

Teams meeting

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Present

Andrew Mackenzie	Lews Castle College
Aisling Nic Aoidh	Údarás na Gaeltachta, Na Forbacha, Co. na Gaillimhe
Dr Alasdair Macleod	Lews Castle College, Stornoway
Dr Jonas Steenholdt Sørensen	Arktisk Teknologi Center, Greenland
Dr Agnes Mols Mortensen	TARI – Faroe seaweed
Prof Lisbeth Truelstrup Hansen	Arktisk Teknologi Center, Greenland
Jon MacLeod	An Lanntair
Prof Francesco Gentili	Swedish University of Agricultural Sciences
Dr Calle Niemi	Swedish University of Agricultural Sciences
Dr Angus Murray	Lews Castle College
Dr Roy Bartle	Lews Castle College

Apologies

Dr Masami Inaba	NUI Galway
Dr Ronan Sulpice	NUI Galway
Prof Rúnar Unnþórsson	University of Iceland
Fionnán Ó hÓgáin	Údarás na Gaeltachta, Na Forbacha, Co. na Gaillimhe

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Minute

	ITEM	Comment	Decision	Task	Who?	By date
1	Approval of minute of SW-GROW Teams Meeting 26 January 2022	The minute was approved.	No matters arising.	Send to Angus for uploading to website	Andrew	Done
2	Matters arising from 26 January 2022 meeting	None				

	Item	Information
3	Progress with work package deliverables for Period 5	<p>Lews Castle College Andrew Mackenzie: Work package Management. Writing reports, preparing for meetings, drafting minutes, and circulating. Engaging with Partners. It was emphasised that since we are in the final period of the project, and with respect to the letter from Christopher Parker emphasising the final reporting procedure, the final date of eligible expenditure is 30 September 2022, and the submission date of the final report is 31 December 2022. All Partners were asked to be aware of this date and to ensure that, for any particular deliverable, there is sufficient evidence to prove that we have achieved all the agreed objectives.</p> <p>Dr Angus Murray Website updated and current meters put on the drying equipment at Lews Castle College and have begun drying experiments using a tumble dryer.</p>

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		<p>Dr Roy Bartle A tumble dryer (9 Kg capacity) with a heat pump has been delivered, installed and instrumented at Lews Castle College. A student from ZHAW in Switzerland will be testing the device using small industrial quantities of seaweed and investigating using hydrogen as a source of alternative energy. Precision experiments will start on the forced convection machine once sufficient quantities of seaweed have been sourced. Work continues to be done on modelling and some development is taking place to produce a software tool that SMEs will find the use. Contacts have also been made with UHI colleagues to explore the possible benefits of seaweed drying using radio frequency radiation.</p> <p>Dr Alasdair Macleod The software tool for SMEs will simply be an app where they are able to specify a quantity of seaweed that the wish to dry and that will tell them how much renewable energy they will need to source to do that, along with any energy storage requirements.</p>
	Update on progress with work packages	<p>Swedish University of Agricultural Sciences Work packages T2.6.1 and T2.6.2 The protein analysis and modelling with the spectroscopy system is working satisfactorily and a paper based on this work is being finalised for publication. More work has been done on the Alginate to validate the system and soon work will begin on the lipids and the fatty acids.</p> <p>A letter has been received from the National Institute of Standards and Technology in Gaithersburg, Maryland inviting participation in their Exercise 1 of the Dietary Supplement Laboratory Quality Assurance Program (DSQAP). This is designed to assist laboratories in the development and validation of new analytical methods, in improving the quality of their analytical measurements, and in supporting compliance with a number of federal regulations enforced by the US FDA, USDA, and other international bodies. Exercise 1 will offer opportunities for participants to measure mass fractions of nutritional and toxic elements, water- and fat-soluble vitamins, phenolic content, contaminants, proximates, and withanolides in dietary supplement ingredients and finished products. If we participate in this programme then it will be possible to compare our analyses of seaweeds with those of the American National Institute and will provide a useful quality assurance function. It was agreed that Partners will participate in this exercise and Swedish University of Agricultural Sciences will register to be included. The cost of participating will be minimal and can be funded from existing budgets.</p>

