

Present

Andrew Mackenzie	Lews Castle College
Clíodhna Ní Ghríofa	Údarás na Gaeltachta, Na Forbacha, Co. na Gaillimhe
Dr Ronan Sulpice	NUI Galway
Dr Masami Inaba	NUI Galway
Dr Agnes Mols Mortensen	TARI – Faroe seaweed
Dr Angus Murray	Lews Castle College
Dr Roy Bartle	Lews Castle College
Prof Rúnar Unnþórsson	University of Iceland
Prof Francesco Gentili	Swedish University of Agricultural Sciences
Dr Calle Niemi	Swedish University of Agricultural Sciences
Dr Alasdair Macleod	Lews Castle College, Stornoway

Apologies

Jon MacLeod	An Lanntair
Prof Lisbeth Truelstrup Hansen	Arktisk Teknologi Center, Greenland

Minute

	ITEM	Comment	Decision	Task	Who?	By date
1.	Approval of minute of 26 August 2020	The minute was approved.	No matters arising.			
2.	Feedback from NPA conference – any matters arising	The feedback from the conference was generally favourable and some useful contacts were made and should	Agreed to make contact and see if algae could be added to the production of some beers?	Contact Peter	Andrew Mackenzie	Before next meeting

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		be followed up. In particular, the presentations on the production of barley in Scotland and the presentation on provenance in Iceland.				
3.	Progress with Period 1 and 2 reports	Swedish FLC need some further clarification.		Send the information required	Francesco/Christina	Before 6 October 2020
		An Lanntair still have not had their claim certified.		Contact FLC and expedite claim.	Jon	As soon as possible
4.	Progress with questionnaire	Need to add some changes recommended by Agnes. It will then be possible send out to respondents. Scotland and Ireland are fairly well represented via existing networks.	Input is needed from other partners so that the questionnaire can be widely circulated to relevant organisations. Timescale agreed was that a database (ideally) of organisations would it be sent to Clíodhna by 2 October, with an aim of sending out the questionnaire to all organisations on	Send contact details (possible database) of processors, harvesters etc to Clíodhna.	Francesco, Agnes (Faroe and contacts in Norway), Lisbeth and Rúnar.	As soon as possible or by 2 October 2020. (reminder sent 4 Oct 2020)

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			12 October 2020 with a return date by 30 October 2020 at the latest.			
5.	Update on progress by person/organisation since last meeting at the end of August	<p>Lews Castle College Andrew Mackenzie: Work package Management; Continuing to chase up FLC and finance claims – and responding to queries from Partners and the NPA. Developed a PowerPoint for delivery to the NPA 2020 annual event and took part and contributed to discussion of this event. Met with Jon and agreed how we would proceed with building a brand and how we could bring local producers on board. Dr Angus Murray will be building up a database of elements that might make their way into the branding and he will probably be in touch with Partners asking for any contributions to the study. Angus has uploaded the presentation for the NPA conference to both websites.</p> <p>Roy Bartle Work package T1.2.1 Drying systems. Finished contribution to the initial drying paper and sent to Calle who hopes to have the protein characterisation done in a couple of weeks and then it should be possible to publish by November. A plan has been developed to construct a drying rig at Lews Castle College, but we are still under some restrictions due to the COVID-19 situation. This should not unduly delay the drying work since this cannot happen until the next season of seaweed growing has begun - end of winter beginning of Spring 2021.</p> <p>T1.2.2 , developing a model by which drying systems can be optimised for different products in different places and validating the European Union’s ERA5 meteorological data against UK Met office data so that, if successful, the ERA5 data can be used in the SW-GROW optimiser software. This will allow a user to specify their location, and the software will recall the meteorological data for that location and from that be able to optimise and energy system for drying.</p>				

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		<p>Swedish University of Agricultural Sciences Work package 2. Francesco has been in contact with people in regard to the carbohydrate quantification so that in the next couple of weeks quality and the quantity of the samples can be determined. Calle has been characterising proteins from samples and deciding on which methods work best and, for example, measuring what assays can be used and this will be continued when samples are received from Agnes. Also, protein and fatty acids analysis will be undertaken, and this should be available by the end of October 2020.</p>			
		<p>An Lantair WP T2: Characterisation and Branding T2.6 Characterisation Continuing to research traditional and modern use and knowledge of seaweeds in the region using archive and oral resources adding to a directory of knowledge to be fed into the eventual branding exercise T2.2 Development of Brand identity Continuing to look at existing seaweed brands to analyse imagery, the nature of text used in packaging and the direction of branding in terms of labelling i.e. organic logos, use of a recognised DNA authentication, scientific verification, provenance etc.</p>			
		<p>Arktisk Teknologi Center, Greenland Still working on analysing the samples received from Greenland and the Faroe Islands this summer. Some Greenland Alaria samples are owed to Sweden and Ireland. Jonas, the postdoc, has been on and off sick leave, which has delayed the shipping. Given the limited sample amount, it was decided that it made more sense for Calle in Umeå to complete all of the analyses of the dried Scottish samples.</p>			
		<p>TARI – Faroe seaweed Work package 2 send off dried material of 3 different species (Palmeria palmata (Dulce), Himanthalia elongate, Porphyra umbilicalis) to Francesco and Calle since these species feature in TARI’s finished products. Some freeze-dried samples of Palmeria palmata, and Porphyra umbilicalis will also be sent to Sweden, so that the difference between the treatment of samples can be analysed.</p>			

