

Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context

Rules for Participation 2018

Version 1.0



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## 1 Introduction

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Government of Malta wishes to better understand the feasibility for the private sector to offer livestock farmers a sustainable solution for the holistic treatment of livestock manure and slurry. To this effect an economic model to determine the feasibility of potential solutions is being developed. For its finalisation, a number of input variables related to the customisation of proven technology for the Maltese context need to be obtained and determined. This with a view for prospective operators to demonstrate not only the proven concept of their technology, but also the financial and economic implications of their proposed operation.

The focus of this Scheme is that of the development of solutions and business proposals on Slurry Treatment Solutions from potential interested parties, whilst providing funds to enable the interested parties to carry out the necessary testing that will lead to a revised financial proposal based on any testing they wish to carry out locally or overseas. Such proposals may be put forward in respect of particular catchments of the Maltese islands, i.e. for Malta only, Gozo only and both islands together.

Whilst this Scheme is administered by the Malta Council for Science and Technology (MCST), MCST will be working closely with the Agency for the Governance of Agricultural Bioresources (GAB). GAB was set up by virtue of S.L L.N. 149 of 2017 and has a mandate to manage agricultural bioresources in a sustainable manner that positively contributes to the needs of the Maltese agricultural sector. MCST has launched this Scheme with the technical guidance of GAB to address an immediate market need on sustainable solutions for the holistic treatment of livestock manure and slurry

## 2 The Scheme

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The **Scheme** for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context, is intended to support Organisations wishing to carry out the necessary testing that will lead to a revised financial proposal based on any testing they wish to carry out locally or overseas. To this effect, MCST is making available a limited number of research grants to offer financial support to organisations that are interested in developing a business plan for the management of the entire slurry and manure generated within the Maltese territory or parts thereof as well as to contribute the necessary data required towards the development of a national economic model on the sector. In so doing, the organisations will demonstrate that their existing technology can be customised to manage Bovine, Swine and other livestock manure, slurry and / or a manure slurry mix sustainably and underpinned by circular concepts. This Scheme document should be read in conjunction with the Agricultural Waste Management Plan (<https://msdeccms.gov.mt/en/government/Press%20Releases/Documents/2016/Agricultural%20Waste%20Management%20Clean%20Version%202015%2012%202015.pdf>) for a better understanding of the nature of the livestock present in Malta.



The on farm / off farm management of manure and slurries generated by the livestock operations proves to be challenging to Maltese farmers not least because of the limited size of holding as well as the restricted amount of land that is available for receiving such manures and slurries as fertiliser. This results in the generation of nutrient amounts in manure and slurry that are far more than what is permissible by the Nitrate Directive to be applied to the limited available land since the whole Maltese territory is defined as a Nitrate Vulnerable Zone. Hence, Maltese livestock farmers often have limited options as to how, where, what when and how much manure can be spread on their land base as fertiliser; resulting in a situation of on farm nutrient accumulations that requires immediate attention. All this surplus manure/slurry needs to be processed and managed in a sustainable manner. Currently there is no infrastructure to support the processing of the excess nutrients present in these livestock manures and slurries that allows the farmer to dispose of this surplus in a financially sustainable manner<sup>1</sup>.

For the purpose of this scheme, it is assumed that the approximate livestock populations are as follows:

	<b>Malta</b>	<b>Gozo</b>
<b>Cattle</b>	<b>7,742 heads</b>	<b>4,766 heads</b>
<b>Swine</b>	<b>2,966 sows plus corresponding herd inventory</b>	<b>345 sows plus corresponding herd inventory</b>
<b>Sheep</b>	<b>8,468</b>	<b>3,659</b>
<b>Goats</b>	<b>3,682</b>	<b>1,278</b>
<b>Poultry: Layers</b>	<b>326,788</b>	<b>65,469</b>
<b>Poultry: Broilers</b>	<b>804,560</b>	<b>105,950</b>
<b>Rabbits (estimated)</b>	<b>20,000 does plus corresponding herd inventory</b>	<b>10,000 does plus corresponding herd inventory</b>

Further information on the dynamics of the Maltese livestock sector can be obtained from NSO:

[https://nso.gov.mt/en/publicatons/Publications\\_by\\_Unit/Documents/B3\\_Environment\\_Energy\\_Transport\\_Agriculture\\_Statistics/Agriculture\\_and\\_Fisheries\\_2014.pdf](https://nso.gov.mt/en/publicatons/Publications_by_Unit/Documents/B3_Environment_Energy_Transport_Agriculture_Statistics/Agriculture_and_Fisheries_2014.pdf)

Currently, the slurry, the bulk of which is generated on bovine and swine operations is generally stored in pits underlying sheds housing livestock on slats. Manure handling design that result in the formation of slurries are not appropriate within the Maltese context, in that according to local legislation, slurry (defined as being less than 30% solids) cannot be applied

<sup>1</sup> Agricultural Waste Management Plan Chapter 7



to land. With the current high animal populations and the limited capacity to produce feed stuffs in the required quantity or quality, the feed milling sector has to rely on the heavy importation of raw materials from other countries. This results in the Maltese livestock sector generating nutrient levels in manure and slurry that are far in excess of what is permissible for land application as fertiliser by the Nitrate Directive. The rest of the Animal husbandry sector i.e. poultry (broilers), sheep, goats and horses are kept on litter and produce dry manure whilst rabbits and laying hens are kept in cages that also produce manure of a dry consistency.

**Options involving Mobile equipment, Centralised plants or a combination of both, are considered acceptable as long as they are accompanied with a clear understanding of how the full-scale solution would work and its impacts, if any, are clear.**

The Call was opened on the 28<sup>th</sup> February 2018 and will close at noon on the 25<sup>th</sup> April 2018.

Successful applicants will be notified in writing by the 23<sup>rd</sup> May 2018 to proceed towards a Grant Agreement. Signature of the Grant Agreement is subject to obtaining the necessary operational permits (where applicable), by not later than 20<sup>th</sup> June 2018. Following signature of the grant agreement, the operational phase of the project must start by not later than 18<sup>th</sup> July 2018 and be concluded by 10<sup>th</sup> October 2018.

The beneficiary will have to submit the end of project Technical and Financial Report by the 24<sup>th</sup> October 2018. The end of project Audited Financial Report will have to be submitted by the 7<sup>th</sup> November 2018.

The Final full-scale project will mitigate the current environmental and economic issues of nutrient surplus from the livestock sector. The full-scale solution has to be sustainability validated against standards ISO14040 and ISO14044 and incorporate circular economy principles to be economically viable without fees from farmers. If market failure results, the issues contribution towards market failure have to be clearly defined and appropriate corrective measures suggested.

## **2.1 Scheme Scope and Focus**

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The Scheme aims to support successful applicants to contribute data required in the development of an economic model for the treatment of farm waste, to develop a business plan that charts how operators propose to treat farm waste as well as to undertake an in-situ application, and calibration, of their established technology aimed at ultimately managing livestock manure and slurries generated in the Maltese Islands.

The proposed projects and initiatives to be tested should demonstrate the potential to:

- (i) identify and test a technology mix that has the potential to manage livestock manure and slurry in a sustainable manner whilst subscribing to circular economy principles with no residual streams;
- (ii) account for all the nutrients produced on farm; i.e., the solid fraction and the liquid fraction;
- (iii) propose and test appropriate longer-term technology mix that is sustainable from economic, environmental and social aspects;
- (iii) be upscaled within a short period of time for kick-starting services on a larger scale that would enable a commercially sustainable operation.

