



CALL FOR PROPOSALS AND GUIDE FOR APPLICANTS

Call reference: GP/EFSA/BIOHAW/2023/03

Call title: Animal care & welfare: dairy herd welfare indicators. Risk-based model for dairy herd welfare: Field data collection.

Restricted to **the list of competent organisations** established by the Authority's Management Board in application of article 2 the Commission Regulation (EC) No 2230/2004 laying down detailed rules for the implementation of European Parliament and Council Regulation (EC) No 178/2002 with regard to the network of organisations operating in the fields within the Authority's remit.

Brief description of the call objectives: The aim is the identification of Article 36 organisations to collect data on dairy farms for a risk-based welfare model.



INDICATIVE PROCEDURE TIMETABLE

Milestone	Date ¹	Comments
Launch date	23/06/2023	Date of call publication on EFSA's website.
Deadline for applicants to raise clarification questions to EFSA	06/09/2023	If, after having read this Call for proposals and guide for applicants, you have any questions, you may address them to EFSAProcurement@efsa.europa.eu by indicating the Call reference.
Deadline for EFSA to reply to clarification questions	08/09/2023	Replies will be provided on EFSA's webpage where this Call is published and which the applicants are requested to consult regularly.
<p style="text-align: center;">Deadline for submission of proposals</p> <p><u>Any proposal posted after the final deadline will automatically be rejected.</u></p>	15/09/2023	<p>Applicants can submit proposals:</p> <ul style="list-style-type: none"> - either by post (registered mail) or by courier, in which case the evidence of the date of dispatch shall be constituted by the postmark or the date of the deposit slip, to the address indicated below. The applicant submitting a proposal by post or by courier is requested to send an informative advance e-mail to EFSAProcurement@efsa.europa.eu. - or delivered by hand not later than 12.30 hours (Italian time) on the deadline for submission of proposals to the address indicated below. In this case, a receipt must be requested from EFSA as proof of submission, signed and dated by the staff member in EFSA Post Office who accepted the delivery. The EFSA Post Office is open from 8.30 to 12.30 Monday to Friday. It is closed on Saturdays, Sundays and EFSA holidays. <p>Submission by post, courier or hand to this address: <u>European Food Safety Authority - EFSA</u> <u>For the attention of – Muriel Pesci, Finance Unit (Procurement Team)</u> <u>Via Carlo Magno 1/A, I – 43126 Parma, Italy</u></p> <p>Proposals must be submitted using the double envelope system. The outer envelope should be sealed with adhesive tape, signed across the seal and carry the following information:</p> <ul style="list-style-type: none"> - "CALL FOR PROPOSALS GP/EFSA/BIOHAW/2023/03– NOT TO BE OPENED BY THE INTERNAL MAIL DEPARTMENT". - name of the applicant - <u>the posting date should be legible on the outer envelope</u> <p>The application submission must contain one original unbound paper version and one USB key of all documents, including the technical proposal.</p>
Notification of the evaluation results	October 2023	Estimated <i>Attention: outcome of the present call will be communicated to all applicants to the e-mail address indicated in their proposal. Accordingly, applicants who have submitted proposals under the present call are strongly invited to check regularly the inbox in question.</i>
Grant agreement(s) signature	November 2023	Estimated

¹ All times are in the time zone of the country of the EFSA.





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Annexes:

Annex 1: Draft grant agreement

Annex 2: Estimated budget template **Not applicable**

Annex 3: Financial statement and monthly timesheet template **Not applicable**

Annex 4: Confidentiality Agreement **Not applicable**

Appendix I: additional information on risk-based model for dairy herd welfare: field data collection





1. GRANT OPPORTUNITY AND CONDITIONS²

1.1 LEGAL FRAMEWORK

Article 36 (1) of the Regulation (EC) 178/2002³ of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, stipulates that the Authority shall promote the European networking of organisations operating in the fields within the Authority's mission. The aim of such networking is, in particular, to facilitate a scientific cooperation framework by the coordination of activities, the exchange of information, the development and implementation of joint projects⁴, the exchange of expertise and best practices in the fields within the Authority's mission. The list of competent organisations designated by the Member States, which may assist EFSA with its mission, is approved and regularly updated by EFSA's Management Board. The full list of Article 36 organisations can be found [here](#).

EFSA's founding regulation was amended by Regulation (EU) 2019/1381 of the European Parliament and of the Council of 20 June 2019 on the transparency and sustainability of the EU risk assessment in the food chain.

The Commission Regulation (EC) 2230/2004 of 23 December 2004 laying down detailed rules for the implementation of the European Parliament and Council Regulation (EC) 178/2002 with regard to the network of organisations operating in the fields within the EFSA's mission specifies in Article 4 that tasks may be entrusted by the Authority to organisations on the list of competent organisations.

The present call specifically focuses on the below tasks defined in Article 4(3):

1. preparing the harmonisation of risk assessment methods;
2. sharing data of common interest, e.g. the establishing of databases;

Article 5(2) of the Commission Regulation (EC) 2230/2004⁵ of 23 December 2004 specifies that the financial support to the networking organisations shall take the form of subsidies (grants) awarded in accordance with the EFSA's financial regulation and implementing rules.

The present Call for proposals and guide for applicants (hereinafter referred to as "the Call") is procedurally governed by Title VIII of Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union.

This call is based on EFSA Founding regulation⁶ and EFSA's 2023 Work Programme for grants and operational procurements as presented in Annex XII of the Programming Document 2023 – 2025, available on the EFSA's website⁷.

² The applicant is reminded that this Call and guide for applicants contains a selection of the most important conditions for the grant implementation. For the full set of conditions, the applicant is invited to consult the draft grant agreement in Annex 1 of this Call.

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:031:0001:0024:EN:PDF>

⁴ Project is frequently referred to in this Call as "action", in line with EU Financial Regulation terminology.

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:379:0064:0067:EN:PDF>

⁶ Regulation (EC) 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, as amended by Regulation (EU) 2019/1381 of the European Parliament and of the Council of 20 June 2019 on the transparency and sustainability of the EU risk assessment in the food chain.

