

## Summary of the Project Disclosure Package for Subproject FP198 Vexxel

Sub Project Grant Agreement Title / Name of Project	<b>Vexxel</b>
Implementation country	Argentina
Location of the project	Centro de Estudios Fotosintéticos y Bioquímicos de Rosario (CEFOBI - CONICET). Facultad de Ciencias Bioquímicas y Farmacéuticas- UNR. Suipacha 531, S2002 LRK Rosario - Santa Fe – Argentina.  Link to map: <a href="https://maps.app.goo.gl/AcANadKkF3TF91K18">https://maps.app.goo.gl/AcANadKkF3TF91K18</a>
Facilities to be used	Commercial office: shared area (co-working space) less than 100 square meters. Laboratory; shared area (co-working space) between 300 and 500 square meters.  The company states that it has no plans to expand the area in the next 6 months.
Grant Period	April 2024 – February 2026
Volume Grant	100,000 EUR (this is the subsidy that will be received from the CATAL1.5°T Acceleration Program)
Amount of Co-Finance / Own Contribution	TBC
Total Budget	TBC
Project Summary	Vexxel is an intelligent delivery platform through biocapsules, which are 100% biodegradable and non-toxic. It uses biotechnology for the production of a smart biocapsule, described as a bio-input, made with fungi, equipped with sensors capable of identifying various pathogens (viruses, bacteria, fungi) and environmental conditions (humidity, temperature, UV), designed to allow it to open autonomously and release the necessary inputs at the time they are needed.  In 2022 the company had no sales.
Number of employees, organizational structure, and capacity for ESMP/ESMS implementation	It has 5 full-time employees in total, all with formal contracts according to the company, 4 are women.  The company has a top-down governance model, starting with a general direction, followed by three strategic directions: technical, security, and operations.

	<p>A distribution of the main areas of operation in the company is observed. The company currently has policies on gender, equal opportunities, anti-discrimination, and child and forced labour, which is promoted by the general management. Due to the structure of the company, it is observed that the implementation of the Environmental and Social Management Plan (ESMP) and the Environmental and Social Management System (ESMS) will be carried out by the general management, which will receive training during the acceleration program. However, the culture derived from the ESMP and the ESMS will be permeated throughout the organization.</p>
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Table 1: **A.** The purpose, nature, and scale of the activities, and the intended beneficiaries & **B** The duration of proposed activities. This section describes the purpose that the venture would give to the resources, if selected in the CATAL1.5°T Acceleration Program.

Activity / Action	Purpose	Nature and scale of the activity/action	Materials used (including raw materials), waste generation, wastewater generation	Duration of the activity/action	Intended beneficiaries
1	Move the sensors from TLR 4 to 5	<p>He is currently working in a small laboratory developing his prototype, so he has no customers or sales yet. It is financed with its own resources and private equity funds. If selected, she will use the resources to purchase molecular biology reagents, materials, equipment (a 2-liter fermenter), purification reagents, and culture media. Bioinformatics data that supports laboratory results for clients and for patents. To carry out trials to achieve the commercial authorization of the product with which they are carrying out pilot tests, in order to be able to commercialize; promote among clients in Brazil, Colombia, Argentina and visits to potential investors in the United States.</p>	<p><b>Materials Used</b></p> <p><b>Raw Materials:</b></p> <ul style="list-style-type: none"> <li>• Reagent 1 (5 grm/liter)</li> <li>• Reagent 2 (10 grm/liter)</li> <li>• Sodium chloride (5 grm/liter)</li> <li>• Culture medium (39 grm/liter)</li> <li>• Buffer (6grm/litro).</li> </ul> <p><b>Biological Materials:</b></p> <ul style="list-style-type: none"> <li>• E.Coli (0.01grm/liter)</li> <li>• Trichoderma (0.01grm/liter)</li> </ul> <p><b>Biodegradable materials:</b></p> <ul style="list-style-type: none"> <li>• Protein (450mg/month).</li> </ul> <p><b>Recycled Materials:</b></p>	Indefinite	Large Input Producers and Large Food Producing Companies

			<ul style="list-style-type: none"> <li>• Racks</li> <li>• Computer Supports</li> <li>• Micropipette Holders</li> <li>• Fermenter</li> <li>• Erlenmeyer</li> <li>• Jars</li> <li>• Pipettes.</li> </ul> <p><b>Waste generated.</b></p> <p><i>Compostable organics: 2,500 Mg/month of mushroom mycelium that can be used as fertilizer.</i></p> <p><i>Non-usable organics: 50 ml/month of ethyl acetate</i></p> <p><i>Recyclable inorganics: 1 kilogram/month of plastics</i></p> <p><i>Biological waste: 1 kilogram/month of E. Coli bacteria.</i></p> <p><b>Consumption</b></p> <ul style="list-style-type: none"> <li>• <i>Monthly volume (cubic meters) of water used in the operation of the company: 20 cubic meters.</i></li> <li>• <i>Monthly volume (cubic meters) of wastewater generated by the project: 10 cubic meters.</i></li> </ul>		
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Table 2: **C** summary of stakeholder consultations and the planned stakeholder engagement process. Information about the virtual interview phase and delivery of additional information in the screening phase.