For the purpose of this Scheme, participants should be able to demonstrate:

- i. Their ability to commence pilot operations within a period of 4 weeks of receiving notification of eligibility;
- ii. The daily amount of slurry and manure (in cubic metres) they will be able to treat during the pilot period;
- iii. Their ability to upscale and efficiently manage all livestock manure and slurry (i.e. solid and liquid fractions with special reference to the nitrogen and phosphorus components) generated in the Maltese Islands in a sustainable manner within a closed loop model (with no residuals) thus enabling it to be diverted away from the urban sewage systems;
- iv. A declaration of their interest to upscale to a sub-national or national dimension;
- v. A business plan of their proposed solution or solutions;
- vi. Their ability towards contributing to a national economic model for the management of farm waste;
- vii. The amount of resources that may be derived from the management of manure and slurry and that may be used to offset the use of natural or imported resources and their market value.
- viii. That the technology and processes adopted are sustainable from economic, environmental and social aspects.
- ix. The resource requirements, if any, to upscale the technology to cover part and/or the whole of the Maltese territory (e.g. land, permits, cost per tonne of waste processed, time frames).
- x. The technical and projected/estimated financial feasibility of the project.

All proposed technology and processes must be fully compliant with all applicable National and European directives, regulations and legislation and all necessary operating permits shall be obtained from the permitting authorities within 4 weeks of receiving notification of eligibility. In the case where the permitting authority does not provide Operating Permits, the application shall be deemed as ineligible.

All the data, results and information generated from the testing projects supported by this scheme shall be effectively made available to MCST and GAB and be in a conducive format to appropriately review the feasibility of the technology and its potential to be upscaled to a fully-fledged project that maximises economic, environmental and social goals. It shall cover at least the requirements as set out in Annex 1 to this document.

The beneficiary has to submit all the data relevant to the technical and financial feasibility of the technology used and GAB / MCST retain the right to utilise the data.

GAB shall have the right to request the collection of any further information it may require in relation to the demo project. The beneficiary shall produce a full report complying at least with the requirements as set out in Annexes 1 and 2 of this document by not later than 24<sup>th</sup> October 2018.

## 2.2 Contacts

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For general enquiries kindly contact:

Ms. Zona Ivanovic  
Scheme Coordinator  
Email: [bioresource.mcst@gov.mt](mailto:bioresource.mcst@gov.mt)  
Tel: 23602177

## 3 Definitions

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**Activities** are the tasks which were undertaken and where applicable funded through the Scheme.

**Agricultural products** means products listed in Annex I to the Treaty, with the exception of fishery and aquaculture products.



**The Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context** is the Scheme managed by the MCST with the technical assistance of GAB. It provides beneficiaries with financing to support organisations that are interested in developing a business plan and the data for the management of the entire slurry and manure generated within the Maltese territory or parts thereof as well as to contribute the necessary data required towards the development of a national economic model on the sector. In so doing, the organisations will demonstrate that their existing technology can be customised to manage Bovine, Swine and other livestock manure, slurry and / or a manure slurry mix sustainably and underpinned by circular concepts.

**Circular Concepts** means a process that will account for all the nutrients produced on livestock farms; i.e. the solid fraction, and the liquid fraction, with special reference to the nitrogen and phosphorus components, with no residual material entering waste streams.

**Consortium** means a group of two or more Partners, of which the lead Partner has to be a Maltese Legal Entity. Foreign Partners can appear within the consortium, over and above the minimum requirements set out in this definition

**Due Diligence** is an investigation of a business or person prior to signing the Grant Agreement.

**Lead Partner** means the Consortium Partner identified as being the partner responsible to ensure the correct execution of the Scheme Project Grant Agreement and will have joint and several liability together with other Project Partners for all the obligations arising from the Grant Agreement. The Lead Partner must be Maltese. The Project Coordinator shall be an employee of the Lead Partner.

**Maltese Legal Entity** means any entity created under the laws of Malta which has legal personality and which may, acting under its own name, exercise rights and be subject to obligations.

**Marketing of agricultural products** means holding or display with a view to sale, offering for sale, delivery or any other manner of placing on the market, except the first sale by a primary producer to resellers or processors and any activity preparing a product for such first sale; a sale by a primary producer to final consumers shall be considered as marketing if it takes place in separate premises reserved for that purpose.

**Partner** means any Maltese Legal Entity, as described above that forms part of a Consortium for the purposes of applying for funding under this Programme and being a signatory to the Grant Agreement.





**Project Coordinator** is the individual with experience in research project management who will assume the responsibilities defined within this document. The Project Coordinator shall be an employee of the Lead Partner of the Consortium carrying out the project.

**Public Entity** means any Maltese Public Service Department or Maltese Public Sector Entity, or any Maltese Legal Entity which has more than 50% government shareholding. Public Service refers to all Ministries and Departments; and (ii) Public Sector Entities refers to authorities, corporations, agencies and commercial public sector entities in which the Government has a majority shareholding and that are not listed on the stock exchange. Public Entities also include foundations, local councils and public academic entities. In the case of public academic entities, this includes but is not limited to a higher education entity or a research institute, whether as a whole body or as a component unit or department within such body, provided that the entity's ongoing education and research is scientifically in line with the subject of the application being submitted during this call and the relevant smart specialisation areas and provided that the higher education entity must be in possession of a license for Higher Education according to the Further and Higher Education (Licensing, Accreditation and Quality Assurance) Regulations – Subsidiary Legislation 327.433. This does not include the license for a tuition centre.

**Research** as defined under this Programme is the systematic investigation, work or research carried out in any field of science or technology through experiment, theoretical work or analysis undertaken in order to acquire new knowledge, primarily directed towards a specific practical aim or objective.

**Single undertaking** includes, for the purposes of the *de minimis* Regulation, all enterprises having at least one of the following relationships with each other:

- a) one enterprise has a majority of the shareholders' or members' voting rights in another enterprise;
- b) one enterprise has the right to appoint or remove a majority of the members of the administrative, management or supervisory body of another enterprise;
- c) one enterprise has the right to exercise a dominant influence over another enterprise pursuant to a contract entered into with that enterprise or to a provision in its memorandum or articles of association;
- d) one enterprise, which is a shareholder in or member of another enterprise, controls alone, pursuant to an agreement with other shareholders in or members of that enterprise, a majority of shareholders' or members' voting rights in that enterprise.

Enterprises having any of the relationships referred to in points (a) to (d) of the first subparagraph through one or more other enterprises shall also be considered to be a single undertaking.

## **4 Eligibility Criteria and Applications**

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This section provides details as to the criteria which must be checked in order to assess the applicant's eligibility to apply and the application's fit within this Programme.

### **4.1 Eligibility for Participation**

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Any applicants that at the time of proposal submission will have been deemed by the Council to be non-compliant with the terms and conditions of any previous or then current Grant Agreement including but not limited to applicants who at the time of proposal submission are the beneficiaries of any other MCST-funded project that is out of the Grant Agreement timelines, shall automatically be disqualified from participation in this Call.

Furthermore, applicants are to ensure eligibility under the State aid regime in line with Section 6 below.

### **4.2 Pre-requisites**

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(i) Applicants must, at the time of application be a Maltese Legal Entity having sufficient capacity with respect to suitable qualified human resources, appropriate technology acumen and financial standing to undertake such a project. Confirmation in this regard is to be provided, possibly by referencing to the primary aims and fields of activity of the applicant and past or ongoing project experiences as well as by including CVs of key personnel.

(ii) Funds shall only be granted for projects that are in line with the terms of these Rules of Participation.

(iii) The project deliverables should have a definite completion timeframe of not more than 5<sup>th</sup> October and shall include all the requirements as specified in the End of Project Technical and Financial Report Template.

(iv) Project has to be compliant with all national legislation and permitting requirements.

(v) Ability to commence proof of concept trials in a very short time frame (within 4 weeks of receiving notification of award) as a trial and which can be upscaled in the shortest possible time at a later stage if required.

(vi) Applicants shall have a good financial standing having passed the Due Diligence administrative check by MCST evaluators.

