent counties.**

Tasks of the County Administration

Environmental Management

Contaminated areas

Water protection

Hunting and fishing

Nature conservation

Alpine management

Predator management

Reindeer husbandry

Infrastructure

Cultural heritage

Housing

Financing of housing

Climate, energy and climate adaptation

Spatial planning

Agriculture, farm advisory

Animal welfare and husbandry

Food and feed control

Veterinary issues

National funding
company, farming, project
"A living country side"

Prevention and control of
infectious diseases

General elections

Juridical matters

Developing program

EU project

Interreg

- Botnia – Atlantica

- Northern Periphery

Commercial service in rural areas

Civil defence

Emergency and rescue service

Gender issues

Integration

International relations

Facts



The County Administrative Board 2013

210 employees

19 494 items

208.3 million SKR in turn over

331.9 million SKR disbursed in grants and subsidy and another

392.3 million SKR that on our decision will be disbursed by the Board of Agriculture, the Board of Housing, Building and Planning etc

The County of Västerbotten



Tillsammans gör vi det hållbara möjligt



Länsstyrelsen
Västerbotten

The county of Västerbotten – brief facts and specificities

- Second largest county in Sweden (larger than Denmark...)
- Varied landscape with mountains, inland and coastal
- 15 municipalities
- 70 % of the population lives in Umeå & Skellefteå
- Sparsely populated
- Several strong research environments
 - Umeå university, Sweden's University of Agricultural Sciences, Luleå University of Technology (skellefteå)

The county of Västerbotten – brief facts and specificities

- Good access to renewable energy sources such as hydropower and forest fuels
- large areas and potentials for establishment of wind power
- cold climate and the great need for heating in residential and commercial buildings
- long distance and export-oriented economy with a high need for transport of both freight and passenger

