Kristian Lautrup Nielsen

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I finished my master in Climate Change at the University of Copenhagen in 2016. Through my education I have gained a broad understanding and knowledge of climate change related issues and the climate system and combined with my work experience I now have work skills in areas such as:

Seasonal Climate Forecasts, Climate change, WordPress, React-Native, Weather Prediction, Adaptation strategies, Carbon Footprint, Machine learning and Data analysis

I am able to work methodologically and holistically with these challenges. During my carrer I have worked individually but also had numerous group projects, which has given me competences in relation to project management and in collaborating with people from different educational backgrounds and countries.

Education

Master in Climate Change, impacts, mitigation and adaptation (2013-2016).

Website of education: http://studies.ku.dk/masters/climate-change

In this 2-year interdisciplinary masters degree I followed the natural science direction on the master. I obtained broad knowledge of how the global climate system works and what effects will the changing climate have both at a local and global scale. In

addition, I acquired a toolset for analyzing energy systems and carbon neutral energy production. I gained a great understanding of the risks derived from climate change and the strategies needed to mitigate it and adapt to it. Furthermore, this education was interdisciplinary, which gave me an insight in other aspects related to climate change such as economic and social science aspects. With all of these competences I am able to analyze and evaluate issues regarding both energy production and its impacts together with
climate change from many different perspectives.

2010-2013: Bachelor in Geophysics
Website of education:
http://studier.ku.dk/bachelor/fysiske-fag/specialiseringer/geofysik/

I obtained an understanding of the geophysical aspects of climate change as well as knowledge of climate models and what are the parameters that play a role in the global climate system. With these skills I am able to understand and work with climate models and different climate scenarios and analyze their impacts at regional and global scales.

Projects from my MSc in Climate Change

Throughout my studies, I had the possibility to create my own unique profile by developing projects within my area of interest. The projects I have designed therefore primarily focused on: renewable energy, climate change adaptation and climate change mitigation.

Analysis of the Australian 2007 National Climate Change Adaptation Framework (NCCAF)

We assessed and discussed the NCCAF, describing the eight sectors that must adapt to climate change, including water resources, biodiversity and human health. This project gave me the skills to evaluate the several adaptation strategies included in the plan and discuss the possible reasons for the different levels of detail of each strategy. I also acquired skills in project analysis, where I assessed the positive and negative aspects of the plan and give suggestions for future adaptation plans in even more cost effective ways.

Halving the United States Beef Consumption

The focus of this study was a scenario where the annual beef consumption in the United States was halved. This lead to a reduction of land use due to the reduction in crop production and land used by the livestock. This area was estimated and the potential uses of it were investigated, specifically the bioenergy potential, which was calculated. This project gave me knowledge in LCA and in climate change mitigation.

Solar energy - a study of the feasibility of solar panels in the Sahara desert

This study analyzed the feasibility of solar energy production in Sahara from three different perspectives: social, economic and natural science. This project gave me an understanding of the different aspects that have to be investigated in relation with the feasibility analysis of establishing new renewable energy productions projects. Furthermore, it taught me the importance of ensuring that different areas works together in a productive and well organized way.

Future European risk areas for invasive Trachycarpus fortunei in an A1B climate scenario

This analysis focused on one specific specimen of palm that has already shown invasive behavior in parts of Europe. By estimating and documenting specific climatic growth limitations and analyzing these in relation with the future estimated climate, a map of future potential risk areas was found. This project gave me a good understanding of factors crucial for plant survival and growth and the relation between these and future climate changes. I also acquired skills in modeling with the programming language MatLab.

Master thesis: Eucalyptus and Paulownia – the Future energy crops in Denmark?

My master thesis is a full estimation of which new species might be able to grow for bioenergy production in a future warmer climate in Denmark. This has taught me how we can adapt to a changing climate and even to some degree benefit from the future changes. In addition, it gave me an understanding of bioenergy and its production and how it might play a key role in transforming the energy sector in Denmark and other countries in a more carbon neutral direction.

Work Experience

2018 – current (Research Scientist)

I am currently involved full time for Underwriters Laboratories (UL) at the European H2020 project SECLI-FIRM. My focus is on gathering and tailoring seasonal climate forecasts to optimize their skill and fit the needs of the renewable energy industries acting as end-user. This can help them improve their decision processes by implementing this information and thereby providing them with an advantage in their respective markets.

2017: Intern– meteorological software development

My main focus has been on optimizing the meteorological WRF model of a European domain as well as its daily running process. I have develop my skills in Python scripting and obtained further knowledge of meteorological models and how to use these in calculating weather information. It also gave me the opportunity to work together with a group of programmers and software developers.

2016: Intern – app development and carbon footprint

I calculated energy and carbon emission savings due to the implementation of the company's products. I also helped making the company webpage in WordPress, which made me improve and develop my skills in webpage design even further. I also took part in the process of designing an app for the company.

Languages

- Danish   - Mother tongue
- English   - Fluent in writing and speaking
- German   - Intermediate knowledge
- Catalan   - B1 level and learning
- Swedish   - Beginner level
- Norwegian   - Beginner level

Computer Skills

Office programs   : Professional user level.
MatLab   : Intermediate user level.
Python   : Professionel user knowledge.
GIS   : Basic knowledge of the GIS software ArcGIS.
WordPress   : Intermediate knowledge of development and design.
React Native   : Basic knowledge of app development.

Unix/Linux   :Experience working effectively in Linux environments.

Other Skills and Competences

Driving license (B)

Availability to travel

Personal interests: I love playing sports, specially football and badminton. I have an interest in plants and nature and I love being outdoors cycling, travelling and visiting new places.

References and recommendations available on request !