### **4.3 Funding limitations**

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(i) Funding shall only cover direct costs that are reasonably necessary for the implementation of the chosen project and, included in the proposed budget for the project which has to be authorised. Direct costs are costs that can be identified specifically within the project, or that can be directly assigned to the project activities relatively easily with a high degree of accuracy. These costs include expenditures for project senior or key personnel salaries, supplies, travel, equipment, laboratory analysis, etc. All direct cost items must be included in the budget. Eligible direct costs must be identifiable as specific costs directly linked to the performance and implementation of the project. Eligible Costs are defined in Section 10 of these Rules.

(ii) The grant shall cover 100% of the total eligible cost of the project, as specified in Section 10 of this document, capped to a maximum of €150,000.

(iii) Funding will also be granted to finance projects that involve commercial elements within its operation model in its up-scaling to meet national dimensions.

(iv) Funding may not be awarded retrospectively for already-completed projects.

(v) Funding may not be awarded for any project that is already launched prior to the day of issue of this grant scheme.

### **4.4 Other terms and conditions**

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(i) Applicants are to provide adequate support that they have stable and sufficient resources and finances to sustain the portion of the project that is not supported by the grant, such that the integrity and viability of the project can be guaranteed, as certified by documentary evidence from a financial institution licensed in Malta. Applicants must also have the necessary operational capacity, expertise and competence to undertake and complete the project within the proposed time frame. MCST will conduct a Due Diligence exercise on each shortlisted applicant, the outcome of which will dictate whether the shortlisted applicant can proceed to Grant Agreement.

(ii) Projects, interventions and activities must be covered by all necessary regulatory and other relevant permits and must be carried out in full conformity with all applicable laws and permits. MCST shall have the right to withhold or cancel any letter of acceptance or Grant Agreement, or to impose additional terms and safeguards, if the applicant as a follow-up of the release of the letter of comfort from the permitting authority fails to obtain any required authorisation within 4 weeks of receiving notification of eligibility.

Potential eligibility for funding under this scheme shall not per se constitute sufficient justification for: the granting of any permit which would otherwise not be issued; circumventing or influencing any assessment; or non-application or relaxation of any appropriate conditions or quality standards.

(iii) Wherever relevant (e.g. in case of physical interventions on a building or site), the beneficiary must provide legally binding documentation that provides sufficient evidence of ownership, title, right of use or consent to intervene.

(iv) Non-disclosure of any required information (including any details required for processing of the application or for subsequent administration, verification or monitoring), or submission of misleading information, shall invalidate the application and may also constitute grounds for judicial or other proceedings against the applicant.

Programme funding for successful project submissions will be on the basis of a 20% cash advance and balance settled after and in accordance to the technical, financial and audited financial reports submitted for the project. Funding will be regulated through a Grant Agreement establishing the terms and conditions governing the financing of the project.

Funding under this Programme is made available on the basis that any applicant does not benefit from any other grant or financial incentive in respect of the expenses related to execution of the project.

A minimum of 195 marks out of 300 marks must be achieved through the independent scientific evaluation in order to be eligible for the grant. Eligible proposals are ranked based on scores obtained. The number of projects selected for funding will correspond to the funds available under the Scheme. The decision of the Council on selection of projects is final and binding.

Any Maltese Legal Entity as described in Section 3 may be a beneficiary in a project and will be eligible for funding subject to the terms and conditions laid out in this document.

## **5 Consortium**

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Whilst a Consortium is not a requirement for eligibility to this Scheme, as in fact, a Maltese Legal Entity may be the sole applicant, should a Consortium be proposed at application stage, this shall only be eligible if the conditions outlined in the Definitions section of this document for a “Consortium”, are satisfied.

One of the Partners should be designated as the Lead Partner and will be responsible for the application for the Scheme, the appointment of a project coordinator and the correct execution of the project. The Lead Partner must be a Maltese Legal Entity.

Foreign entities are eligible to participate as a partner in a project and as a signatory to the Grant Agreement as described in the definition of the term “Partner”. However, foreign entities cannot receive direct funding through the grant. For those projects that require the participation of a foreign entity at a cost to the project, the foreign entities should be engaged through subcontracting as opposed to a partner and signatory in the grant agreement.

### **5.1 Project Coordinator**

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In the event that an application is submitted by a Consortium, the project proposal must be submitted by the lead partner on behalf of the Consortium, with prior endorsement and signature of application by the legal representative of each Partner. Should the endorsement be absent, a delegated authority should be sought and achieved. The role of Project Coordinator shall be performed by a physical person who is an employee of the Lead Partner. Legal entities other than physical persons, as well as foreign entities are not eligible to perform this role.

The Project Coordinator has overall responsibility for the project, and shall have the following responsibilities:

- ✓ To coordinate the timely development of the project, including establishing and managing project activities, timeframes and financial estimates;
- ✓ To coordinate the timely activities of the individual project Partners on an ongoing basis, and to ensure that they fulfil their obligations in terms of the Contractual Agreement;
- ✓ To compile all reports including Technical and Financial Reports including submissions by all project Partners in a timely fashion;
- ✓ To act as the main point of contact between the Council and the project Partners;

## 5.2 Lead Partner

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The Lead Partner is responsible to ensure that the Project Coordinator complies with all obligations assigned within the contract governing this grant, including being responsible for the timely submission of reports and effective execution of the project.

## 6 Eligibility Under the State Aid Regime

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This Programme operates under the *de Minimis* State Aid regime, which stipulates that a single undertaking cannot receive more than €200,000 in aid over any 3-year period through schemes operating under this regime. Applicants should ensure and declare they are eligible for the requested grant under State Aid rules before submitting an application.

For the purposes of this Section, an “undertaking” shall mean any entity engaged in an economic activity, regardless of its legal status and the way in which it is financed.

All applications should be accompanied by a State Aid de Minimis declaration form. **For successful applications, an updated declaration form shall be provided at the time of the signing of the Grant Agreement, ensuring that the applicant remain eligible for funding under the state aid regime.**

For the purposes of the *de Minimis* Regulation, “Single Undertaking” includes all enterprises having at least one of the following relationships with each other:

- (a) One enterprise has a majority of the shareholders’ or members’ voting rights in another enterprise;
- (b) One enterprise has the right to appoint or remove a majority of the members of the administrative, management or supervisory body of another enterprise;
- (c) One enterprise has the right to exercise a dominant influence on another enterprise pursuant to a contract entered into with that enterprise or to a provision in its memorandum or articles of association;
- (d) One enterprise, which is a shareholder in or member of another enterprise, controls alone, pursuant to an agreement with other shareholders in or members of that enterprise, a majority of shareholders’ or members’ voting rights in that enterprise.

Enterprises having any of the relationships referred to in points (a) to (d) above through one or more other enterprises shall be considered to be a single undertaking.

The terms and conditions set out in these guidelines are in line with the Commission Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de Minimis* aid. In line with

Article 1 of this Regulation, specific sectors (such as agriculture, fisheries and aquaculture), are excluded from this regime and applications in these sectors are therefore outside the scope of this programme.

The successful applicants are expected to sign the necessary forms before any funds are transferred and provide the necessary reports in accordance with *de Minimis* State Aid regulations.

This Scheme is not available to undertakings in difficulty within the meaning of the Guidelines on State Aid for rescuing and restructuring non-financial undertakings in difficulty.

## **7 The Application Process**

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The Call for Project Proposals will be open from **28<sup>th</sup> February 2018** to **25<sup>th</sup> April 2018**. The selection and funding of proposals under this Programme shall be on a competitive basis.

Applicants should refer to the eligibility criteria in Section 4.

### **7.1 Application Submission**

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Each application shall be assessed by MCST against the following criteria:

Applications received by the closing date for applications shall be evaluated using a two-stage procedure, first involving eligibility screening and administrative compliance assessment, and then, technical evaluation in terms of definite criteria.

7.1.1 The first stage of the evaluation procedure involves eligibility screening checks and administrative compliance assessment. At this stage, proposals will be checked for completeness (e.g. whether all relevant sections of the application forms were filled in correctly, whether all requested accompanying documentation was enclosed, whether the forms are duly endorsed by an authorised representative of the organisation, etc), as well as for compliance with the eligibility criteria. Any incomplete or administratively non-compliant proposals, or proposals from ineligible organisations, shall not be evaluated further.

