



CALL FOR EXPERTS

Job title	Food Expert
Project title	“Resilient Island Endeavour (R.I.S.E): the application of a seaweed-based multipurpose agricultural system to combat the effects of climate change in Mauritius”
Project objectives	the promotion and the dissemination of innovative and sustainable seaweed farming systems for the dietary diversification and improvement of resilience to climate change disasters and erratic weather behaviour in Mauritius.
Employer	EPCO – Environmental Protection and Conservation Organisation
Donor agency	European Union under SANOI Programme (Sécurité Alimentaire et Nutritionnelle Océan Indien)
Type of appointment	Consultancy Service Agreement – Fixed term for training sessions (18 hours)

THE PROJECT

Through the dissemination of seaweed farming systems, the R.I.S.E. Project aims to: 1) promote sustainable technologies to enhance resilience to water scarcity and erratic weather patterns; and 2) establish a supplementary source of income for project beneficiaries. The specific needs addressed include: improving general water-scarcity resilience; diversifying cropping systems; reducing reliance on chemical fertilizers; minimizing pesticide use; and enhancing soil biota and biodiversity.

Overall, **250 farmers** will participate in the R.I.S.E. Project activities. Beneficiaries will be selected from 10 villages in the southeast of Mauritius: Grand River South East, Quatre Sœurs, Grand Sables, Bambous Virieux, Bois des Amourettes, Old Grand Port, Morcellement Ferney, Rivière des Créoles, Petit Bel Air, and Ville Noire.

In each community, 25 participants will be chosen. In these areas, the project will target two groups of direct beneficiaries: on the one hand, it will involve 250 farmers (women and men) in the process of seaweed farming. These beneficiaries will undergo training on farming techniques for seaweed cultivation and harvesting. The harvested seaweed will be used to produce two main by-products: superfood and bio-stimulants/bio-fertilizers.

On the other hand, it will involve **a group of women in seaweed treatment for consumption as food. The production of seaweed-derived food for human consumption is a key objective of the project. The purpose of this consultancy is to deliver a comprehensive course focused on food preparation and safety. The course will span approximately 18 hours over 6 days, providing participants with essential skills and knowledge in food handling, preparation techniques, and safety protocols.** The Food Expert will conduct a series of training sessions to provide specialized knowledge that introduces beneficiaries to food processing and preparation. This training aims to enable them to process seaweed and transform it into nutritious and pleasant-tasting food.

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REQUIRED PROFILE AND EXPERIENCE

a) Education

- High school diploma with coursework in culinary arts, nutrition, or food safety.
- Certifications in food safety (e.g., ServSafe, HACCP).
- Degree in Culinary Arts, Food Science, Nutrition, or a related field will be considered an asset.

b) Professional experience

- Minimum of 2 years in food preparation, culinary arts, or food safety.
- Proven track record of working in professional kitchens, catering, or food service management.
- Experience in teaching or training in culinary skills or food safety protocols.
- Experience in developing and delivering educational programs or workshops.
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c) Knowledge and skills

- Knowledge and experience in preparation of seaweed-based food (recipes and treatment) will be considered as an asset.
- Familiarity with Mauritius law governing food security and safety aspects.
- In-depth understanding of food safety regulations and best practices.
- Proficiency in various cooking techniques and methods.
- Familiarity with food preparation equipment and tools.
- Strong knowledge of nutrition and dietary considerations.
- Knowledge of food labeling and storage guidelines.
- Excellent communication and presentation skills, with experience in delivering training or workshops.
- Engaging presentation skills to keep participants motivated and involved.
- Knowledge of thickeners or gelling agents will be considered an asset.

d) Languages

- Mauritian Creole and English or French

Interested candidates should submit their CV, a cover letter detailing their relevant experience, and a brief outline of the proposed course content, including key topics to be covered and teaching methods, to the following addresses:

e.gatteschi@cis song.org

daksh@epco.ngo

Yours sincerely
R.I.S.E. staff

Royal Road, Bois Pignolet, Terre Rouge

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Terms of Reference (TOR) Specifications and Details