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	<p>Also, the collections for genetic analysis have been done and arrangements have been made with the transporting company to dispatch samples to Ireland.</p> <p>Work package 1 All the sampling on the farm site has been completed, but the hatchery is now full-both the hatchery ropes that are going to be used by TARI as well as seeded rope that is used by the aquaculture industry to be used in the salmon cages for lump fish shelters. This is becoming a new important source of income to the company and means that more space will be needed at the new hatchery at Fámjin. TARI has applied for a Danish patent and is hopeful that a European one will also be forthcoming. For the last month Agnes has employed an interim to develop recipes based on TARI's products and together with that they have been working on fermentation because they want to try and make a fermented health food supplement using different lactobacillus cultures. They would like to continue with this work and would welcome discussions with Lisbeth and Francesco and perhaps Roy on the fermentation study.</p> <p>Work package 3 (pilot) Working on developing the "green" hatchery pilot and have good contacts in the Faroes with a company that deals in water turbines on behalf of an Italian company and has sent some proposals that may be suitable for this pilot project. This has to be discussed further, in particular, with regard to finances. The proposal to include the municipality is probably not so relevant now since the turbine will only be used for the seaweed hatchery.</p>	<p>Údarás na Gaeltachta</p> <p>Work package T4 Dissemination and engagement with stakeholders. Have been engaging with various stakeholders across the NPA and have been involved in organising a webinar that is looking at a standard for seaweed accreditation to accredit the sustainability of the product. At the seaweed culture conference (last week) SW-GROW had a segment there and a view important contacts were established which will be followed up in the next couple days.</p>	<p>NUI Galway Work package 2 characterisation and branding. Looking forward to receiving samples from Agnes (Palmeria palmata and Alaria esculenta) for DNA sequencing. Clíodhna sent some dry samples last week-also for sequencing. Also going to do some</p>		

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		sampling of <i>Palmeria palmata</i> in Connemara, and possibly <i>Alaria esculenta</i> , but the season is not very suitable.				
		University of Iceland Work package 1.3 Working on preparations for the gasification of seaweed-making slow progress.				
6.	Agree pilot projects to be delivered.	<ol style="list-style-type: none"> 1. Shared infrastructure project. 2. Drying systems. 3. Disposing of biomass waste. 4. Species database. 5. Cultivation. 	<p>(Clíodhna)</p> <p>(Lews Castle College)</p> <p>(Rúnar)</p> <p>(Ronan)</p> <p>(Agnes)</p>	Many of these pilots are interrelated and will have in-feed from each other as they progress (drying, energy, renewables) and despite COVID-19 problems good progress has been maintained.		
7.	T3.1 shared infrastructure project etc.	Shared resources. We need demonstrate that shared infrastructure resources for SMEs is feasible and we have agreed that we will move this into a pilot. For this to be successful we need to have developed branding and that using shared facilities will add value to the local industry. We need a clear plan, and responsibilities agreed, between Lews Castle College, Rúnar and Clíodhna and a method for getting SMEs involved at an early stage. This needs to be linked in with the work that Lews Castle College is doing regarding drying and the use of renewable technologies. It would be possible to install a conventional drying system and then add the renewable energy afterwards - but by the end of 3 years we would like to have a drying system which is largely “green” and environmental. This means that it would have to be electrically driven and not by fossil fuels. It was agreed to set up a separate subgroup consisting of Andrew, Alasdair, Clíodhna, Roy and Rúnar to devise a pilot that would obtain feedback from SMEs on the potential: <ul style="list-style-type: none"> • Savings • Benefits in terms of greater production and / or lower costs • Convenience 				

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		<p>of shared restructure. The meeting should take place on Wednesday. 7 October 2020.</p> <p>Food packaging</p> <p>It may be possible to investigate the production of bio plastics as part of the work on using waste materials. There is already much work going on at the Alfred-Wegener-Institute Helmholtz Centre for Polar and Marine Research (Bremerhaven, Germany) who are using algal-based materials to pack food and using the antibacterial effect for longer shelf life. It may be possible to contact them to see what algae they are working on, and what size of biomass they are using. It would be interesting to see what Alaria can be used for and possibly sugar kelp, because these species are ones that we can grow as part of our project very easily. If we encounter problems with any of the above pilots then it might be possible to investigate this further.</p>				
8.	Samples	Ronan requested samples of palmaria to be sent from any source in a tube with seawater from Partners.				

Next meeting:

Skype Wednesday 28 October 2020