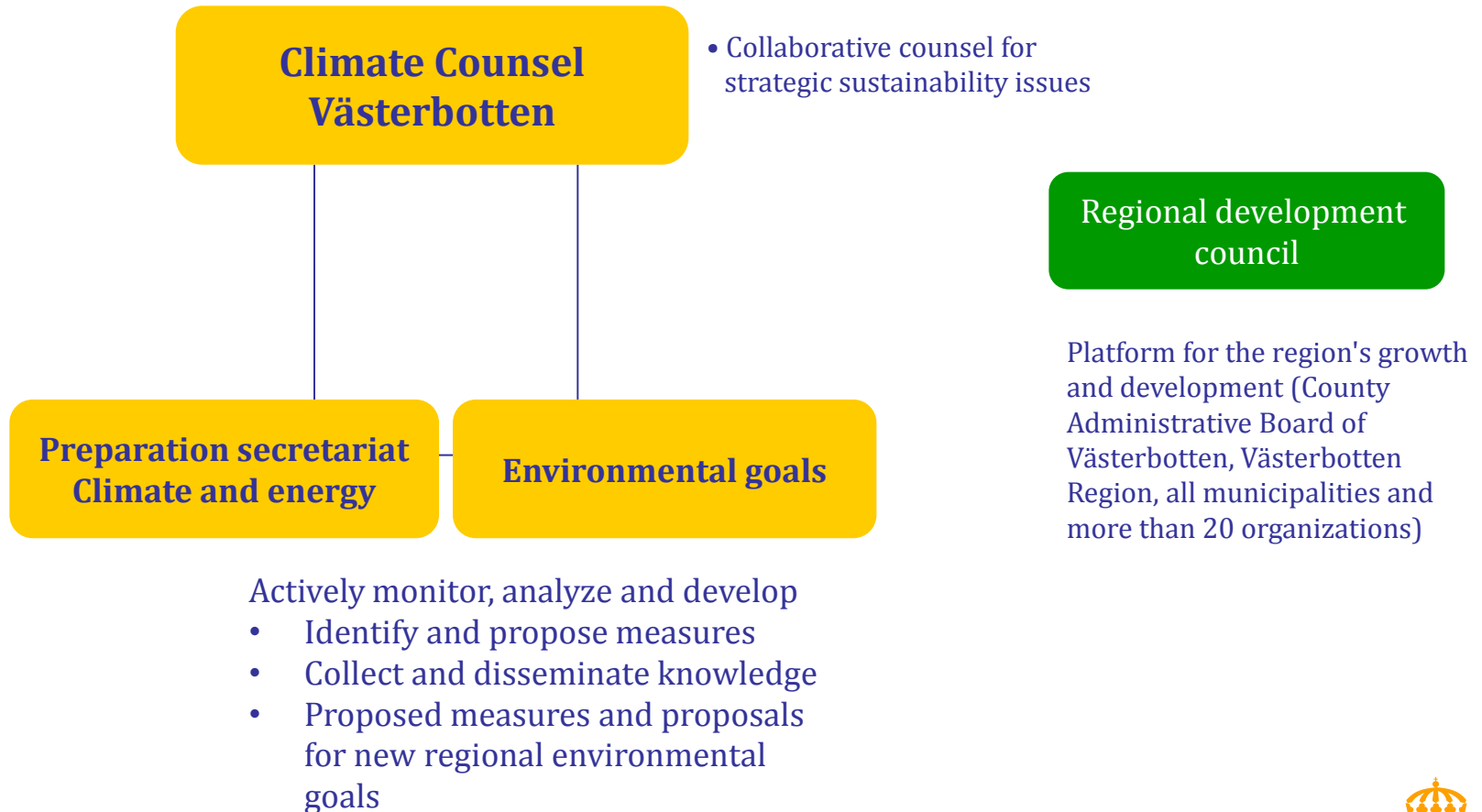


Conflicts of interest

- Reindeer husbandry
- Mining industry
- Windpower
- Forestry industry

»Land use

Organization for climate, energy and environmental issues – collaborative counsel



Climate Counsel Västerbotten

- Governor (Chairman)
- County Director
- 4 political representatives
- Board of Forestry
- Transport administration
- County Council
- Umeå University

- Swedish University of Agricultural
- Swedish Sámi National Association
- Almi North
- Nature Conservation Society
- Skellefteå Kraft
- Northern forest owners
- County traffic

Working groups

- Preparation Secretariat
 - Region Västerbotten, Farmers' Association, Norrbotten energy office, Umeå University, the Swedish Transport Administration, Västerbotten County Council
- Local meetings
- Information at conferences / meetings
- Internal work Länsstyrelsen
 - Climate counsel with relevant Heads of Unit
 - Internal working group with officials

Three important processes

Regional
Development
Strategy
RUS
(Regional Council)

Climate and Energy
Strategy + Action
Plan
(county administrative board)

Environmental
Objectives work
Collaboration for
Sustainable
Development
(county administrative board)

Measures
developed

Climate and energy strategy

2013-01-22



Tillsammans gör vi det hållbara möjligt



Länsstyrelsen
Västerbotten

National climate and energy goals

- *The vision is that by 2050, Sweden has a sustainable and resource efficient energy without net emissions of greenhouse gases in the atmosphere (Roadmap 2050)*
- 40 percent reduction in greenhouse gas emissions
- At least 50 percent renewable energy
- 20 percent more efficient energy use
- At least 10 percent renewable energy in the transport sector
- 30 TWh of wind power in 2020
- 2030 a vehicle fleet that is independent of fossil fuels

CAB's assignments Regional climate and energy strategies, etc.

- Actions taken to strategically coordinate and lead regional efforts to realize the Government's policy on energy conversion and reducing climate impact,
- Efforts to develop and implement regional action plans for climate and energy strategy work in collaboration with the local and regional stakeholders in order to identify, plan and implement regional initiatives and programs with a focus on innovative and resource-efficient solutions to achieve reduced climate impact, increased share of renewable energy and increased energy efficiency,
- Efforts to strengthen collaboration both within the respective county administrative board of county administrative boards to jointly develop provincial offices work to implement government policies for climate change mitigation and energy conversion,
- Efforts to climate and energy targets will increase the impact in various fields such as environmental assessment and supervision, the local and regional community planning, regional development and growth work and infrastructure work,
- Efforts to support business and local climate and energy work,
- Efforts to promote increased share of renewable energy, especially for efforts to achieve a definite plan conditions within the planning framework for wind power, and
- Efforts to contribute to the Government's efforts Roadmap 2050th