Consultation [if applicable, place]	Date	Participants	Information and/or further Engagements Planned
<i>Mandate fit check (virtual)</i>	01-29-2024	<i>CEO &amp; Co-Founders of the venture</i>  <i>Instituto Tecnológico de Monterrey</i> <i>GIZ México – CATAL1.5°T</i> <i>LATAM</i> <i>Climate-KIC</i>	<i>Delivery of the necessary documentary evidence identified in the screening stage</i>

**D.** The available grievance mechanism(s) to receive complaints and facilitate the resolution of such from affected and potentially affected communities, groups, and individuals.

The Grievance Redress Mechanism (GRM) is a formal process for managing complaints and minimizing social risk linked to the CATAL1.5°T Initiative. The GRM process is published on the CATAL1.5°T (<https://catalist-initiative.eco/es>) website, and all Start-Ups receive brochures and all information about the GRM.

- Annex A:** Sub Project Disclosure Form (mandatory)
- Annex B+C:** ESIA and ESMP (mandatory)
- Annex D: Land Acquisition (if applicable)
- Annex E: IPP (if applicable)

Disclosure Package **Annex B & C**: ESIA and ESMP for Sub- Projects with Categorization B of GCF co-financed projects with GIZ as Accredited Entity

Tick box  of the PS Categorization by the Sub-Project: Vexxel, Argentina

- A  B  C  Does not apply  *Performance Standard 1. Environmental and Social Assessment and Management System*
- A  B  C  Does not apply  *Performance Standard 2. Labor and working conditions*
- A  B  C  Does not apply  *Performance Standard 3. Resource efficiency and pollution prevention*
- A  B  C  Does not apply  *Performance Standard 4. Community Health & Safety*
- A  B  C  Does not apply  *Performance Standard 5. Land acquisition and involuntary resettlement*
- A  B  C  Does not apply  *Performance Standard 6. Biodiversity conservation and sustainable management of living natural resources*
- A  B  C  Does not apply  *Performance Standard 7. Indigenous Peoples*
- A  B  C  Does not apply  *Performance Standard 8. Cultural heritage*

**Table 1: Environmental and social impact analysis (ESIA) and management plan (ESMP) (safeguard measures) of the FP198 Sub-Project Vexxel, Argentina**

Performance standard (PS 1-8)	Risks of negative impact and type of risk	Risk mitigation measure	Assumed Risk mitigation effectiveness	Expected results of mitigation	Execution Period and Responsibility	Budget allocated for mitigation measures
<i>PS 1. Environmental and Social Assessment and Management System</i>	Absence of an environmental and social management system that includes: (i) corporate environmental and social policy; ii) procedures for the identification, assessment, management and communication of environmental and social, health and safety risks and impacts in the project environment proportional to the risk and stages or TRL that the company intends to carry out directly; (iii) responsible persons and	<i>Establish a specific environmental and social management framework or system (ESMS) that includes or complements the Environmental and Social Policy with: i) internal procedures for identifying, assessing and managing potential environmental and occupational health and safety risks and impacts; (ii) procedures for implementing the environmental and social risk management program or plan; iii) Assign a person or persons responsible for the implementation of the ESMS and specify their functions; (iv) a mechanism for dealing with complaints with a person in charge</i>	High	<i>The environmental and social risks and impacts of the undertaking are identified, assessed and managed quickly and effectively through the ESMS.</i>	<i>6 months CEO &amp; Management Team</i>	

Performance standard (PS 1-8)	Risks of negative impact and type of risk	Risk mitigation measure	Assumed Risk mitigation effectiveness	Expected results of mitigation	Execution Period and Responsibility	Budget allocated for mitigation measures
	functions; (iv) mechanisms for monitoring and evaluation of implementation; (v) communication mechanisms; (vi) a grievance mechanism with a gender equity approach.	<i>and its functions (already in place); (v) mechanism for evaluation and continuous improvement of the ESMS.</i>				
	Potential risk of inadequate management of threats and hazards due to the lack of an emergency preparedness and response plan, which is updated as the project progresses through the stages of the project.	<i>Develop a preparedness and response plan for on-site emergency situations, including resources and mechanisms for dissemination, communication, monitoring and evaluation, documentation of the actions carried out (real and simulations if applicable) and continuous improvement.</i>	High	<i>Accidental and emergency situations directly or indirectly associated with the operations of the enterprise are prevented.</i>	6 months Operations	
<i>PS 2. Labor and working conditions</i>	<i>It presents an incomplete model employment contract that does not include the labor rights protected by the legislation and/or aligned with the requirements of PS 2, aimed at establishing, maintaining and improving relations between workers and the company.</i>	Develop a model contract that includes working conditions and terms of employment in accordance with national legislation (specify the country where it operates).	High	<i>Workers' labour rights are duly protected under PS2 and national legislation</i>	3 months CEO / CTO / COO	
	It does not present procedures for the assessment and management of occupational health and	Develop occupational safety analysis and assessment of health and safety hazards and risks specific to the work environment.	High	<i>Accidents, injuries and illnesses that may arise in the course of work are</i>	6 months CTO / COO	