7.1.2 After eligibility screening checks and administrative compliance assessment are completed, the proposal shall undergo technical evaluation, according to the following criteria:



**i) Relevance of the proposed project to the priorities of the Grant:**

- extent to which the project meets the objectives, parameters, requirements and criteria, and addresses a priority area, as set out in these guidelines and in the call for applications. This means the ability to efficiently manage all livestock manure and slurry that is, the solid and liquid fractions with special reference to the nitrogen and phosphorus components, generated in the Maltese Islands in a sustainable manner within a circular economy concept thus enabling it to be diverted away from the urban sewage systems. (maximum score 25 points)
- demonstrated need, appropriate feasibility, effectiveness, reliability and sustainability of the proposal in meeting and addressing needs and providing tangible benefits in the sustainable management of livestock manure and slurry within a closed loop model from an economic, environmental and social aspects. Value for money in terms of the amount of treated slurry during the trial month period to the requested grant amount will also be taken into account. (maximum score 25 points)
- the wider implications of the project, particularly any other benefits, adverse impacts or consequences on the environment or social aspects. (maximum score 25 points)
- feasibility of achieving the goal of long term solution towards the sustainable management of livestock manure and slurry within a closed loop system from an economic, environmental and social aspects. (maximum score 25 points)

This criterion carries a maximum score of 100 out of the potential score of 300.

**ii) Quality of the proposal:**

- presentation, structure and comprehensiveness of the project plans. (maximum score 25 points)
- clarity of focus on achieving the declared outcomes in the most technologically effective way as it applies to the Maltese scenario supported with appropriate scientific evidence. (maximum score 25 points)
- soundness of business plan, budget and value for money; securing net long-term benefit. (maximum score 25 points)
- the suitability, effectiveness and reliability of proposed methodologies, in meeting the closed loop model principle in relation to the solid and liquid fractions with special reference to the nitrogen and phosphorus components. (maximum score 25 points)

This criterion carries a maximum score of 100 out of the potential score of 300.





**iii) Organisational and administrative capacity of applicant to carry out the proposed project:**

- sufficiency of resources of the organisation to carry out the proposed project, including but not limited to financial soundness, human resource capacity, appropriate infrastructure and technology. (maximum score 25 points)
- demonstrated ability, competence, experience and capacity of the organisation to successfully and lawfully implement the project in a timely and effective manner. (maximum score 25 points)
- the organisation's track record to meet appropriate standards. (maximum score 25 points)
- in the upscale to national level phase, the following is required: time to apply solution to a declared catchment; ability to scale up solution and to operate without any financial input from farmers or government; minimum throughput required to operate without any financial input from farmers or government. (maximum score 25 points)

This criterion carries a maximum score of 100 out of the potential score of 300.

A technical evaluation pass mark of 65% for each criterion is set. Proposals scoring less than the pass mark for each criterion shall not be considered further. Those proposals scoring above the pass mark for each individual criterion shall have their total score computed and shall be shortlisted for support in the order of priority.

**A minimum of 195 marks (equalling 65% of 300 points) must be achieved through the independent scientific evaluation in order to be eligible for the grant.**

7.1.3 Wherever more than one eligible proposal is received from a single applicant organisation, and such proposals obtain the pass mark stipulated above and are thus shortlisted for funding support, MCST shall, in its final ranking decision, have regard to the overall number of applicant organisations participating in a given call for applications, the number of eligible proposals per applicant organisation, and the availability of funds under the Call, so as to ensure a balanced allocation of funding support across beneficiary organisations participating in a given call.

7.1.4 Proposals may be approved wholly or rejected, on the basis of the above criteria. Qualifying proposals shall be awarded funding support, subject to availability of funds.

The project application must present a coherent, comprehensive and credible plan based on:

- ✓ Reasonable estimates of human resources, finance, deliverables and timeframes; and
- ✓ Templates provided by the Council.



**Submission, evaluation and selection of project applications will be in the form of a one-stage process. The applicant should ensure complete compliance to the ‘Rules for Participation’ explained in this document, prior to submission as no amendment or negotiations are allowed after submission and any unapproved deviations will result in the failure of the application during the administrative check.**

The Application Form must be dated, signed and initialised (stamped or signed) on each page by the applicant’s or in the case of a Consortium by the Lead Partner’s legal representative. Additionally, the legal representative of each participating organisation within the consortium must sign off on the application and enter the date of signature in blue ink (not electronically).

The content of the Application Form will be directly appended to the Grant Agreements for successful applicants and will constitute the Grant Agreement technical obligations.

Application Forms can either be sent electronically to; [bioresource.mcst@gov.mt](mailto:bioresource.mcst@gov.mt) with “Programme Application Submission” as a subject heading or submitted by hand to

Ms. Zona Ivanovic  
Scheme Coordinator  
R&I Unit,  
The Malta Council for Science and Technology,  
Villa Bighi,  
Kalkara KKR 1320

Email: [bioresource.mcst@gov.mt](mailto:bioresource.mcst@gov.mt)  
Tel: 23602177

The Malta Council for Science and Technology  
Villa Bighi, Kalkara KKR 1320

In both cases, it is the responsibility of the applicant to ensure that a confirmation of receipt is provided.

All Submissions shall include:

- ✓ The application form in MS Word (.docx) format and a signed scanned copy (to be sent by email or on a pen drive)
- ✓ A precise plan of project activities, timeframes and deliverables.
- ✓ A precise indication of project costs for the funding being requested in the application



- ✓ A draft Business Proposal aimed at the holistic approach to the sustainable management of livestock manure and slurry within a circular economy context
- ✓ Curricula Vitae of key researchers including relevant track records. These should clearly establish that the applicant/consortium has the potential to carry out the project.
- ✓ A detailed plan of how partners knowledge and, where applicable subcontractors, will be used to perform the project tasks and to achieve the project objectives. (At this stage, if subcontractors have not been identified, one should mention the tasks that will be passed on and the expertise required.)
- ✓ The De Minimis State Aid Declaration Form (An updated State Aid Declaration form is to be submitted upon the signing of the Grant Agreement should the project be selected for funding).
- ✓ Memorandum & Articles of Association of all partners (excluding public entities).
- ✓ Audited financial statements for last 3 fiscal years of all partners. (In the event that the Partner is a start-up and the above documents are not available, the Partner shall provide the financial projections for three (3) years signed by an independent certified public accountant, including:
  - an income statement,
  - a cash flow statement, and
  - a statement of financial position)

It should be noted that emails larger than 6MB shall be automatically rejected by the system. The applicant may make use of cloud storage.

All received applications shall be acknowledged in writing or by email. Incomplete applications will not be considered.

## **7.2 Considerations at Application Stage**

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### **7.2.1 Respecting Lead Times**

All organisations, including the Council, have their internal procedures for processing, approving and signing off on legally binding documents. Beneficiaries are to ensure that they are aware of these lead times in their organisation as well as in the other organisations constituting the Consortium. It is the applicant's responsibility to ask for information on lead times pertaining to the Council.

Partners should also take into account personal commitments, vacation leave etc, when planning to submit an application. **All project application submissions, which must reach the Council at noon (CET) on the day of the deadline, must be dated, signed and**

**initialised (stamped or signed) on each page by the applicant’s legal representative, or in the case of a Consortium by the Lead Partner’s legal representative and must include signatures of the legal representatives of each respective participating organisation within the Consortium.**

### **7.2.2 Assistance with Applications**

Prospective Project Partners are encouraged to seek the advice of the Council in the preparation of the project application. This should help identify any areas of concern prior to the submission of the application and lead to a better quality of submission. Advice shall only be given in respect to these Rules for Participation and not on technical grounds. Applicants are particularly encouraged to seek the Council’s guidance through proposal-specific one-to-one sessions to ensure that the single-stage application documentation is complete and effective, as once submitted, cannot be edited.