⁷ <https://www.efsa.europa.eu/sites/default/files/2022-01/amp2325.pdf>





<p>WP 1 – Preparatory work</p>	<p>Task 1: Determining regions and farms to be sampled and defining a detailed project plan</p> <p>1a. Identify n (minimum 5) areas in the European Union that represent most of the common commercial dairy farm systems, to be sampled in WP2. The selection should include different geographical regions of the EU and cover the main production systems. It is expected that the selected areas with farms to be sampled are located in at least five of the following European subregions: Central Europe, Eastern Europe, Northern Europe, South-eastern Europe, Southern Europe, South-western Europe and Western Europe as described in the “The World Factbook”⁹. Farms selected across these subregions represent all of the common dairy systems. These areas will be used for data collection in WP2.</p> <p>1b. Define a method to select at least 500 farms, to be sampled in WP2. The sample type and size should be sufficient to allow the questions listed in Task 5c to be answered robustly. That is, results should relate, as far as possible, to the target population of all EU dairy farms.</p> <p>1c. Define a plan for undertaking Tasks 2 and 3.</p>	<p>Deliverable 1: Provide a single report containing relevant information for each sub task:</p> <p>1a. Information on the minimum of five selected EU areas and the reasoning for selection. Explain how representative of different dairy production systems they are and how the sampled population relates to the target population (i.e., the EU dairy cow population in the EU).</p> <p>1b. Farm selection. Indicate the method and assumptions used for sample size calculations and the method for identification of farms detailing inclusion / selection criteria, (assumptions on e.g. prevalence of farm characteristics and size of target population). Provide a map with the (approximate) distribution of farms to be sampled. The expectation is that at least 500 farms are sampled and are well distributed across the selected areas.</p> <p>1c. Provide detailed information on the plan for Task 2 and Task 3, including information on farms to be visited and relevant timelines.</p>	<p>2 months from kick-off meeting</p>
	<p>Task 2: Development of guidelines for standardised collection of data on Animal-based measures</p> <p>2a. Develop a step-by-step method (SOP-like) to collect information from commercial dairy farms across the EU on the ABMs indicated in Table 2 of Appendix I. The protocol for the behavioural observations should provide indications of how many cows to sample, selection of cows to be sampled, and observation times. Include figures/schemes if that aids with the clarity of the SOP. The total observation times for</p>	<p>Deliverable 2: Provide a single report containing relevant information for each sub task:</p> <p>2a. Provide the final protocol (SOP-like) for all the ABMs as described in Task 2a. Provide information on how the protocol was piloted (number of piloting phases, type and location of farms) to ensure reliability of the method, and the main adjustments made.</p>	<p>8 months from kick-off meeting</p>

⁹ https://en.wikipedia.org/wiki/Regions_of_Europe





	<p><u>all</u> the ABMs should not require longer than a half day (~4 hours), to make it feasible for inspection. The protocol should include the order in which the ABMs will be observed and data collected. The protocol should be piloted in different dairy farms with different data collectors and any necessary adjustments made to prepare a practical and reliable protocol, for use under different farm conditions.</p>	<p>2b. Provide information on the data input/survey form as well as credentials for full access of the tool and data by EFSA for an indefinite period of time. Provide clear descriptions of all the columns/ variables in the tool.</p> <p>NB: The outputs of Tasks 1-3 (sample size, protocol development for farm characteristics (FC) and ABMs, and survey tool development) need to be approved by EFSA before proceeding to WP2 on data collection.</p>	
	<p>Task 3: Development of guidelines for standardised collection of data on farm characteristics (FC)</p> <p>3a. Develop a step-by-step method (SOP-like) to define and collect information from commercial dairy farms across the EU to measure each of the five farm characteristics as described in Table 1 of Appendix I (for instructions on the SOP for the farm characteristic "mortality", see Task 3b and Table 2 in Appendix 1). The methods need to be simple and allow a harmonised and reliable collection of the information on farm by a farmer on a researcher in different EU Member States. Each SOP needs to be piloted in different farms and MSs.</p> <p>3b. For the FC "mortality", investigate availability and accessibility of electronic data in different MS as a means to calculate mortality rates. If the variables, numerators or denominators used to calculate mortality rates are defined differently across Member States, indicate how to carry out calculations to achieve a comparable figure on mortality across the EU.</p> <p>3c. Propose a list of additional farm characteristics (e.g. 2-5 characteristics) to be investigated (e.g. herd size). The inclusion of such characteristics may also be useful to control for potential confounding effects. As in 2a, develop a step-by-step method (SOP-like) to</p>	<p>Deliverable 3: Provide a single report containing relevant information for each sub task:</p> <p>3a. For each farm characteristic, provide the final, piloted SOP. Provide information on how each SOP was piloted (number of piloting phases, type and farm location) to ensure reliability of the method, and the main adjustments made.</p> <p>3b. For the farm characteristic "mortality", provide findings on the information in each MS, including whether such data are publicly available. Adjust the SOP so the steps indicate how to calculate the mortality figure in each MS</p> <p>3c. For each farm characteristic, provide the final, piloted SOP. Provide information on how each SOP was piloted (number of piloting phases, type and farm location) to ensure reliability of the method, and the main adjustments made. Before proceeding with the development of SOPs for the collection of the farm characteristics, discuss and confirm with EFSA the proposed list.</p>	<p>10 months from kick-off meeting</p>