Performance standard (PS 1-8)	Risks of negative impact and type of risk	Risk mitigation measure	Assumed Risk mitigation effectiveness	Expected results of mitigation	Execution Period and Responsibility	Budget allocated for mitigation measures
	<p>safety risks, nor the corresponding management programs to prevent and control the risks identified</p> <p><i>Possible biological hazards due to exposure of employees to pathogens that may occur during the isolation and growth of microorganisms in the laboratory.</i></p>	<p>Develop the Management Programs to prevent and control the identified and prioritized risks.</p>	<p>High</p>	<p><i>avoided by minimizing the causes of hazards.</i></p>		
<p><i>PS 3. Resource efficiency and pollution prevention</i></p>	<p>Possible risks due to the control and improper management of all types of waste generated, resulting in them ending up in unauthorized sites and generating environmental problems.</p>	<p>Develop a framework for a comprehensive waste management programme that includes: (i) classification; (ii) storage and labelling; (iii) transport; (iv) training of workers and (v) recording and documentation of the process</p>	<p>High</p>	<p>6 months</p> <p><i>CRO or responsible for the Environmental and Social Management System (to name).</i></p>		
<p><i>PS 4. Community Health &amp; Safety</i></p>	<p><i>Posible riesgo de gestión inadequate threat and hazard management due to the lack of an emergency preparedness and response plan, which is updated as the project progresses.</i></p>	<p><i>Develop a preparedness and response plan for on-site emergency situations, including resources and mechanisms for dissemination, communication, monitoring and evaluation, documentation of the actions carried out (real and simulations if applicable) and continuous improvement</i></p>	<p>High</p>	<p><i>Accidental and emergency situations directly or indirectly associated with the operations of the enterprise are prevented.</i></p>	<p>6 months</p> <p>Operations</p>	
<p><i>PS 6. Biodiversity conservation and sustainable management</i></p>	<p><i>Possible risks due to the non-existence or deficient application of procedures due to the use and storage of microorganisms (fungi, viruses, bacteria) and their</i></p>	<p><i>Develop or present appropriate mechanisms and procedures for the management of substances and microorganisms and evidence of training in their application.</i></p>	<p>High</p>	<p><i>The risk of significant threat to biodiversity is reduced.</i></p>	<p>3 months</p> <p><i>CRO or responsible for the Environmental and</i></p>	

Performance standard (PS 1-8)	Risks of negative impact and type of risk	Risk mitigation measure	Assumed Risk mitigation effectiveness	Expected results of mitigation	Execution Period and Responsibility	Budget allocated for mitigation measures
<i>of living natural resources</i>	<i>possible impact on biodiversity.</i>				<i>Social Management System (to name)</i>	

### **Additional support for FP198 Environmental and Social Management Framework (ESMF) start-ups: CATAL1.5°T environmental and social support for climate start-ups.**

As part of the CATAL1.5°T ESMF, the following complementary activities are carried out to implement measures to mitigate the adverse environmental and social effects of the accepted subprojects, in accordance with PS1:

1. Accepted ventures will receive support in the development of business plans, which will necessarily include environmental and social management plans. Environmental and Social Due Diligence will provide the necessary guidance to identify what type of management plans are required in accordance with the **Green Climate Fund's (GCF) Interim Social and Environmental Safeguards** and guide companies in establishing and monitoring management plans.
2. The companies selected in the Acceleration program will benefit from a reimbursable subsidy of up to 100 thousand euros. The use of reimbursable grants will be governed by a grant agreement signed with each climate venture and the Executing Entity (Instituto Tecnológico de Monterrey), which will include environmental and social clauses on:
  1. Compliance with environmental and social requirements on excluded activities.
  2. Establishment of reasonable conditions of employment, protection of the workforce, establishment of a safe and healthy working environment.
  3. Non-violations of human rights.
  4. Zero tolerance for gender-based violence and sexual exploitation, abuse, and harassment.
  5. Cumplimiento de condiciones ambientales y sociales adicionales incluidas en los planes de manejo ambiental y social.
3. In addition, the Acceleration Program will offer mentoring on environmental, social and gender issues.
4. All reports will include environmental and social reports. Environmental and social reporting requirements will be defined in the business plans.

In preparation for graduation from the Acceleration Program, supported companies will receive assistance in the preparation of long-term environmental and social management plans.