### **7.3 Deviations**

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Applicants should note that:

- Transfers of project funds between line items of a single partner, totalling a maximum of 5% of that partner’s overall budget per stage, are automatically allowed and do not require prior approval by the Council. A clear indication of such transfers needs to be illustrated in the end of stage financial reports and all reallocations are to be appropriate and within the scope of the project and its deliverables.
- Transfer of project funds between line items that are greater than 10% of the project value, will be considered by the Council upon an official, signed request by the coordinator to the Council. The change will then be implemented in an addendum signed by all partners.

## **8 Confidentiality of Submissions**

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Unless otherwise indicated, all project application submissions except for the abstract, shall be treated in strict confidence. However, all project applications will be passed on in their entirety to the external evaluators and due diligence experts, who are bound by confidentiality and who shall also be required to declare that they do not have any conflict of interest in reviewing the individual proposals. All evaluators are bound by confidentiality.

## **9 Programme Parameters**

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The Council reserves the right to carry out financial and/or technical audits to its discretion at any time within the project to ensure that Programme Parameters as per contractual obligations are being observed.

### **9.1 Mandatory Deliverables**

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The beneficiary or lead partner should:

- ✓ During the duration of the project or within three (3) months from termination, publish at least one (1) research paper based on the work carried out throughout the Project in a pre-peer reviewed open access repository. GAB is to be co-author on all such publications.

Provided that if the Beneficiary wishes to publish a research paper in a peer-reviewed closed-access journal, then the Beneficiary must obtain written approval from the Council by proving to the satisfaction of the Managing Authority through the submission of adequate documentary evidence that such a closed-access journal enjoys a higher impact factor than the peer reviewed open-access journal with the highest impact factor in the same area and that the applicant has the intention of publishing in an open access repository after the embargo comes to an end; then the Beneficiary will not be held in breach of this particular obligation.

Provided further that if the Beneficiary claims that such an attempt to publish this research paper will have been unsuccessful, the Beneficiary must prove to the satisfaction of MCST and through the submission of sufficient and adequate documentary evidence that such an attempt to publish a research paper in terms of the requirements of this Clause was in fact made. Sufficient and adequate documentary evidence includes evidence that the paper was actually submitted for publication and documentary evidence that the paper was rejected for publication. If MCST is satisfied with the evidence provided, then the Beneficiary will not be held in breach of this particular obligation.

A copy of all publications must be presented to the Council before any retention is paid by the same.

- ✓ MCST may request the publishing of at least two articles in local newspapers or magazines. These should not contain intellectual property but should raise awareness about the project and its benefits. A copy of these should be presented to the Council within two weeks of publication.



- ✓ Report on project progress as per the list hereunder and in line with the templates provided:
  - Hold a minimum of two interim meetings to verbally update the Council on progress
  - End of Project Technical Report reflecting the information requested in Annex 1;
  - End of Project Financial Report and Audit Report.

The reports are to include sufficient evidence on the achievement of the project objectives as well as the parameters indicated in the application and should be provided in accordance with the templates presented to the Coordinator by the Council.

Any changes to the project objectives, work-packages or any other parameter committed in the application are to be communicated in writing to the Council, at least one month prior to the deadline, who will then seek approval from the Unit Director. A clear justification in writing should be provided. The Council will acknowledge receipt of the request within five working days and reply in a timely manner so as not to affect project performance.

Acceptance or otherwise of any changes is the sole discretion of the Council and its decision is binding and final. Any other communication is not considered valid or binding.

## **10 Eligible Costs**

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10.1 The grant has to demonstrate the viability of the farm waste to resource approach envisaging proper processes to allow for the reuse of wastewater, energy and/or any bioresource. Ideally the proposed systems should not emit any waste. One of the positive spin-offs for advanced manure processing systems should respect the correct level of health and environmental safety in the management of livestock manure, and to increase the level of confidence in the treatment methods between manure/slurry producers or handlers and regulatory bodies.

3.2 The Agency for the Governance of Agriculture Bio-resources has identified the following non-exhaustive list of beneficial actions that would be eligible for support through funding. A list of eligible actions falling within the scope of the current scheme are:

### **Structures**

- Minor structural alterations to already existing structures;
- The renting or purchase of mobile platform;



- The renting or purchase of hard & software technological directly linked to the proposed process;
- The construction of structures that require a Planning Authority permit will **NOT** be eligible for the purpose of this grant.

However, Government may be in a position of making available a site within the Government premises at Ghammieri on which the Technology mix can be tested.

### **Processes**

- Mechanical dewatering of slurry
- Nitrogen and phosphorus extraction and harvesting from manure and slurry or part thereof
- Production of soil improvers, crystalline / solid / liquid fertiliser in saleable commodities
- Conversion of biomass into other saleable products or formats
- The incorporation of the liquid fraction in a circular manner so as to make the efficient use of this resource

### **Financial:**

- Development of business plan
- Quantifying of parameters required for national economic model

Eligible direct costs are those costs incurred directly by the Partners during the duration of the project and used primarily for the purpose of achieving the objectives of the project. All eligible expenses must be incurred between the Start Date and the End Date of the Project and must be limited to the budgeted value.

Start Date means the date which is stated in the grant agreement.

End Date means the date when the Project period, having commenced on the Start Date, expires.

Project period is the time required to execute the Project as indicated by the Partners.

Project Value means the entire project budget.

Project Grant means the granted funding provided.

The eligible direct costs are:

- Personnel Costs:

This includes any senior or key personnel from the applicant's organisation or supporting organisations who are dedicating effort to this project including the development of the business plan.

There is no limit on the number of employees per project other than that the total cost of funded hours per project will not exceed 20% of the project value.

The hourly rate (z) is calculated using the formula:

$€ z = \text{(basic salary + allowances)} / \text{yearly weekday hours}$ . Eligible salaries are pinned to the following hourly rates (including National Insurance and Inland Revenue and allowances) and personnel limits per project:

Role in Project	Hourly rates	Limits per project
Top Management or equivalent	€ 27.72/hour to € 34.13/ hour	Max 2 per project
Middle Management, or equivalent	€ 19.71/hour to € 27.71/ hour	Max 2 per project
Senior Researcher <sup>2</sup> or equivalent	€ 19.71/hour to € 27.71/ hour	Max 2 per project
Researcher <sup>3</sup> or equivalent	€10.94 to € 19.70/hour	No Limits
Operational, technician, research support assistant or equivalent	up to €10.93/hour	No Limits

Personnel in salary brackets that are higher than those noted above will still only be reimbursed at the rates of the eligible brackets above depending on their role in the project. The hourly rates will have to be noted in the applications along with the number of hours on the project per individual.

The salary of senior researchers, researchers, technicians, operators and research support assistants that are employed **specifically** for the project would not form part of the personnel

<sup>2</sup> The term 'senior researcher' is to be used for a postdoctoral researcher with a specialist and high level of local and international experience in the field. Individuals possessing a high level of experience in industry can still be considered. The applicant is to confirm this judgement with MCST well in advance of submitting the application form.

<sup>3</sup> The term 'researcher' is to be used for a Bachelor's, Master's or a Ph.D. degree holder and hence the hourly rate should be equivalent to the degree held by the relevant individual.





costs limit of 20% of the project value. This provision is not applicable to existing personnel that are provided with separate part time contracts to extend their working hours with the entity, for the purpose of the project.

Personnel Costs related to Project Management are further limited to 10% of the project value and form part of the 20% limit set on personnel costs. Any project management which is not carried out by any of the partners shall be deemed to be subcontracting and be subject to the 10% maximum threshold detailed herein.

Filled time sheets are to be retained for all personnel, including students, as proof of number of hours spent on the project. Documentation of the utilisation of the employees' internally funded research quota for other research activities is to be retained as this evidence may be required by the auditors.

- Specialised equipment: Purchase of specialised equipment including software.