	<p>collect information on those additional farm characteristics.</p> <p>3d. Develop a data input tool (or use an existing tool, e.g. survey form) for collection of data. The tool should be used to capture data on the ABMs described in 2a and farm characteristics (including mortality) detailed in 3a-c. Pilot the data input tool.</p>	<p>3d. Provide information on the data input tool/survey form as well as credentials for full access to the tool and data by EFSA for an indefinite period of time. Provide clear descriptions of all the columns/ variables in the tool.</p>	
	<p>Task 4: Final list of farms to be visited</p> <p>4a. Having conducted farm selection and the assessment of feasibility to conduct the farm visits, prepare a final list of farms to be used in the study, including farm location.</p>	<p><u>Deliverable 4:</u> Provide a single report containing information on the list and distribution of the farms to be visited (final list of farms)</p>	<p>12 months from kick-off meeting</p>
<p>WP 2 – Data collection on farm characteristics and on-farm welfare assessments</p>	<p>Task 5: Data collection on farm characteristics and behaviour</p> <p>5a. Carry out training of staff in data collection to standardise collection methods.</p> <p>5b. Collect data from all farms selected in 1b, to measure and determine the prevalence of each of the 5 FCs in each of the n areas. Group farms as “control farms” (the farm has none of the listed 5 farm characteristics) and “case farms” (the farm has at least one of the farm characteristics).</p> <p>5c. Collect data from “control” and “case” farms (having in consideration the questions to be answered in 5d) on:</p> <ul style="list-style-type: none"> - The full ABM protocol (regardless of number of FCs present), i.e., assess all ABMs listed in Table 2 Appendix I. - Additional farm characteristics proposed in 3c. <p>5d. Carry out data analysis to answer the following questions:</p> <ul style="list-style-type: none"> ▪ From your sample, estimate the prevalence (with confidence intervals), across EU dairy farms, of farms with one or more of the farm characteristics specified in Table 1 of Appendix I. 	<p><u>Deliverable 5.a:</u> provide an interim report with a description of the progress on data collection, and with preliminary results of the data collected until this point. It is expected that at least 30% of farms have been visited. Provide maps and figures to best illustrate progress and provide a timeline for completion of the data collection.</p> <p><u>Deliverable 5. b:</u> Provide a final report with the following information and relevant information for each sub task. The final version of the report should address the comments and suggestions from EFSA, which may include requests for further/ different data analyses. The final version of the report should address the comments and suggestions from EFSA, which may include requests for further/ different data analyses. A first version of the Deliverable 5.b should be submitted to EFSA at least two month before the deadline to allow for comments by EFSA. The changes proposed by the contractor to address EFSA’s comments are to be discussed</p>	<p>Deliverable 5.a: 20 months from kick-off meeting</p> <p>Deliverable 5.b: 30 months from kick-off meeting</p>





	<ul style="list-style-type: none"> ▪ From your sample, on farms with at least one characteristic present (“test” farms), estimate how many EU dairy farms would breach one or more of the ABM thresholds (see thresholds in Table 2) ▪ From your sample, on farms without any characteristic present (control farms), estimate how many EU dairy farms would breach one or more of the ABM thresholds (see Table 2 in Appendix I) ▪ Evaluate whether any of the newly specified farm characteristics (3c) are significantly associated with any of the ABMs measured. 	<p>in the final meeting. Following the final meeting, the contractor has 1 month to submit the final version of the report.</p> <ul style="list-style-type: none"> • Training carried out for the staff undertaking data collection, to ensure comparability (including considerations on inter and intra observer reliability) of collected data. • Descriptive statistics and results of analysis for the bullet points indicated in 5d. • Recommendations to improve data collection of FCs across all EU farms if used in future, including suggestions for an approach to collecting data from a very large sample of EU dairy farms. • Recommendations to develop a future monitoring system based on this scheme; e.g. standardisation of variables; potential identification of additional variables; planning of data formats for data to be submitted to EFSA, and any other lessons learned and recommendations for optimisation of the model that resulted from the project. The applicant should address all edits and comments on the draft received by EFSA. <p>The deliverable 5.b shall include:</p> <ul style="list-style-type: none"> • At least two spreadsheets (.csv format), one with the raw data and one with the final cleaned data. Provide a 	
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		<p>clear description of the variables in the spreadsheets.</p> <ul style="list-style-type: none"> R-markdown file with R-code used for the analysis, with the full, running code for the calculations with clear headings so that it is possible to easily follow the calculation steps. 	
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Subcontracting is allowed for non-core tasks only. The core tasks in this project are Tasks 1, 2, 4, and 5. Please also refer to section 1.7 'Possibility of implementing contracts and subcontracting'.

No.	Meetings	Deadline for finalisation
RISK-BASED MODEL FOR DAIRY HERD WELFARE: FIELD DATA COLLECTION		
1	<p>Kick-off meeting (meeting #1): Teleconference (one day)</p> <p>The kick-off meeting is regarded as the start of the project and must take place no later than 3 months after the signature of the grant agreement. At this meeting, details of the project will be discussed and the objectives, the final report structure, deliverables and timeframe will be clarified. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary.</p> <p>The presence at the kick-off meeting of a beneficiary's staff member responsible for administrative/finance issues of the project is advised as this will facilitate understanding by the beneficiary of the grant principles, related financial reporting requirements and significantly ease the financial management of the grant agreement, both for EFSA and the beneficiary.</p>	2 months after entry into force of grant agreement
2	<p>Interim meeting (meeting #2): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss Deliverable 1 as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	3 months from kick-off meeting
3	<p>Interim meeting (meeting #3): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss Deliverable 2 as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	9 months from kick-off meeting