Reduced emissions of greenhouse gases

Increased proportion of energy efficiency

Increased proportion of renewable energy

Adapting to climate change

Sustainable urban planning, construction and management

Sustainable travel and energy efficient transport

Sustainable business and business-driven CleanTech

Sustainable natural and cultural environment

Sustainable consumption, lifestyle and health

Most sustainable county in 2020

Tillsammans gör vi det hållbara möjligt



Länsstyrelsen
Västerbotten

Sustainable urban planning, construction and management

- Important efforts
 - Lifting the climate and energy issues early in the planning process
 - Create a holistic approach and consider the climate alterations and renovation for reduced energy
 - Increase the use of wood in construction

Sustainable travel and energy efficient transport

- Important efforts
 - Create efficient travel options in the form of new technologies combined with increased investment in railway
 - Increase the share of renewable fuels and electric vehicles
 - Reduce the proportion of unnecessary transport - choose climate-friendly transport

Sustainable business and business-driven development environment

- Important efforts
 - Collaborating for the export of knowledge, technologies and system solutions in the CleanTech
 - Implement sustainable purchasing
 - Using the forest as a resource for increased processing

Sustainable natural and cultural environment

- Important efforts
 - Sustainable use of natural resources and planning so that nature will continue to deliver the ecosystem services that society depends on
 - Develop ecotourism
 - Develop knowledge and technology solutions for energy efficiency in cultural and historical buildings

Sustainable consumption, lifestyle and health

- Important efforts
 - Increase knowledge of climate-smart choices through information, education, work experience etc.
 - Selecting climate-friendly transport - avoid unnecessary transportation
 - Direct the activities to children and young people

Work during 2011-2012

(Climate- and energystategy)

- 2011 – along with internal and external counsel and workshops developed drafts on the strategy
- January 2012 – Consultation Workshop with relevant actors
- February 2012 – Climate and Energy Strategy approved
- Roadmap 2050
 - Dialogue meetings from February to March
 - Reported April 13
- In May we began the development of the action plan
 - meetings with relevant actors (municipalities, authorities, organizations)
- Action plan for consultation in February 2013
- – Opportunity for municipalities to apply for funding

Approved municipal projects

(Total 464 400 kr)

- We use public transport in Lycksele (Lycksele)
- Operations training (Vilhelmina)
- Charging structure electric vehicles (Umeå)
- Energy mapping airports (Lycksele, Storuman, Vilhelmina)
- Environmentally adapt Skellefteå Airport (Skellefteå)
- Climate adaptation in Lycksele municipality (Lycksele)
- Climate smart in Vännäs (Vännäs)
- Prestudy carsharing municipality and county (Storuman)