Equipment costs may include the following, depending on project requirements and funding rules: New equipment, import duty and delivery costs Charge out rates for use / rental of existing equipment - for access to certain facilities servicing / maintenance costs of equipment, Equipment re-location costs, and restructuring works necessary to install/house certain equipment.

- Travel Costs are eligible if strictly related to the execution of the project

Travel costs should be included only for senior or key personnel individuals from within the applicant's organization or supporting organisations who are dedicating effort to this project institution. The budget justification should include the destination, number of people travelling and dates or duration of your stay for all anticipated travel. Travel shall be considered eligible if it is the most financially advantageous path of travel utilizing normal commercial transport in the economy class.

- Scientific information: Access to scientific information sources including databases and publications

Consultant Services: Consultants are entities that provide advice, but should not be making decisions for the direction of the project.



## **10.1 Subcontracted Activities**

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Subcontracted Activity means any activity related to the project, (including but not limited to consultancy), which is not carried out directly by a Partner or its employees, but is carried out by any third party (local or foreign) individual, company, partnership or entity, under whatsoever terms and conditions.

## **10.2 Audits**

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Eligible Costs are to conform to the following, and are subject to the final audit scrutiny:

- Any expenses incurred during the course of the project must be consistent with the principles of economy, efficiency and effectiveness.
- In the event of purchases of any value, private entity partners are required to demonstrate adequate market testing, obtaining three quotations from three different, independent, and relevant sources. This is not applicable when a beneficiary intends to access specific technologies as core technologies for the proposed processes. In this case, the beneficiary would need to provide a valid justification to the effect that the technology used is not subject to market price competition, as would be the case for instance through the use of patented technologies and processes etc.
- Public entity partners are to follow Public Procurement Regulations in their entirety.
- Commercial transactions between consortium partners, or between a consortium partner and a company with similar shareholding to a consortium partner, is not allowed.

## **10.3 Eligible Indirect Costs**

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Overheads will be covered at 10% of direct eligible costs, excluding the costs of (1) subcontracting and (2) items of equipment above €5000 and (3) consumables above €5000.

Note that for equipment, the capping of €500 is per piece while for consumables, the capping of €500 is for the total amount of consumables per partner. The cost of the audited financial report is part of the indirect cost.

## **10.4 Ineligible Costs**

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The following expenditure shall be considered as ineligible costs:

- ✓ Expenses related to loans, interest, etc
- ✓ Recoverable value added tax
- ✓ Expenses which are recoverable through other funding mechanisms
- ✓ Re-purchase of equipment originally procured through other funding mechanisms



- ✓ Purchase of equipment from partners or their subsidiaries within the consortium
- ✓ Opportunity costs related to foregone production and production downtime arising from the allocation of resources to the Project
- ✓ Any activity related to the reproduction of a commercial product or process by a physical examination of an existing system or from plans, blueprints, detailed specifications or publicly available information.
- ✓ Standard office equipment/ stationery
- ✓ Organising a conference
- ✓ Personnel hours for travelling

## **11 Post Selection Process**

### **11.1 The Grant Agreement**

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Successful applicants shall enter into a funding agreement with MCST. The funding agreement shall be subject to the conditions set out in these guidelines as well as those contained in the call for applications, and shall also include any specific conditions and arrangements as necessary to ensure proper governance and enforcement of the grant conditions as well as effective implementation of the test technology.

In accepting a grant, a beneficiary is expected to:

- (i) Ensure that all necessary permits to operate the project are in hand within 4 weeks of receiving notification of eligibility and that the project commences promptly and progresses steadily;
- (ii) Submit performance reports to the satisfaction of MCST;
- (iii) Provide due acknowledgement to MCST and GAB in all publications and reports, all informative signage, and all public communications relating to the approved project; and
- (iv) Ensure that all funds are used in line with the grant conditions.

20% of the grant will be given to the beneficiary upon signing of the grant agreement, and the remaining 80% will be given upon certified completion of the project to MCST satisfaction. For this purpose, the beneficiary shall, within one month following project completion, submit to the MCST a final progress report and a completion certificate, also including documentary evidence and photographs to confirm that all project components have been successfully implemented to the required standards. A project audited financial report is also required to ascertain satisfactory completion of the project.

Any unspent funds shall be returned back within one month of project completion, failing which these will be considered as a public debt due to MCST on which commercial interest will be charged.

Should an organisation benefitting from a grant wish to dispose, within a period of 5 years from such grant, of any asset that had been purchased through such grant funds and had a value exceeding €2,000 at that time, it must submit a written application requesting consent to the disposal.

Following the successful evaluation of the application, the Consortium members will be invited to sign a Grant Agreement establishing the terms and conditions governing the financing of the project as well as a data co-ownership agreement. The Project Application including but not limited to milestones, compliance and reporting obligations shall constitute an integral part of the Grant Agreement.

Hard copies of the Grant Agreement must be signed by all beneficiaries within two working days from the date on which the applicant receives them. In the case of a consortium, the coordinator should ensure that all members of Consortium are available to provide their signature during this 2 working day timeframe. Failure to comply with the stipulated timeframe will result in a withdrawal of the offer for funding.

Together with the signed copies of the Grant Agreement, the beneficiary or Project Coordinator as the case may be, must provide two (2) images related to the project and an abstract on the project. These will be used to publicise the award.

## **11.2 Start Date and End Date**

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The project will start on a pre-determined date as agreed by all the respective parties and determined in the Grant Agreement, which date shall be a date after the date of signature of this agreement by the Executive Chairman of the Malta Council for Science and Technology.

The Council will endeavour to transfer the first tranche of funding to the beneficiary's Project account as soon as possible after the Agreement Date, as described in the Grant Agreement.

Between the Agreement Date and the Start Date, the beneficiary should ensure that all activities required for a smooth project start are completed. These may include but not limited to:

- ✓ obtaining quotations for procurement purposes
- ✓ issuing a human resources call
- ✓ opening a bank account for the depositing of the first tranche



**To be eligible for funding, all expenses must be incurred between the Start Date and the End Date of the Project.**

## **12 Double Funding**

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Funding under this Programme is made available on the basis that none of the project Partners have benefited and will not benefit from any other grant or financial incentive of whatever nature, applied for and/or utilised for the same scope as that subject of the funding requested under this Programme. Provided that, in the case where the application covers work that is part of a larger project, the Partner must submit a table as an appendix to the application form that shows a comprehensive list of the items of work and the source of funding for each item.

By signing the Grant Agreement, project partners are automatically accepting and authorising the Council to exchange essential information related to the project with other funding agencies, both local and overseas, for any necessary checks. Any occurrence of double funding should be communicated in writing to the Unit Director prior to the signing of the Grant Agreement.

## **13 Funding, Management and Progress Monitoring**

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### **13.1 Allocation and Disbursement of Funding**

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Total financial contribution over the lifetime of the project shall not exceed the funding limit as established in the Grant Agreement, irrespective of actual expenditure.

The periodic funding will be allocated according to the following schedule:

At the beginning of the project, the Council will provide 20% of the grant as pre-financing to the beneficiary. This will include both direct and indirect eligible costs.

The balance of the grant will be due upon successful project closure and the submission of technical and audited financial reports.

The beneficiary, within 30 days of project tasks completion, will be required to submit a Technical Stage Report reflecting all the requirements stated in Annex 1, as well as an audited Financial Report. The latter should contain details of actual expenditure over the past stage, together with an updated forecast of projected expenditure for the following stage. In the case of a Consortium, such details must be broken down for each Project Partner.

Normally underspends are retrieved by the Council following the financial audited report. However, the Council reserves the right to modify tranche payments if it deems that the underspend within the previous stage is considerable.