4	<p>Interim meeting (meeting #4): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss Deliverable 3 as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	11 months from kick-off meeting
5	<p>Interim meeting (meeting #5): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss Deliverable 4 as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	13 months from kick-off meeting
6	<p>Interim meeting (meeting #6): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss the status of the work on the data collection, any preliminary results as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	17 months from kick-off meeting
7	<p>Interim meeting (meeting #7): Teleconference (half-a-day)</p> <p>The purpose of this meeting is to discuss the status of the work on the data collection (Deliverable 5a), any preliminary results as well as any problems or difficulties encountered during the project. Minutes of the meeting shall be taken and provided to EFSA by the beneficiary maximum two weeks after the meeting.</p>	21 months from kick-off meeting
8	<p>Final meeting (meeting #8): In-person (one-day meeting)</p> <p>To discuss draft (almost final) Deliverable 5b. Changes proposed by EFSA to be applied to the final version of Deliverable 5b.</p>	29 months from kick-off meeting
No.	Payments	Linked to EFSA approval of deliverable No.
1	Pre-Financing payment as specified in articles I.4.1 and I.5.2 of the draft grant agreement (Annex 1 of the call for Proposals).	Within 30 days from Grant Agreement countersignature
2	Interim payment , as specified in articles I.4.3 and I.5.3 of the draft grant agreement (Annex 1 of the call for Proposals).	1, 2, 3, 4 and 5.a
3	Payment of the balance as specified in article I.4.4 and I.5.4 of the draft grant agreement (Annex 1 of the call for Proposals). The amount due as the balance payment is calculated by EFSA by deducting from the final grant amount the total amount of prefinancing and interim payments already made. The final payment is subject to the approval by EFSA of all the deliverables and final report.	5.b





Foreseen milestones and corresponding completion rate

Milestones	Project completion rate %
Approval of Deliverable 1	5%
Approval of Deliverable 2	5%
Approval of Deliverable 3	4%
Approval of Deliverable 4	1%
Approval of Deliverable 5.a	45%
Approval of Deliverable 5.b	40%
Full approval of all deliverables	100%

1.4 INFORMATION ON THE GRANT AGREEMENT

Applicants should note that the draft grant agreement is published with the call for proposals. If any applicant should have specific comments on the provisions of the draft grant agreement, these must be raised in a clarification, prior to the deadline for receipt of proposals so that a clear and transparent reply may be published for the benefit and information of all applicants.

1.4.1 Direct Agreement

This Call for proposals aims to conclude a Direct Agreement for the performance of the tasks described in these specifications for a fixed duration. The Agreement can be signed between the Authority and one or several partners.

EFSA intends to fund one proposal following this Call. However, EFSA reserves the right not to award all the funds available at any cost, e.g. if the quality of submitted proposals will not be satisfactory.

Please note that EFSA reserves the right not to award any grant and/or to cancel the whole grant procedure at any time before the signature of the grant agreement without any compensation to be paid to the applicant.

The maximum budget available for this call is 500,000 € with a duration of 30 months from the kick-off meeting date.

1.5 ELIGIBLE ORGANISATIONS

To be eligible, applicants must be on the list of competent organisations designated by the Member States in accordance with Article 36 of Regulation (EC) 178/2002 and Commission Regulation (EC) 2230/2004. This list is regularly updated by EFSA Management Board and is available for consultation using this link <https://efsa.force.com/competentorganisations/s/>.

In order to achieve the main objective of the call, proposals can be submitted by **one eligible organisation or by a consortium of eligible organisations**. In case of a consortium, one of the





partners must be identified in the proposal as the consortium leader. The applicant (consortium leader) is responsible for identifying consortium partners.

1.6 ROLES AND RESPONSIBILITIES

For proper understanding of this call, it is important to have clarity on the terminology regarding involved organisations and their roles.

Proposals submitted by a sole applicant:

- **The Applicant** submits the proposal to EFSA. There can be only one applicant in the proposal.

As soon as the grant agreement is signed, the applicant becomes the beneficiary. The beneficiary is liable for the technical implementation of the project as described in the proposal which becomes Annex 1 of the grant agreement.

The beneficiary:

- Communicates with EFSA;
- Receives and answers all claims EFSA might have in relation to the implementation of the project;
- Requests and reviews any documents or information required by EFSA and verifies their completeness and correctness before passing them to EFSA;
- Informs EFSA of any event that is likely to substantially affect the implementation of the project;
- Submits the deliverables and reports to EFSA;
- Requests and receives payments from EFSA.

Proposals submitted by consortium:

- **The Applicant** submits the proposal to EFSA on behalf of the consortium. The applicant is the leading entity of the consortium.
- **The Partner** is the other entity in the consortium. There can be a minimum of one partner or more partners.

Once the grant is awarded, the grant agreement is signed between EFSA and the applicant (leading entity of the consortium).

Partners do not sign the grant agreement directly but instead sign a mandate (template provided by EFSA) authorising the applicant to sign the grant agreement and any future amendments on their behalf.

As soon as the grant agreement is signed, the applicant becomes the Coordinator and partner/s become co-beneficiary/ies. The coordinator and co-beneficiary/ies are referred to as the beneficiaries. The beneficiaries are jointly and severally liable for the technical implementation of the project as described in the proposal which becomes Annex 1 of the grant agreement. If a beneficiary fails to implement its part of the project, the other beneficiaries become responsible for implementing that part.

The coordinator has the following important roles:

- Takes part in implementing the project;
- Monitors the action is implemented properly;
- Act as intermediary for communication between the consortium and EFSA;





- Receives and answers all claims EFSA might have in relation to implementation of the project;
- Requests and reviews any documents or information required by EFSA and verifies their completeness and correctness before passing them to EFSA;
- Informs EFSA and the partner/s of any event that is likely to substantially affect implementation of the project;
- Submits the deliverables and reports to EFSA;
- Requests and receives payments from EFSA and distributes the funds to partner/s without unjustified delays.

The coordinator may not delegate the above-mentioned tasks to the co-beneficiary/ies or subcontract them to any third party.

The other beneficiary/ies:

- Take part in implementing the project;
- Forward to the coordinator the data needed to draw up reports, financial statements and other documents required under the grant agreement;
- Inform the coordinator of any event or circumstances likely to substantially affect or delay the implementation of the project.

1.7 IMPLEMENTING CONTRACTS AND SUBCONTRACTING

Implementation contracts:

Where the implementation of the project requires the award of procurement contracts (implementation contracts), e.g. purchase of services and/or goods or equipment necessary for the implementation of the action, the beneficiary must award the contract to the entity offering the best value for money or the lowest price (as appropriate), avoiding conflicts of interests. The beneficiary is expected to clearly document the tendering procedure and retain the documentation for the event of an audit.