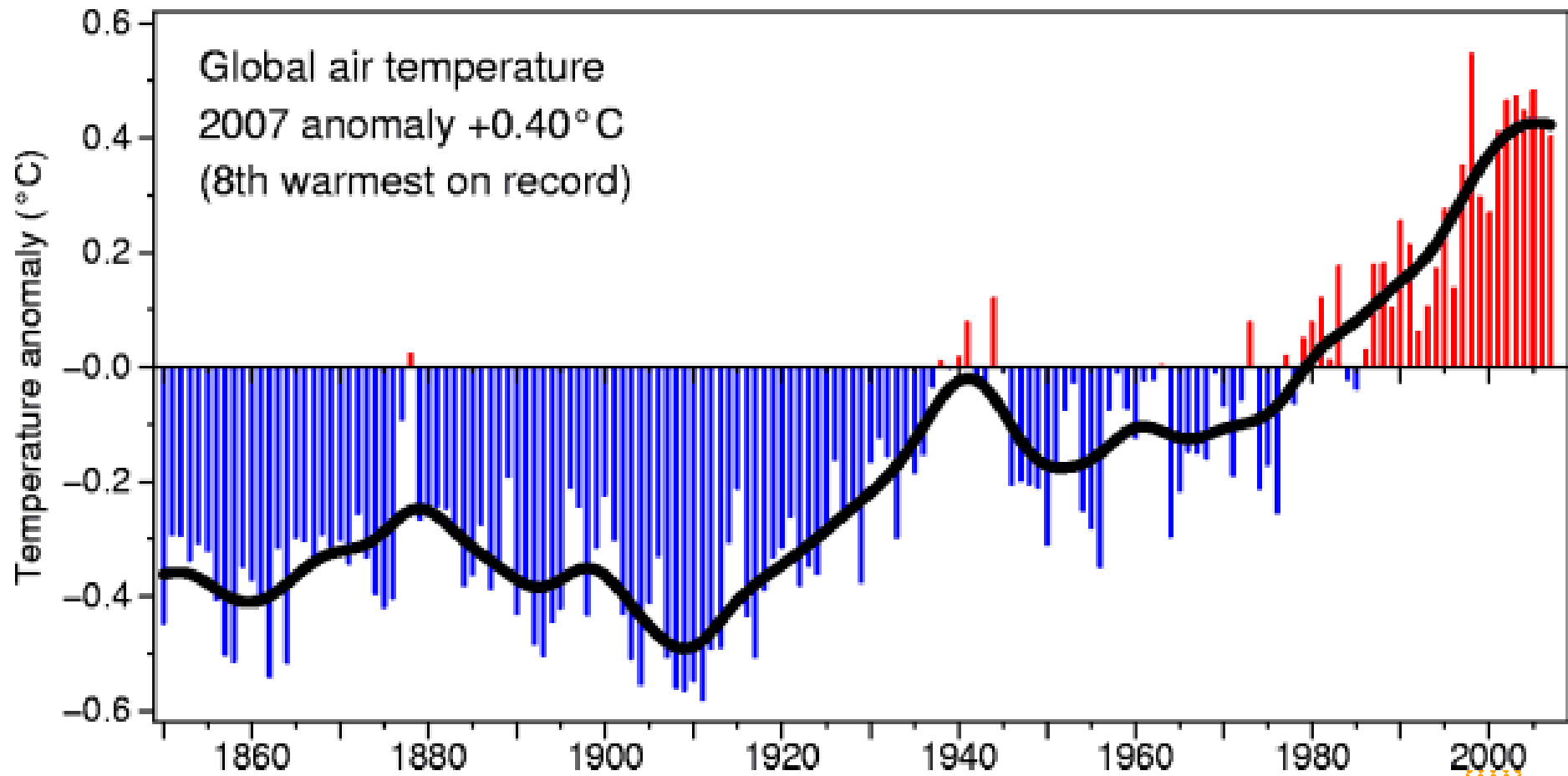
Climate change and adaptation in the county of Västerbotten



CAB's assignments on climate adaptation

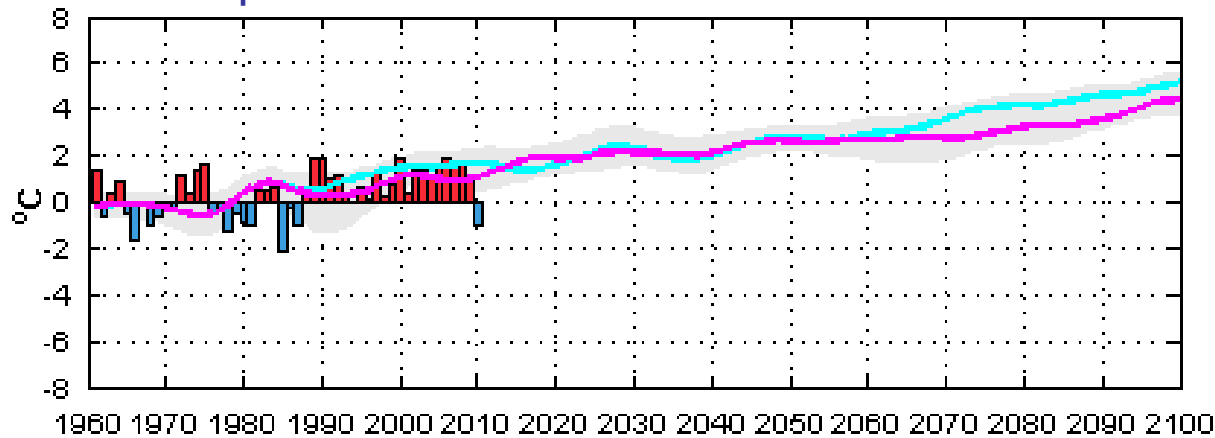
- Coordinate the regional climate adaptation
 - Coordinate, manage and support the work on climate change
 - Propose and implement measures in collaboration
- The county administrative boards shall compile, report and make comparisons of the adaptation work that is done at the municipal level. The starting point of the work should be assessments of vulnerability to climate change and the need for adaptation. The county administrative boards should then after consultation with interested actors elaborate regional action plans for climate adaptation to guidance for continued local and regional adaptation to climate change.

