

## Present

Dr Roy Bartle	Lews Castle College
Andrew Mackenzie	Lews Castle College
Ms Agnes Mols Mortensen	TARI – Faroe seaweed
Prof Lisbeth Truelstrup Hansen	Arktisk Teknologi Center, Greenland
Prof Francesco Gentili	Swedish University of Agricultural Sciences
Dr Ronan Sulpice	NUI Galway
Calle Niemi	Swedish University of Agricultural Sciences
Jon MacLeod	An Lanntair

## Apologies

Prof Rúnar Unnþórsson	University of Iceland
Dr Angus Murray	Lews Castle College
Dr Alasdair Macleod	Lews Castle College, Stornoway
Clíodhna Ní Ghríofa	Údarás na Gaeltachta, Na Forbacha, Co. na Gaillimhe

## Minute

	ITEM	Comment	Decision	Task	Who?	By date
1.	Approval of minute of last meeting 27 November 2019	One small change.	Approved			

ITEM	Comment	Decision	Task	Who?	By date
2.	Update on progress by person/organisation				
	<p><b>Lews Castle College</b></p> <p><b>General</b></p> <p>Andrew gave an overview of the position of the project. It is now in the “contracted” stage and access is now available to all reports via the EMS system. He suggested that all partners should look to section 3.5 of the NPA manual where it gives advice on completing the various reports. Reports will be required from all partners and the first one is due for the period up to the end of January 2020. We are then allowed three months to complete the report, but it would be preferred if these could be done as quickly as possible after the end of the month. There are two project reports, one of the whole project-“Project report” and one for each individual project partner - “Partner report” which is combined into the project report by the Lead partner.</p> <p><b>Drying and conference paper</b></p> <p>Roy has spent most of the last 2 months, with Alasdair, developing a model of a fairly simple wind turbine system for seaweed drying. The paper has been submitted under the theme of food security and because the audience will be scientists and social scientists. The presentation will show how the variability of wind energy can result in a more natural drying process, and bring attention to the work we are doing in the SW-GROW project over the next couple of years.</p> <p>The presentation will begin with a very brief discussion on how seaweed can contribute to food security in the region and then going on to observe that mean wind speeds in the Arctic region are amongst the best in the world. So, with an excellent growing environment for seaweed and a good wind regime these show excellent potential for wind drying of seaweed. The presentation will then move on to outline the software model that has been developed at Lews Castle College which tracks seaweed production over 24-hour timeslots across the year. The user can input several parameters - the weather, the annual wind speed over the course of the year for their location and then can vary rated capacity of the wind turbine, its performance curve and any energy storage capacity they may wish to install. By doing this end users can, more easily, decide whether such a system might be worth investigating further for their particular location and their particular drying model that they may wish to operate. In the future we intend to develop the model so that it is far more automated on the technical aspects but also will include costings and life-cycle analysis etc as well as other renewable technologies and an electrical hook-up. However, this will take many months to achieve.</p> <p>By the end of the month, Roy hopes to send a literature review of seaweed drying techniques to all partners.</p>				

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	<p><b>Údarás na Gaeltachta</b> Clíodhna met with three seaweed companies in Ireland and has organised a seaweed event for 15 January 2020 - a wealth of speakers and delegates are expected to attend. She has also been helping one seaweed company with their new product development. In addition, she has been working with the design company to get the translations ready for all of the required partners and hopes to have the banners available by the first week in February so that Agnes from TARI can have a pop-up stand for the next SW-GROW-GROW meeting in Torshavn on arrival on the 25th February.</p>				
	<p><b>Swedish University of Agricultural Sciences</b> Francesco has been investigating the best way to characterise the proteins, lipids and carbohydrates. Regarding the proteins samples have been sent through the metabolic centre who will provide all the amino acids - both free and bound and Calle will work on a simpler way to quantify total protein. Given time and resources during the project they will be able to identify other metabolites and compounds. Calle has been working on getting their gas chromatograph working and can no analyse fatty acids but, at the moment, there is concentration on method evaluation.</p>				
	<p><b>An Lanntair</b> John has started a desk top survey to see what branding is already being done and creating a directory of what businesses are already up and running within the region, what imagery they are using and what additional information they are giving on products. He has been to the Bergen University archive and also to Newfoundland looking at seaweed production and touching base with some local producers (Ullapool) to discuss various drying methods e.g. solar. He noted that Elsa at 58° North was keen to be involved in this project since she might have some useful information about her business model-successes and failures seaweed growing in Loch Broom.</p>				
	<p><b>University of Iceland</b> SW-GROW is on halt due to setup of pelletizer equipment. After installing a new gearbox at Christmas they discovered a broken conveyor screw, therefore they are still on halt until they receive the screw from repair workshop. This week they have a technician from the company that sold them the gasifier, he is helping them with operating the gasifier.</p>				
	<p><b>TARI – Faroe seaweed</b> Agnes has been working for the past month on catching but no the hatching season is almost over but they hatchery is almost full. They will be using their own production for some of the analysis that is going to be carried out in this project so for the cultivation part they are waiting for suitable weather to deploy their ropes. With regard to sending samples to Ireland, she has not done this yet but has been able to access a freeze dryer but there might be some delay in obtaining good quality material from their ropes and the cultivars because the seaweed is not yet ready for harvesting. Also, to do the genetic work it is good to have fresh material without so many episites to disturb the picture and hence it is a little bit early to get material and she would prefer to wait until March so that there is sufficient material to work. The same is true for sending samples to Sweden and we have to be aware that the seasons have a significant impact.</p>				

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	<p>The translation work for the posters has also been done. Agnes has booked the venue at Torshavn for the meeting on 25 and 26 February 2020 but still needs to finalise arrangements dinner and lunches. It has been suggested that Roy should arrive in Faroe before the others since there is a seminar coming on 28 February and Agnes will be giving a talk to that. It is also possible that Roy and Agnes will visit some of the other islands while he is there. Roy proposes to extend his visit to Faroe so that he can be involved in drying side in conjunction with TARI from an engineering viewpoint – especially if they are proposing to move to a new site.</p>				
	<p><b>Arktisk Teknologi Center, Greenland</b> Lisbeth is currently looking into travel arrangements for the Greenland meeting in August to help participants travel to Sisimiut but she is still waiting for details of the entrepreneurship course that our meeting was hoping to link in with-just a few hours to allow the students to meet members of the SW-GROW project. The Ph.D. student associated with the project has made some good presentations to the Greenland Science Week so we were well represented at that meeting and it is expected that travel arrangements and a programme will be announced in due course. One of the members of staff collecting samples has suffered a boating accident but has been off work for a couple of months so this has delayed any sample delivery.</p>				
	<p><b>NUI Galway</b> Ronan needs samples for analysis but already has some from Ireland in his laboratory but continues to work with his colleagues in France. He is going to give a presentation at the Clár Seaweed seminar on 15 January 2020 on the SW-GROW project and will be involved in a workshop on cultivation.</p>				

**Next meeting: Tues 25 February 2020 in Faroe.**