Entities acting in their capacity as contracting authorities within the meaning of Directive 2014/24/EU¹⁰ must comply with the applicable national public procurement rules.

Sub-contracting:

Sub-contractors are not consortium partners and are not party to the grant agreement. They do not have any contractual relationship with EFSA. Subcontractors are entities contracted by the beneficiary to carry out some specific tasks or activities. Subcontracting is allowed under these conditions:

- **Core tasks must not be subcontracted.** Only ancillary and assistance tasks can be subcontracted.
- Subcontracts must be awarded to the entity offering best value for money or the lowest price (as appropriate), avoiding conflicts of interests;
- Subcontracting must only cover the implementation of a limited part of the action;
- Recourse to subcontracting must be justified having regard to the nature of the project and what is necessary for its implementation;
- Tasks to be subcontracted must be identified in the proposal and be approved by EFSA before the signature of the grant agreement;
- Recourse to subcontracting during project implementation, if not envisaged from the outset in the proposal, is subject to prior authorisation in writing by EFSA, and must be formalised

¹⁰ Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (OJ L 94, 28.3.2014, p. 65-242)





via an amendment to the grant agreement. Approval may be granted as long as it does not entail a change to the grant agreement which would call into question the decision awarding the grant or be contrary to the equal treatment of applicants;

- The conditions applicable to the beneficiaries under Articles II.6 (*Confidentiality*), II.7 (*Processing of Personal Data*), II.8 (*Visibility of Union Funding*) of the grant agreement are also applicable to the subcontractor.

1.8 GRANT PRINCIPLES

The financial help provided by EFSA under this Call is a grant governed by the EU Financial Regulation referred to in part 1.1.

The form of grant awarded under this Call is based on financing not linked to the costs of the relevant operations in accordance with Article 125 (1)(a) of the EU Financial Regulation. Grants financed in this way require the fulfilment of conditions set out in sector specific rules of Commission decisions or the achievement of results measured by reference to previously set milestones or through performance indicators.

The present call for proposals comes with an innovative and simplified grant management, where the grant amounts paid to the partner are based on the pre-defined sums which are not linked to the actual costs of the action. This means there is no need for co-financing from the partner, and no need for completion of estimated budgets or timesheets to record the work. The agreed sums are set at a level designed to stimulate the mutually convenient partnership creation. The payment of agreed sums from EFSA will be carried out based on the acceptance by EFSA of the delivered work. If you have questions on this grant form, during the application period, please raise any clarification questions to EFSAProcurement@efsa.europa.eu.

The financial support provided by EFSA under this Call is a grant governed by the EU Financial Regulation referred to in part 1.1. Accordingly, the grant awarded following this Call must comply with certain grant principles established in the EU Financial Regulation, specifically:

- **Non-retroactivity:** A grant may be awarded for a project which has already begun only where the applicant can demonstrate in the grant application the need to start the action before the grant agreement is signed. In accordance with Article 193 of the Financial Regulation. The tasks entrusted by EFSA should not be performed before the signature of the grant Agreement.

Article 180(3) of the EU Financial Regulation specifically states that **the following grant principles are NOT applicable** where the grant takes the form of financing not linked to the costs pursuant to article 125(1)(a):

- **Co-financing:** In accordance with Article 190 of the Financial Regulation, grants shall involve co-financing.
- **No-profit:** In accordance with Article 192(3)(d) of the Financial Regulation, grants shall not have the purpose or effect of producing a profit within the framework of the project for the applicant or partner.
- **Non-cumulative:** In accordance with Article 191(3) of the Financial Regulation, in no circumstances shall the same costs be financed twice from the EU budget.

1.9 ESTIMATED BUDGET AND ELIGIBLE COSTS

Not applicable





1.10 PUBLICITY

All beneficiaries are expected to follow the rules on visibility of EFSA funding set out in Article II.8 of the grant agreement.

According to Article 38 of the EU Financial Regulation EFSA is bound to publish information on recipients of its grants at its website. Such publication shall take place no later than 30 June of the year following the financial year in which the grants were awarded and shall cover these data of the beneficiaries:

- name of the beneficiary
- address of the beneficiary
- subject of the grant
- amount awarded

With regards to publications of EFSA outputs that are integrating the preparatory work delivered in the context of this grant, the beneficiary could be mentioned in authorship lists indicating the affiliation to its organisation.

1.11 PROTECTION OF PERSONAL DATA IN RELATION TO GRANT PROCEDURES

Processing of personal data by EFSA

Information on the processing of personal data by EFSA in the context of this grant procedure is available in the [Privacy Statement](#) on the EFSA website as well as in Article II.7 of the draft grant agreement. Any personal data included in the Agreement must be processed by EFSA in accordance with Regulation (EU) No 2018/1725.¹¹

Applicants should note that personal data as applicant or selected beneficiary may be registered in the Early Detection and Exclusion System (EDES) if you are in one of the situations mentioned in Article 136 of the Financial Regulation. For more information see the Privacy Statement on: http://ec.europa.eu/budget/explained/management/protecting/protect_en.cfm#BDCE.

Processing of personal data by the beneficiary

In case the implementation of activities under the grant agreement resulting from this call entails the processing of personal data, the beneficiary shall comply with the relevant rules in Article II.7.2 of the Grant Agreement (Annex 1) as a data processor of EFSA.

1.12 PUBLIC ACCESS TO DOCUMENTS

In the general implementation of its activities and for the processing of grant procedures in particular, EFSA observes Regulation (EC) N° 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.

1.13 OPEN ACCESS

EFSA is committed to the publication of grant outputs in the [Knowledge Junction](#) in order to improve transparency, reproducibility and evidence reuse. The Knowledge Junction runs on the EU-funded Zenodo research-sharing platform where uploaded items receive a unique Digital Object Identifier to make them citable. Any part of the output resulting from the action under this grant may be published (at EFSA's discretion) on the Knowledge Junction with attribution to the beneficiary.