Global average temperature is changing



Climate change in Västerbotten

Temperature



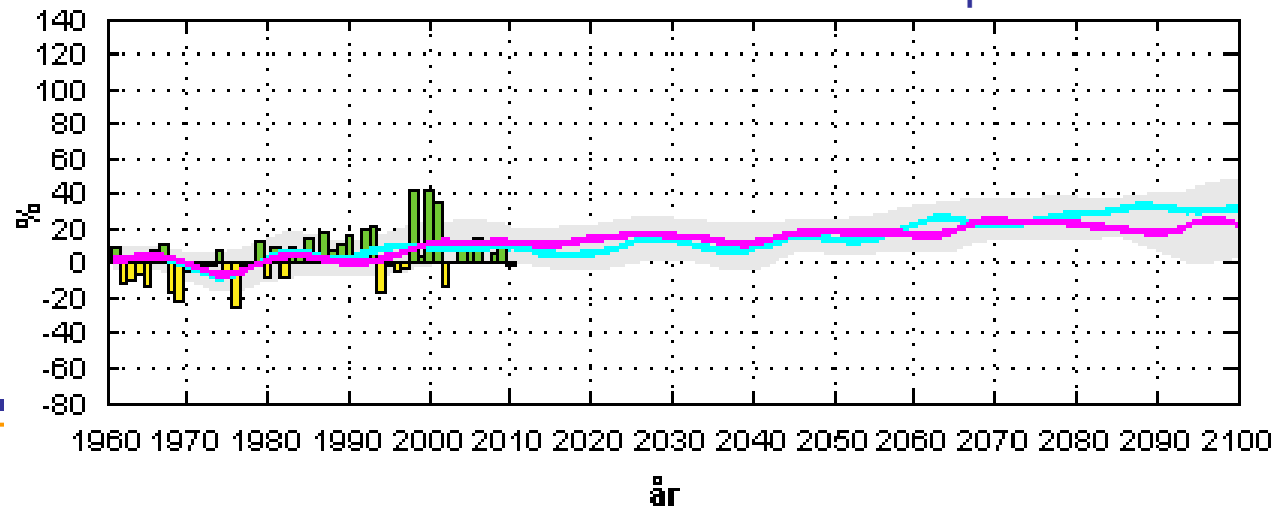
The longest heat wave expected to last longer

Need for heating is expected to decrease by about 20 - 25%.

Extreme daily precipitation is expected to increase by 5-9 days in Norrland coast, 5-8 days in Norrland, 10 - 20 days in the mountain regions of northern Sweden

The period of snow cover from 80 to 100 days shorter in the Norrland coast and inland, and about 60-70 days shorter in Norrland mountain areas

Precipitation



Climate change in Västerbotten

Forest

- 60 percent of the county's total area
- increased production
- change of forest raw material quality
- change of damage
- increased likelihood of insect

Agriculture

- Increased vegetation period
- Risk of harvest damage
- Increased risk of harmful insects
 - Increased need for pesticides
- Opportunity to grow other crops