In cases where an extension is required, beneficiaries are expected to notify the Council, in writing, at least one month prior to the deadline. Such notification should be sent to Ms. Zona Ivanovic on [bioresource.mcst@gov.mt](mailto:bioresource.mcst@gov.mt)

### **13.2 Subcontracting**

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Where a component of the project work is a Subcontracted Activity, the following considerations shall apply:

The beneficiary/Lead Partner remains responsible for the timely delivery of the subcontracted tasks;

The beneficiary/Lead Partner shall ensure that such a third party is selected in a manner which is transparent, fair and impartial and the attainment of any services or goods must respect the procurement guidelines noted in section 10.2.

Subcontracting to foreign companies should only be considered if suitable expertise is not available locally. This must be duly justified.

### **13.3 Final Financial Audit**

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Following the termination of the project or expiry of the Grant Agreement, the beneficiary/Lead Partner will be required to submit a Final Technical Project Report together with an Audited Final Financial Report for the whole project, thus covering the work and expenditure undertaken by all the Partners. The Final Financial Report needs to be audited by certified auditors appointed by each of the partners where each auditor is responsible for the financial audit of the relevant partner and approved by the Council once submitted. The audit should determine the total eligible costs and compare these to funds forwarded to the Partners. The Council reserves the right to appoint an auditor to audit the Project Financial Audit as submitted by the Partners. Following finalisation of the financial audit, the technical audit may be performed based on the templates provided by the Council.

As soon as the verifications and audits are finalised and cleared the Council will release the retention money due to the Partners. In the case of overpayment, the Partners will be required

to refund the under-spend amount to the Council within a specific timeframe, or as agreed to with the Council, through the Project Coordinator.

### **13.4 The Technical and Financial Reports**

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The Technical and Financial Reports should reflect Annex 1 and be in the form of a refined Business Plan and include:

- ✓ An account of project activity and achievements over the past stage for each Partner compared with the originally submitted application.
- ✓ An account of actual expenditure over the past stage for each Partner compared with the originally submitted budgeted expenditure. All financial reports must be signed by the person responsible for the financial management of the Partner, and assembled as per the instructions in the Grant Agreement;

Technical and financial report templates will be provided with the Grant Agreement which the beneficiary/consortium are requested to follow.

Over and above the audit responsibilities of the lead partner, the Council may conduct a detailed audit consisting of a financial and a technical part, following the completion of the project. The 3-part audit will consist of the following:

#### The financial audit

- Accounts
- Physical Inventory
- Time-sheets and payslips
- Receipts for all equipment and consumables
- Bank statements for the Project Account

#### The Project Management Audit

- Schedule management
- Change management
- Deliverables

#### Technical Audit

- Brief summary of the project including scientific hypothesis investigated
- Interpretation of Scheme Results
- Project's impact

The Council reserves the right to request additional project-related information and conduct intermediate audits at any time.

In the event that a project is found to be in breach of the Grant Agreement or to materially depart from the submitted application, the Council reserves the right to discontinue the award and the Partners may be required to refund the Grant in part or in full. In any such event, the Council may also exclude an applicant from participating in future calls of the Programme.

### **13.5 Accountability**

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Each Partner should keep a separate bank account or records, clearly distinguishable from its other accounting records. All relevant expenses must be recorded in these accounts.

Eligible expenses must have been determined in accordance with the usual accounting and management principles and practices of the Partner. Direct eligible costs must be backed up with the relevant documentation as specified in the Grant Agreement.

### **14 Referencing**

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Any articles and text material related to the project should include the words:

‘Project <Project Name> financed by the Malta Council for Science & Technology, for and on behalf of the Foundation for Science and Technology, through the Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context.

Any websites or printed material related to the project should also include the Council logo, the Ministry logo or any other logo related to this Programme as provided by the Council. Such material should follow the specifications described in the Council’s Guidelines.

During the Term of Agreement and for five (5) years thereafter, the Partners shall include and prominently feature the Council and this Programme in any publicity related to the project, as per the Council’s Guidelines.

All publications should be approved by the Council before publication and should make mention of the Council as per above guidelines. In the case where printed material is published without a mention of the Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context and the Council, the Consortium shall be obliged to publish a correction at its own expense in the subsequent issue of the publication. This is also applicable for published material produced by persons who are not members of the consortium. In the case



where such publicity does not mention the Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context and the Council, associated costs will be considered ineligible.

## **15 Supervening Circumstances**

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The beneficiary is obliged to immediately advise MCST, of any internal or extraneous significant event which might affect the validity or implementation of the project. This obligation applies to the entire period between the submission of the preliminary project application and the completion of the project.

The Council shall acknowledge receipt within five (5) working days. The reply will either give such directives as it deems necessary for the furtherance on the project or re-assess the project in its entirety accordingly.

Failure on the part of the beneficiary to respect this obligation may be deemed by the Council to constitute material non-compliance on the part of the Beneficiary and the Council may thereafter take such action as is necessary in terms of the Grant Agreement in consequence of such non-compliance.

If during the course of a project a Partner withdraws from the Consortium, the Lead Partner will advise MCST immediately. The Council shall then, at its own discretion either gives such directives as it deems necessary for the reallocation of tasks among the remaining Partners or the nomination of a replacement Partner, for the furtherance on the project or re-assess the project in its entirety accordingly.

## **17 Default**

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If the implementation of a project becomes impossible or if the Partners fail to implement it, the Council shall be entitled to take any action it deems necessary, including, but not limited to, the withdrawal of funding for the project and the collection of refunds of money already paid out. A similar course of action may be followed if a project is in default as a result of not meeting one or more of its obligations. However, the Council will provide a maximum of two notices indicating a rectification period of one month each.



## **18 Interpretation of Rules**

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This document endeavours to establish comprehensive and unambiguous rules governing participation in the Scheme for the Provision of Proposals aimed at a Holistic Approach to the Sustainable Management of Livestock Manure and Slurry within a Circular Economy Context. However, should circumstances arise where the rules are inadequate, unclear, and ambiguous or conflicting, the Council shall exercise its discretion in the interpretation of the rules or will extrapolate the rules as necessary through the setting up of ad hoc committees.

## ANNEX ONE

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### *Covering letter to explain context of data to be collected to justify experimental approach through competition and state aid*

Livestock waste management has become a national challenge with several implications on water resource management, environmental performance and the competitiveness of the agricultural sector, amongst others. There are ever increasing pressures from national policies and EU directives, to find and implement solutions for better management of waste in terms of collection, treatment and disposal whilst considering its environmental, social and regulatory ramifications.

The agricultural waste management in Malta is subject to several market failures. One principal cause is the high costs involved in relation to profitability. This is mainly due to economies of scale. When considering the profitability of livestock farms and dividing it by the amount of waste generated, each farmer's ability to pay is estimated to stand at €11.98/m<sup>3</sup>. This is lower than the estimated cost of investment per cubic meter, thus reducing the return on investment and suggesting that the high cost of the sector will wipe out its profit.

In addition, the potential variation in costs for the treatment and disposal of cattle and other livestock manure and pig slurry is significant, further accentuating the degree of uncertainties present within the industry. The cost is influenced by several factors amongst which are the number of heads and the volume of waste generated, which determine the size of the investment and therefore the investment cost. Forecasts estimated for the AWMP show that the heads and the amount of waste is set to decline creating more uncertainty on the availability of the supply of agricultural waste to the treatment plants. These uncertainties make it difficult to establish the cost per tonne and thus also estimating revenue generation.

The cost estimated for the agricultural waste treatment plants is also subject to the waste composition. However, the composition and consistency of waste vary across Malta. The AWMP makes it clear that without knowing the actual composition of the waste, the actual cost involved cannot be determined with precision. This influences the type of technology used, how it is used and its efficiency. Uncertainty also features in the behaviour and response of operators within the livestock sector. Some could oppose any changes in their practices fearing they become unsustainable and lose competitiveness due to excess imposition of regulations and increase in costs.

All these uncertainties make it very difficult to establish the costs of operation. In fact, given the elements of uncertainty and risk, this uncertainty could result in investors losing



confidence and opting out of investment in this sector. Being unable to establish the cost also makes it difficult to estimate the output and revenue.