¹¹ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC





2. SELECTING PROPOSALS

The **Evaluation Committee** established by EFSA specifically for this call will evaluate the submitted proposals in five steps:

1. Verification of submission requirements (2.1)
2. Eligibility criteria (2.2)
3. Exclusion criteria (2.3)
4. Selection criteria (2.4)
5. Award criteria (2.5)

If the proposal fails at any step it is automatically excluded from further evaluation. EFSA may contact the applicant during the evaluation process if there is a need to clarify certain aspects or for the correction of clerical mistakes.

2.1 VERIFICATION OF SUBMISSION REQUIREMENTS

The following will be verified:

- proposal was submitted within the deadline for submission of proposals;
- administrative data for grant application form is duly signed by the authorised representative of the applicant;
- proposal is complete and includes all the supporting documents.

2.2 ELIGIBILITY CRITERIA

Criterion No. 2.2	Requirements and requested evidence
1	Eligibility criteria
	The following requirements will be verified:
	<ul style="list-style-type: none"> • At the day of deadline for submission of proposals, the applicant and in case of consortium also its partner/s are on the list of competent organisations designated by the Member States in accordance with Art 36 of Regulation (EC) 178/2002 and Commission Regulation (EC) 2230/2004; • Applicant and in case of consortium also its partner/s are involved in the execution of the project; • Subcontracting, if any, is justified in the proposal
	Requested evidence:
	<ul style="list-style-type: none"> • Administrative data for grant application (including Legal Entity and Financial Identification Forms): available here • LEGAL ENTITY FORM: available here to be completed and signed by the applicant and in case of consortium also by its partner/s. For a public body the legal entity form should be provided together with a copy of the resolution or decision establishing the public body, or other official document establishing that public body. For a private body an





	<p>extract from the official journal, copy of articles of association, extract of trade or association register, certificate of liability to VAT (if, as in certain countries, the trade register number and VAT number are identical only one of these documents is required).</p> <ul style="list-style-type: none"> • FINANCIAL IDENTIFICATION FORM: available here to be completed only by the applicant and in case of consortium only by the coordinator. <p>Please note that there is no need to submit the Legal entity and Financial information forms if they have already been submitted under another EFSA procurement or grant procedure and provided that these forms are still valid. In this case simply indicate in the administrative data for grant application form the reference of the call under which the form/s were previously submitted to EFSA.</p> <p><u>Only applicable if the applicant is a consortium:</u></p> <ul style="list-style-type: none"> • PARTNERSHIP STATEMENT: The applicant and partner/s must provide EFSA with a statement indicating their involvement in the action. The applicant and partner/s must sign the partnership statement. No template is provided by EFSA.
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2.3 EXCLUSION CRITERIA

Criterion No. 2.3	Requirements and requested evidence
1	Exclusion criteria
	The following requirements will be verified:
	The applicant and partner/s must sign a declaration on their honour certifying they are not in one of the exclusion situations referred to in the Articles 136-140 of EU Financial Regulation.
	Requested evidence:
	THE DECLARATION ON HONOUR – Section A , available here : to be completed/signed individually by the applicant and in case of consortium by each partner.

2.4 SELECTION CRITERIA

A) Financial capacity

Criterion No. 2.4A	Requirements and requested evidence
1	Financial capacity
	The purpose of the selection criteria is to verify the financial capacity of the applicant and in case of consortium also of its partner/s.
	The applicant and in case of consortium also its partner/s must have stable and sufficient financial resources to:





	<ul style="list-style-type: none"> maintain their activity throughout the period during which the project is being carried out, and
	Requested evidence:
	<p>Documents to be provided by the applicant:</p> <ul style="list-style-type: none"> DECLARATION ON HONOUR – Section B, available here to be completed by the applicant or in case of consortium by the coordinator. SIMPLIFIED FINANCIAL STATEMENT available here only required for private bodies if the grant requested from EFSA is >60.000 €. The template published with the Call should be completed for at least the last two closed financial years. LETTER OF COMMITMENT: applicable only when another public body financially contributes to the project (body other than EFSA, applicant or in case of consortium, its partners); to be signed by the contributing public body; it serves to confirm its commitment to financially contribute to the project; no template is provided by EFSA;

B) Professional and operational capacity

Criterion No.2.4. B	Requirements and requested evidence
1	Professional and operational capacity:
	RISK-BASED MODEL FOR DAIRY HERD WELFARE: FIELD DATA COLLECTION
	Requirements:
	<p>The applicant or in case of a consortium, the consortium as a whole, must have the professional resources, competencies and qualifications necessary to complete the proposed project:</p> <p>1. Requirements for the organisation: The applicant should provide evidence of expertise of the organisation in the field of dairy cow welfare, data collection activities in dairy farms, and publication in peer-reviewed journals of the research outputs.</p> <p>2. Requirements for the team of experts. Experts involved in the tasks should include:</p> <ol style="list-style-type: none"> At least one senior researcher with at least 7 years of experience in the field of dairy herd health and welfare and with experience in managing European-wide research projects. The senior researcher will have the responsibility of ensuring high scientific standards of the methods used in the quality of the project outputs and timely delivery of project outputs. At least one post-doctoral researcher, with a at least 3 years of experience in a relevant field (e.g. animal welfare, veterinary epidemiology, ethology) which will support the senior researcher in the scientific supervision of the project, who can closely