TOR for Food Expert

for Project R.I.S.E. Resilient Island Endeavour (R.I.S.E.): the application of a seaweed-based multipurpose agricultural system to combat the effects of climate change in Mauritius

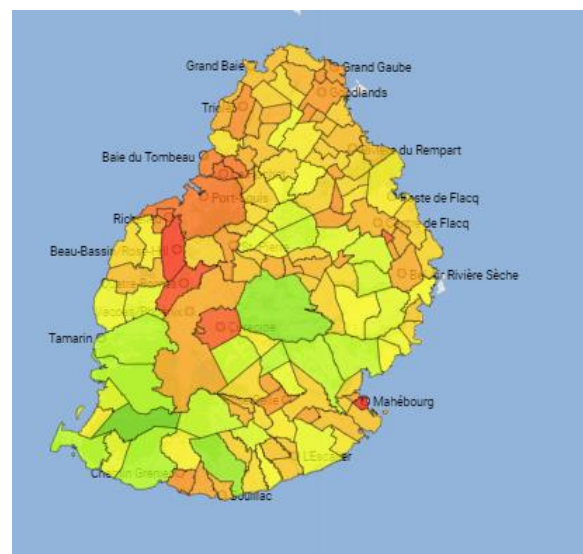
1) Background and Objectives

Just like other Small Island Developing States, Mauritius faces crucial challenges that are strictly connected to its small size, narrow resource base, and remoteness. These conditions are even worsened by the effects of climate change. It is worth saying that groups most vulnerable to sea-level rise and its threats amount to 20% of the population: these people live in environmentally fragile areas in low coastal zones, residential areas prone to flooding. In the current state of affairs, coastal zones and biodiversity are not the sole elements being at risk, but rather the whole future of the island on so many levels: as it has already been stated, endangering its already delicate balance means endangering the Mauritian economy, livelihood and overall safety. Thus, this action meets the specific needs of the island: 1) reduce import dependency and 2) introduce sustainable, replicable and climate change resilient practices to deal with water shortages and erratic rainfall. The promotion of seaweed farming will tackle at the same time several of the most crucial issues of Mauritius: water scarcity, abuse of pesticides and lack of crops diversity, which altogether help creating an economy that is fragile and subject to unforeseen event such as droughts and floods. Hence, *R.I.S.E.* seeks ***to promote the dissemination of innovative and sustainable seaweed farming systems for the dietary diversification and improvement of resilience to climate change disasters and erratic weather behaviour in Mauritius.*** By introducing local farmers to seaweed farming and processing, Mauritius will enhance general water-scarcity resilience, vary the cropping system, reduce the general dependence on fertilizers and enhance soil biota/biodiversity.

2) Targeted areas

10 villages in Southeast Mauritius as follows:

- Mahébourg/Ville Noire
- Petit Bel Air
- Rivière des Creoles
- Morcellement Ferney
- Vieux Grand Port
- Bois des Amourettes
- Bambous Virieux
- Grand Sable
- Quatre Soeurs
- Grand Rivière South East



Adapted from: City Population
<http://www.citypopulation.de/en/mauritius/admin>

The courses will be held in our lab in Deux Frère (GRSE).

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3) ACTIVITY 2.3: PROCESSING ACTIVITIES FOR SUPERFOOD CREATION

Seaweed presents an untapped business opportunity in Mauritius and other islands, with evidence supporting its diverse applications in the food industry. Seaweeds are nutritionally beneficial, being low in fat and calories while high in vitamins and minerals. Notably, *Ulva lactuca* is rich in protein, containing all essential amino acids, making it a valuable source of high-quality protein for human consumption. To promote seaweed consumption, three key issues will be addressed:

1. **Health Intervention:** Introducing seaweed into the local diet can help combat the rising prevalence of chronic conditions, such as obesity, in Mauritius.
2. **Reducing Import Reliance:** The initiative aims to decrease Mauritius' heavy dependence on food imports by focusing on locally grown products. In 2020 alone, the island imported approximately 124,970 metric tons of wheat valued at \$32 million, primarily from France and Germany. Furthermore, Mauritius imports all its edible oil requirements, including 26,957 metric tons of various oils in 2018, worth \$21 million. While about 40% of the land is cultivated, most is dedicated to sugarcane, with limited space for food crops, whose production is often hindered by inconsistent rainfall.
3. **Culinary Exploration:** Introducing seaweed will allow Mauritians to enjoy new flavours tied to local agriculture, providing numerous health benefits. For example, *Ulva lactuca* is particularly rich in iron (137 mg per 100 g), magnesium (2,250 mg per 100 g), and calcium (3,052 mg per 100 g), compared to parmesan cheese and skim milk, which contain significantly less.

In summary, promoting seaweed consumption can enhance nutrition, reduce import dependency, and diversify the local diet with new and beneficial flavours.

In connection with A.2.1., A.2.3 aims at promoting economically sustainable agro-ecological practices and, at the same time, encouraging a more diverse dietary habit on the island. At this stage, a group of women will be involved and responsible for two, interconnected types of processes. The beneficiaries will be helped along the process thanks to two sets of workshops conducted respectively by a food expert and a marketing expert. Overall, 36 hours of training will be ensured.

1) The first process is the transformation of dried seaweed into food. The type of food to be produced should take into account the island's economic and cultural background to the fullest extent possible, as these factors affect and shape local tastes and behaviours. Overall, the production will focus on 3 types of products. **a) Snacks such a crunchy flakes or crisps:** using the multipurpose structure's ovens, seaweed will be baked after being dehydrated. The first steps are crucial in order to find a product that meets the tastes of local consumers; **b) Sea salt enriched with seaweed;** **c) Seaweed flour** obtained by using the multipurpose structure's shredder. It is extremely interesting the potential of this product, as its content of carrageenan and agar plays a role as does gluten, which represent the “skeleton” in food dough: when dissolved, hygroscopic powders allow to mix many sorts of preparation, making seaweed **an alternative to wheat flour**. Carrageenan and agar function also to form gels in food (these properties are common to almost all algae), so that seaweed can also be utilized **as thickener or gelling agent**. The women involved in the initiative will be invited to submit ideas for potential products that align with local tastes, such as seaweed-based *gateaux piments* and *achard*.

2) The second process will focus on the final preparation of the products, which will be safely vacuum-sealed and either distributed to local grocery stores or consumed by the beneficiaries themselves. With the support of a marketing expert, beneficiaries will learn to promote their products and showcase the value of their work. The workshop will also help them understand customer needs and develop effective packaging and branding strategies to attract buyers. Once the seaweed products are ready for sale and the packaging design is finalized, the action staff and beneficiaries will present the final products to local stores and commercial channels.

A multipurpose structure will serve as the laboratory for the initiative's implementation. Here, the collected *Ulva lactuca* will be dried in a designated area specifically designed for this purpose. A separate storage area will be allocated for the product, and a dedicated space equipped with a projector will be used for training sessions. The laboratory also features a kitchen, previously a professional space in a former snack restaurant, where beneficiaries can gain hands-on experience in food preparation.

4) CONTENTS OF WORKS

In the course of Activity 2.3, a Food specialist will be hired to implement the following tasks:

Conduct Training Sessions on Food Processing

Course Outline: The expert will develop a detailed course of outline (**approximately 18 hours**) covering, but not limited to:

- Introduction to Food Safety
- Food Handling Techniques
- Meal Preparation Basics
- Kitchen Hygiene Practices
- Understanding Food Labels
- Safe Storage and Temperature Control

Course Objectives:

- Provide foundational training in food handling and safety.
- Educate participants on fundamental food preparation skills.
- Teach best practices for sanitation and hygiene in food production.
- Equip participants with practical techniques for safe food handling and storage.
- Explain food storage techniques to ensure quality and safety.
- Offer guidance on regulatory compliance and food safety standards: ensure understanding of food safety regulations and best practices.