Market failure also occurs if treatment plants decide to take a monopolistic approach or on the other hand, if farmers decide to cooperate and create a monopsony. Both approaches will see one player gaining control over the market, thus controlling the output and the price. This will cause the price mechanism and therefore the market to fail. Given the high fixed costs or start-up costs involved and the regulation and ownership of the limited amount of input available, a monopoly is quite possible. This would wipe out any form of competition.

Other determinants of market failure are externalities. Practices involved in the management of cattle manure and pig slurry will impose social costs or discomfort stemming from GHG emissions, odour, and possible waste water leakages effecting the groundwater, amongst others. For instance, contamination of groundwater because of agricultural waste will cost society €0.167/m<sup>3</sup> to be replaced while emissions of GHG emissions in the agricultural sector amount to €1.6 million in damage costs.

Within this context, it is recommended that proposals for agricultural waste management are assessed by means of experimental and pilot-testing exercises. This approach intends to resolve the significant uncertainties and obstacles that project operators may encounter. It also provides justifications of Government intervention. There is the need for a scheme so that private operators provide proof of concepts of already existing markets which enables them to provide a solution for market failure.

## **ANNEX 2: TERMS OF REFERENCE FOR UNDERTAKING THE PROOF OF CONCEPT OF TECHNOLOGIES WITH RESPECT TO THE SUSTAINABLE MANAGEMENT OF LIVESTOCK MANURE AND SLURRY**

### Objectives

This brief contains terms of reference to be followed in the compilation of feasibility assessments for projects aimed at providing treatment processes for agricultural bio-resources in the Maltese Islands. The testing projects and initiatives supported under this action are to provide information which will enable the preparation of feasibility assessments with respect to:

- the financial feasibility of the project (including the business plan for the fully scaled proposed operation);
- the socio-economic and environmental feasibility of the project;



- the compatibility of the project within the overall national strategy for bio-resources management, and refinements to the strategy itself;
- the contributions with respect to the attainment of Malta's obligations under relevant Directives;
- the comparison of the feasibility and desirability of alternative options;
- the nature and extent of government intervention required, based on an assessment of market failure;
- implications for State Aid;
- possibilities for using EU funding.
- No significant financial implications on farmers
- Minimum throughput needed to operate in a financially independent manner

From a technical and operational perspective, the supported projects will have to provide technical, operational and financial data with respect to the typical principal stages of the project cycle, including:

- collection and transportation of biomass;
- treatment processes;
- storage requirements;
- emissions and their management;
- production of outputs and their marketing;
- waste management, including for liquid and solid fractions;
- transportation of outputs and waste;
- proposed financial arrangements including payments associated with bio-resources, outputs, and waste management;
- contractual arrangements to source feed and secure markets for outputs;
- compliance with all relevant regulatory frameworks;
- nature and extent of Government financial/regulatory/resources support required, if any.
- permits required for trial period
- permits for upscaling scenario

### Feasibility Study Template

The following is a template to serve as a guide to be followed in the compilation of the Feasibility Study. It is strongly suggested that all documents are submitted together with working spreadsheet models.



## **1. Needs to be satisfied by the Project**

1.1. Needs the Project is intended to meet within a Set Period of Time (min 12 weeks – max 24 weeks)

1.1.2. Definition of the Base Case (without project)

*To include specific focus on the farms to be covered by project and the characteristics of the territory in which they are located, and the development of the situation with respect to their management of bio-resource in the absence of the project, as this would impact on the farms themselves and on the broader context of water management, environmental emissions and climate change*

1.1.1. Current and Future Trends in Demand for the Project

*To discuss the reasons for the need for the project at the national level and at the level of the farms involved at present and over the expected future lifetime of the project*

1.2. Identification and Quantification of Outputs and Results Expected to be attained by the Project over its Operational Life

1.2.1. Physical Outputs/Results

*To provide analysis, ideally in the form of Sankey Diagrams, of physical flows in terms of mass, N and similarly relevant substances, and, if relevant, energy*

1.2.2. Environmental Effects

*To provide description of emissions from the project, land use, transport effects including related emissions, and effects on waste*

1.2.3. Other Relevant Outputs/Results

1.2.4. Comparison of Effects with Base Case Situation

## **2. Analysis of New Technological Alternatives to meet the Identified Needs and Selection of Preferred Approach**

2.1. Description of Significant Technological Alternatives Considered

2.2. Justifications for the Selection of the Preferred Option

2.3. Detailed Description of Preferred Approach/es

2.3.1. Buildings, Plants (Fixed and/or Mobile) and Transport Infrastructure

2.3.2. Physical Inputs for Project Operation

2.3.3 Personnel Requirements

2.3.4. Energy Requirements

2.3.3. Technology Providers

2.3.6. Estimation of Investment Financial Costs

2.3.7. Project Implementation and Operation Plan over the Project Time Horizon

2.3.8. Network effects on other projects and activities

2.4. Risk Assessment

2.4.1. Register of Risks to project Outputs and Results

2.4.2. Mitigating and remedial measures

### **3. Human Resource Requirements**

#### 3.1. Project Construction and Development

##### 3.1.1 Skills requirements

##### 3.1.2 Financial Costs

#### 3.2. Project Operation

##### 3.2.1 Skills requirements

##### 3.2.2 Financial Costs

### **4. Mobile/Stationary Considerations**

#### 4.1. Ideal Requirements for the Location

#### 4.2. Alternative Options

#### 4.3. Justification of Choice of Site and its Characteristics

##### 4.3.1. Description of Site and Alternative Sites

##### 4.3.1. Environmental Aspects

##### 4.3.2. Transport and Communications

*A detailed transport and logistics plan with respect to bio-resource and project output that is compliant with relevant regulatory provisions is required, for fixed and mobile treatment processes*

##### 4.3.3. Water and Electricity Provisioning

##### 4.3.4. Waste Management

*A detailed waste management plan that is compliant with relevant regulatory provisions is required*

##### 4.3.5. Planning and Other Regulations

*A detailed plan to successfully meet all relevant regulations is required*

##### 4.4.4. Financial Cost of Land and Site Preparation

#### 4.5. Infrastructure Requirements and Financial Costs

### **5. Implementation Aspects**

#### 5.1. Analysis of Construction/Start-up Times (project cycle)

#### 5.2. Implementation Phases

#### 5.3. Investment Financial Costs associated with the Implementation Phases

### **6. Financial Cost and Financial Revenue Estimations**

#### 6.1. Project Annual Investment Financial Cost Estimation over the Implementation Period

#### 6.2. Project Annual Operational Financial Cost Estimation over the Operational Period

#### 6.3. Project Annual Financial Revenues over the Operational Period

#### 6.4. Project Annual Financial Cost Savings over the Operational Period

#### 6.5. Project Annual Financial Costs Net of Project Revenues and Cost Savings over the Implementation and Operational Period

#### 6.6. Presentation of Incremental Cash Flow Analysis over the Project Lifetime



6.7. Presentation of Projected Income Statement and Financial Position Statement for the First Three Years of the Project

6.8. Financing Plan and Liquidity Requirements

*To present the plan to finance the investment expenditure and arrangements to meet short term liquidity requirements*

## **7. Articulation of Request for Government Support**

7.1 Type/s of Support Required and related amounts/extent

*To present financing/loan requirements, support in terms of development/operational permitting, concessions for operational requirements, etc.*

7.2 Discussion on future sustainability of project

7.2.1 Financial Perspective

*To argue that support provided will effectively lead to a sustainable project from a financial perspective*

7.2.2 Compliance with regulatory requirements

*To discuss project robustness to meet potential future expected changes to relevant regulatory requirements*

7.2.3 Management of Risks

*To discuss project feasibility in the context of adverse shocks to major elements of costs and revenues, supply of bio-resource inputs, and markets for outputs, and the extent to which support from Government may need to be resorted to in such eventualities*