	<p>supervise the researchers in charge of the data collection, and that may lead/supervise the data analysis activities.</p> <p>c. At least one project manager, which will oversee the practical and administrative aspects of the work and to ensure timely implementation of the activities, with experience in implementation of similar projects (e.g. international EU-funded projects)</p> <p>d. A sufficient number (at least 5) of researchers (e.g. PhD students, research assistants, or post-doctoral researchers) with experience in behavioural observation and animal welfare to undertake the data collection activities in different EU countries. A larger number may be suggested, depending on the plan for the data collection activities in the different areas.</p> <p>3. Requirement of English language for the team of experts:</p> <p>The Team coordinator and the Work Package Leaders should have a very good level of spoken and written English. For non-native speakers, this should be demonstrated by an official certificate proofing at least level B.2 of the Common European Framework of References for Languages; or at least 2 years of work/study in an English speaking environment where English is used for meetings, communications and producing written reports and scientific publications OR at least 3 years of experience working in international projects where English is the working language.</p>
	<p>Requested evidence:</p>
	<ul style="list-style-type: none"> • <u>Evidence requested for requirement 1:</u> <p>A list of 5 relevant peer-reviewed publications, published in the last 10 years, on dairy cow welfare should be provided. References related with assessment of welfare at herd level are considered more relevant for the purposes of this project.</p> • <u>Evidence requested for requirement 2 and 3:</u> <p>CURRICULUM VITAE (max 3 pages) of the experts and other staff to be involved in the project, including a brief description of the expertise and a list of publications relevant to the project for each person proposed. If individual team members are not yet assigned for the proposed project, applicants should provide details of the staff profiles necessary for the project.</p> <p>LIST OF PROJECT TEAM MEMBERS NAMES AND ROLES – In addition to the CV’s of each team member, the applicant should also summarise on one page, the names of the individual project team members and the expected role of the team member in the project.</p> <p>INDIVIDUAL DECLARATION OF INTERESTS</p> <p>EFSA may request Individuals DoIs for members of the project team having influence and/or control over scientific outputs, prior to and as a condition of grant agreement signature. The requirement to submit Individual DoIs will be specified in the award letter and will have to be provided and assessed by the</p>





	<p>EFSA Authorising Officer before and as a condition of grant agreement signature. <u>Individual DoIs do not need to be provided with your proposal at this stage.</u></p> <p>Please refer to EFSA's policy on independence and the Decision of the Executive Director on Competing Interest Management for more detailed information. Individual DoI template available here.</p>
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2.5 AWARD CRITERIA

Criterion No. 2.5	<p>The award criteria serve to assess the quality of the proposals in relation to the objectives of the Call.</p> <p>The applicant is requested to provide a document with the proposed workplan (recommended max 30 pages) explaining in detail how each task will be addressed. The plan (including scientific approach, logistics and estimated timelines) should cover all Tasks. The plan should be realistic, scientifically sound and provide an overview of the timelines and logistics for proposed implementation of work.</p> <p>The proposal will be assessed in relation to the following award criteria:</p>
1	Workplan quality (MAX 50 POINTS)
	<p>Overall quality of the workplan to undertake each task (recommended max 30 pages excluding annexes). The workplan should be scientifically sound, clear, feasible and include sufficient detail. It should include timelines and logistic details for project implementation especially regarding the farm visits. Risks and barriers foreseen in each task and respective proposed contingency plan in case of deviations should also be briefly described.</p>
2	Sample quality (MAX 40 POINTS)
	<ul style="list-style-type: none"> • Quality of estimated sample of farms to be visited under WP2: information on sample size calculation and sampling strategy, estimated number of farms to be sampled, sample geographical coverage, geographical balance, balance of the sample regarding dairy farming systems and balance regarding types of farm/husbandry systems represented. It is recommended to provide schemes and maps for clarity and a clear outline of the criteria for selection (MAX 25 POINTS) • Demonstrated capacity to contact and visit the farms (this is, that is proposed plan for farm visits, including pre-identification of farms, is realistic and feasible in terms of actual visits) (MAX 15 POINTS)
3	Project management and quality of outputs (MAX 10 POINTS)
	<ul style="list-style-type: none"> • Project management – overview how the project will be managed (if the project has multiple partners, how will be the project coordinated,





	<p>task breakdown among partners) and which steps are taken to ensure timely delivery of outputs and smooth communication with EFSA (MAX 5 POINTS)</p> <ul style="list-style-type: none"> Assurance of quality of written outputs regarding scientific basis and written English (MAX 5 POINTS)
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In order to be considered for a reserve list, the proposal must:

- score a minimum of 70 points out of maximum possible 100 points.

Proposals which have satisfied these quality thresholds will be ranked in a reserve list. The reserve list will be valid for six months from the signature of the feedback letter.

2.6 PROCESS FOLLOWING THE ASSESSMENT AGAINST AWARD CRITERIA

The applicant(s) will be notified, once the evaluation has been finalized, whether they are placed on the reserve list or not.

EFSA reserves the right to invite the 1st ranked applicant on the reserve list, to adapt its proposal based on the evaluators' comments in accordance with article 200(5) EU FR.

Following the successful conclusion of the adaptation phase, the award decision will be taken by EFSA. Subsequently, the grant agreement will be prepared.

If the 1st ranked applicant fails to adapt its proposal, EFSA reserves the right to reject the proposal. The budget made available in this way may be used for a project of the next ranked applicant on the reserve list.





3. SUBMITTING PROPOSALS

3.1 SUBMISSION COMPLETENESS CHECKLIST

The proposal must be submitted along with all the requested annexes and the administrative data for grant application form signed by a duly authorised legal representative of the applicant.

The applicant should be precise and provide enough details to ensure the technical proposal is well described (free format).

By submitting a proposal, the applicant and in case of consortium also partner/s accept/s the procedures and conditions described in this Call and in the documents referred to in it.

In addition to a full paper version of the application, the applicant must submit the application also on a USB. The electronic version must be identical to the paper version. In case of any discrepancies between the electronic and paper version, the latter will prevail. All documents presented by the applicant become the property of EFSA and are deemed confidential.

The below checklist is designed to help the applicant to collect the documents in a structured way before submission of the proposal/application to EFSA.