Climate change in Västerbotten

Biological diversity and effects in the mountains

- Climatic zones move
- Shrinking bare mountain
- Relocated tree lines
- New species
- Greater insect infestation
- Some species need the cold for its reproduction

Reindeer husbandry

- Sensitive to climate change
- More zero-crossings
- Harder to find food
- More difficulties moving the reindeers
- Changes in vegetation

Climate change in Västerbotten

Spatial planning

- Increased risk of landslides
- Increased risk of floods
- Reduced need for heating
- Increased need for cooling
- Cultural and historical buildings are particularly sensitive

Water supply and water quality

- The flood spread pollution
- Eutrophication can be exacerbated in rivers and lakes
- Bacteria and toxic algae given a chance to grow to
- Increased spread of hazardous substances

Climate adaptation

- Adaptation can be defined as changes in response to actual or expected climate change effects
 - » IPCC – intergovernmental Panel on Climate Change

To reduce damage

Take advantage of opportunities manage the consequences



Adaptation - wide work that span the entire society

- **The county administrative boards**
 - Regional coordination responsibilities
 - Coordinate regional efforts to adapt to climate change
- **Authorities**
 - Specific assignments to the relevant authorities, including State Geotechnical Institute, Agency for Civil Protection, Swedish Meteorological and Hydrological Institute, etc...
- **Municipalities**
 - Several important activities where climate adaptation can and should be done

Affected areas of activity

- Conservation and Environmental Protection
- Communications
- Food inspection
- Animal welfare and veterinary public
- Farming
- Reindeer husbandry
- Fishing
- Equality between women and men
- Cultural environment
- Regional development
- Sustainable urban planning and housing
- Civil defense and crisis management in peacetime and emergency

Climate Adaptation - how we work

- Climate and vulnerability analysis
- Climate adaptation in risk and vulnerability analyzes
- Climate adaptation in spatial planning
- Regional water supply plan
- National Network
 - Annual national conference with the relevant authorities
 - Annual workshop with all 21 county administrative boards (climate adaptation coordinators)
- **2013 clarified assignment**
 - Action plan
 - Follow-up of the municipalities



Regional climate and vulnerability analysis

(State Geotechnical Institute, Swedish Meteorological and Hydrological Institute, CAB)

- Identify areas or places in the county where there is potential for landslides, mudslides, erosion and flooding, which can cause damage to existing buildings, infrastructure or critical infrastructure.
- Brief assessment of mudslides landslide and erosion risk in urban areas today and in a future climate
- Climate Analysis at the county level (coastal, inland, mountain)
- Assessment of changes in high flows and changes in seasonality due to climate change
- Expected climate change - temperature, precipitation, snow, frost, wind, vegetation
- Strategies and recommendations for adaptation to climate change for the existing built environment and the spatial planning

Summary of climate analysis. These trends can be seen:

- **Temperature:** Gradual increase towards the end of the century all seasons and regions, the largest increase in winter
- The number of hot days is expected to be more, longer heat waves
- higher maximum temperature
- The growing season is expected to start earlier and be longer
- The number of zero crossings is expected to increase slightly

Precipitation: Gradual increase in all regions, 10 - 50% at the end of the century, all seasons, at least increase the summertime

- Prolonged periods of rain more frequent, heavier precipitation more common
- Extreme precipitation is expected to increase about 20% for most of the county
- More dry days, slightly shorter dry periods

Summary of climate analysis. These trends can be seen:

- **Feeds:** Smoothed flow regime, increased average water flow, reduced spring flood because of reduced snow cover, slightly increasing fall flood
- 100 - year flow size is expected to decrease towards the end of the century (reduced spring flood)
- Climate analysis of future climate is uncertain
- Ensemble Analysis provides common trends



A photograph of a field of purple flowers in the foreground, with a dense line of green trees in the middle ground. The sky is filled with soft, pink and orange clouds, suggesting a sunset or sunrise. The word "Questions?" is written in a blue, serif font, centered in the upper half of the image.

Questions?



Strand-
promenaden

Varvsgatan

Thank you for listening!
Welcome to contact me!
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