28 May - 1 June 2023 Orlando Florida USA

Protecting Our World, Conquering **New Frontiers**

Presentation of Rural Pural Presentation of Rural **Areas into Sustainable**

Landscapes

Torben Juulsager (Denmark)

The Danish Association of Land Surveyors Paper no 12138











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Initial framework of understanding

Denmark – some relevant facts

- Area 42.951 km²
- **Approx. 6 million inhabitants**
- Representative democracy
- Private property rights are protected by the constitution











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Initial framework of understanding

Danish Surveyors – four professional pillars:

- Land use and property legislation
- **Planning**
- Measuring and mapping
- **Geoinformatics**



Organized By









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Content

- Global meta crisis
- Use of areas in Denmark
- Political goals and challenges and tools
- Renewable energy green transition on speed
- The specific approach of the land surveyor











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Global meta crisis – setting the overall agenda for land use

- Climate climate changes
- **Environmental pollution**
- Biodiversity loss of species and fauna
- **Energy fossile carbon footprint**























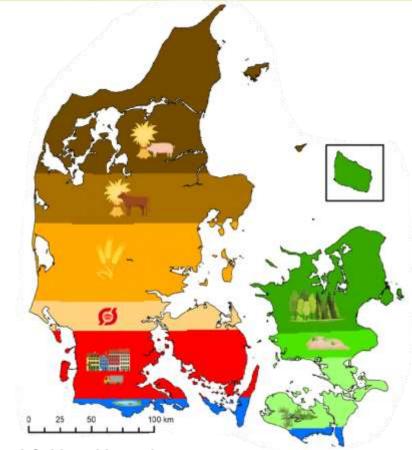
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Use of areas in Denmark

- 60 percent agriculture use
- 10 commercial forestry
- 14 percent nature, lakes and streams
- 13 percent cities, roads etc
- 3 percent other or not registered use



Need of 140 percent of Denmarks area to fulfill all whises and plans











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Political goals – by government

- Removal of low-lying soil from agricultural production 100.000 ha. (2,3%)
- Increasing the forest area by 250.000 hectares (5,8 %)
- Protection of drinkingwater 200.000 hectars (4,7 %)
- Protected nature 1.190.000 hectares (28 % of this 10% restrictly)
- Four-dubling of renewable energy plants 36.000 ha. Solarpanels (0,9%)











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Paradigme shift in use of rural areas

- Multipurpose use
- Intelligent use
- **Priority of interests**
- Hollistic approach in a local content

"From monoculture to multifunctionality"











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Challenges

- Sectorized public sector
- The planning process planning frameworks and citizen involvement
- Interest management and prioritization
- Financing who is going to pay
- "Tools"











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Tools - means of action

- **Physical planning**
- Land consolidation
- **Binding agreements**
- **Expropriation**
- **Economical compensation and financial support**











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Renewable energy - green transition on speed

- Forcing the transformation of rural areas
- Challenges the public planning process
- Embeds local development projects in the energy project
- Lucrative financial options on buying land











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The specific approach of the land surveyor

- Every thing happens somewhere on a geographical spot
- Solutions must take in to account:
 - characteristics
 - rights
 - bindings / regulations

= the potential / solution space

"Land surveyors – connecting the geographical spot with its possibilities"











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