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	Update on progress with work packages	<p>An Lanntair Work Package T2.6 Characterisation T2.2 Development of Brand identity</p> <p>To follow.</p>
	Update on progress with work packages	<p>Arktisk Teknologi Center, Greenland WP 1. Quality Improvement T1.1.1</p> <p>Contributed to the latest newsletter. Continuing to work on the shelf-life study started in the summer of 2020 for inclusion in a journal paper. This has been done in collaboration with a Ph.D. student associated with this project and another Ph.D. student who is working together with the Norwegian Technical University of Trondheim - a truly collaborative study.</p> <p>The two students continue their work on the safety aspects of dried seaweed and initial indications are that the bacteria are quite resistant to these drying techniques. Now. the focus of this work will be to determine whether long-term storage techniques could improve this situation.</p> <p>Two academic papers are in the process of being completed.</p>
	Update on progress with work packages	<p>TARI Work package T1.1:</p> <p>The seaweed refuges for lump fish are now being marketed as “AkvaNest” (a Danish patented product owned by TARI) and are being deployed. The hatchery is being cleared out at the moment but there have been some problems with the water quality, where there have been too many particles (seaweed and sediment) present, mainly due to stormy weather. A solution is being worked on using 2 cylinders containing bio media that the incoming water has to pass through so that the larger particles are removed. This is not such a problem for <i>Alaria esculenta</i> and <i>Saccharina latissima</i> (sugar kelp) but the next step at the hatchery is to conduct experiments on <i>Palmaria palmata</i> (dulce), but this will require much cleaner water - this will be done in collaboration with a Nordic project Rødtang (about the sustainable use of red seaweed) funded by NORA (https://nora.fo/introduction?_l=en). Preparatory work has started to receive the IREM Pelton water turbine that will be used to power the hatchery. The Icelandic student is finalising her draft thesis and work is continuing to support her.</p>

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	Update on progress with work packages	<p>Údarás na Gaeltachta The February newsletter has been completed and has been posted on Facebook, Instagram and Twitter. Regarding the shared infrastructure pilot, expressions of interest have been invited and posted on the Údarás na Gaeltachta website (https://udaras.ie/assets/uploads/2022/02/ExpressionofInterestSW-GROW-FINAL-2.docx) - closing date 1 March 2022 with a press release being released shortly to publicise the opportunity.</p> <p>Plans are being drawn up for the proposed meeting in Galway, week beginning 4 April 2022 (with the actual meeting on Wed 6 and Thursday 7 April). Mungo Murphy will provide a seaweed farm and aquaculture tour and the Marine Institute will provide two speakers to explain their role in encouraging business start-ups in the seaweed industry. Other possibilities are being investigated.</p> <p>The next seminar is being planned and will concentrate on seaweed processing, fermentation, moisture loss and drying. Suggestions for suitable speakers are invited.</p>
	Update on progress with work packages	<p>NUI Galway Work package T2.2 NUI Galway We have 2 papers in review to Algal Research.: Bringloe, Trevor; Fort, Antoine; Inaba, Masami; Sulpice, Ronan; Ní Ghriofa, Clíodhna; Mols-Mortensen, Agnes; Filbee-Dexter, Karen; Vieira, Christophe; Kawaii, Hiroshi; Hanyuda, Takeaki; Krause-Jensen, Dorte; Olesen, Birgit; Verbruggen, Heroen, Molecular Ecology, in review and Inaba, Masami; Fort, Antoine; Bringloe, Trevor; Mols-Mortensen, Agnes; Ni Ghriofa, Clíodhna; Sulpice, Ronan, Algal Research, For the species identification project, rbcL (ribulose-1,5-bisphosphate carboxylase large subunit) primers designed for red algae worked. They intend to sequence the amplicons (Amplicons are DNA products of a polymerase chain reaction (PCR)). Testing other primers continues.</p>
	Update on progress with work packages	<p>University of Iceland To follow.</p>
4.	Progress with Period 3/4 reports	The FLC for An Lanntair has still not certified the claim for period 3. So, following discussions with the NPA desk officer, the claim for Period 3 has been submitted without the contribution for An Lanntair. It

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5.	Update on progress with Pilots	Hatchery pilot: See above Drying pilot (Lews Castle College) route See above.
6.	Progress with engaging Associate Partners / SMEs	Some engagement with SMEs by Údarás na Gaeltachta on the shared infrastructure pilot.
8.	Shared infrastructure pilot project start- Up.	See above.
9.	Options for travel	See Údarás na Gaeltachta report above.
10.	Any other business.	None.

Next meeting:

Teams Wednesday 30 March 2022 at 1pm (UK time)