APPLICATION SUBMISSION COMPLETENESS CHECKLIST	
<input type="checkbox"/>	<p>ELIGIBILITY CRITERIA: for details of which documents are needed see part 2.2 of the call:</p> <ul style="list-style-type: none"> • Administrative data forms signed (including Legal Entity and Financial Identification Forms) available here. • Partnership Statement (only for consortium)
<input type="checkbox"/>	<p>EXCLUSION CRITERIA: for details of which documents are needed see part 2.3 of the call:</p> <ul style="list-style-type: none"> • Declaration on honour section A, available here.
<input type="checkbox"/>	<p>SELECTION CRITERIA: for details of which documents are needed see part 2.4 of the call:</p> <ul style="list-style-type: none"> • Declaration on honour section B, available here. • Simplified Financial Statement, available here only for private bodies if the grant requested from EFSA is >60.000 €. • Letter of commitment, applicable only when another public body financially contributes to the project • List of relevant peer-reviewed publications • CV of the proposed experts • List of project team members names and roles
<input type="checkbox"/>	<p>AWARD CRITERIA: Technical proposal covering award criteria, see part 2.5 of the call</p>





3.2 SUBMISSION MODALITIES

Proposals are to be submitted as indicated in the second page of this document in the Indicative procedure timetable.

3.3 LANGUAGE OF THE PROPOSAL AND THE SUPPORTING DOCUMENTS

Proposals may be submitted in any official language of the European Union. However, as EFSA`s working language is English, the submission of proposals in English would speed up the evaluation process.

Please note that some supporting documents are required. These supporting documents are an integral part of the proposal. For more information on the relevant supporting documents to be submitted, please refer to part 2 of this Call. If these supporting documents are in a language other than English, in order to facilitate and speed up the evaluation, it would be appreciated if a reliable translation of the relevant parts of the documents into English is provided with the proposal.

3.4 EXPECTED DURATION OF PROCEDURE

In accordance with Article 194(2) of the Financial Regulation, the maximum time-limits for the procedure are as follows:

- All applicants will be informed of the decision regarding their application within 6 months of the deadline for submission of proposals;
- Signature of the grant agreement will take place within 3 months from the date the successful applicant/s has/have been informed of the decision on their application.





APPENDIX I – ADDITIONAL INFORMATION ON RISK-BASED MODEL FOR DAIRY HERD WELFARE: FIELD DATA COLLECTION

Background information on dairy herd model to be tested with field data

This risk-based approach was developed by the EFSA working group on dairy cow welfare. The aim was to develop a practical framework for a risk-based assessment of dairy cow welfare that could be applied to farms throughout Europe. The framework was based on defining farm characteristics that could be used to categorise farms at risk of poor welfare. Farms with such characteristics would subsequently be evaluated for the presence of specific welfare consequences through the assessment of specified animal-based measures (ABM). A diagrammatic representation of the risk-based approach is presented in Figure 1. Farm characteristics, if present, would trigger an evaluation of cow welfare on that farm using pre-defined animal-based measures for specified welfare consequences.

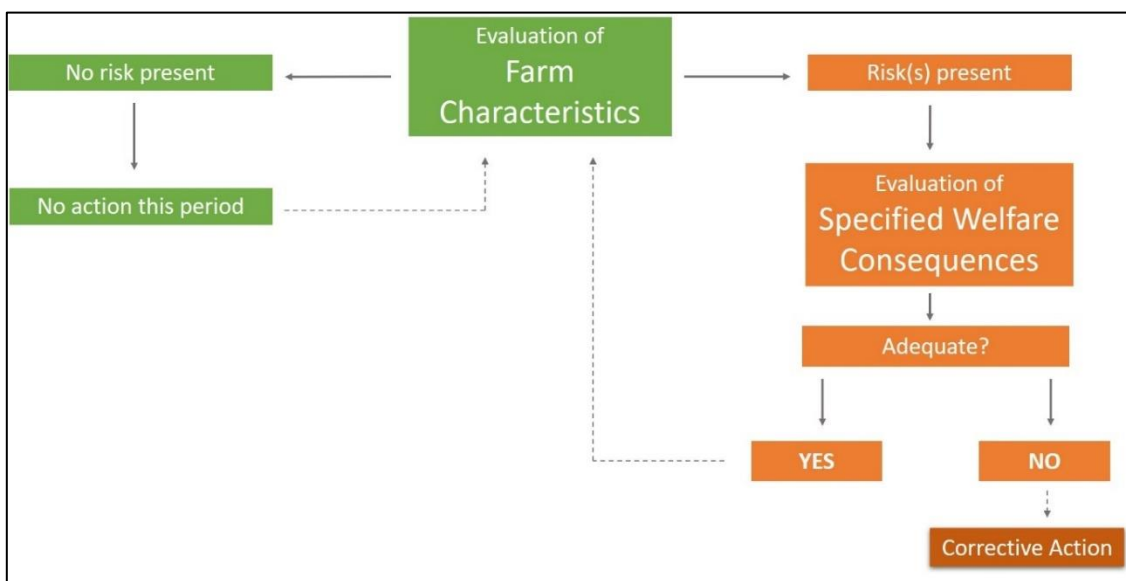


Figure 1. Diagrammatic representation of the proposed risk-based approach to welfare assessment on dairy farms.

The risk-based approach was developed based on expert knowledge, through expert knowledge elicitation, and consisted of three phases:

- Phase 1. Elicitation of farm characteristics: In this phase the WG members identified 5 simple, measurable farm characteristics that were deemed indicative of cows being at a high risk of poor welfare on a farm (e.g. farms with limited space allowance). Farm characteristics had to be measurable across all farms in the EU (i.e., already routinely measured or easily measurable).
- Phase 2. Elicitation of welfare consequences and animal-based measures: In this phase the EFSA working group members identified, for each farm characteristic, the welfare consequences that were likely to arise from the presence of that characteristic (e.g. group stress). A list of potential welfare consequences had been pre-defined based on the current EFSA definition of welfare consequences (see Table 2 of EFSA, 2022¹²).

¹² [Methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy - - 2022 - EFSA Journal - Wiley Online Library](#)





- Subsequently, WG members identified appropriate ABMs to assess each identified welfare consequence (e.g. number of aggressive interactions) and farm-level measurements for each ABM were defined.
- Phase 3. Elicitation of ABM thresholds: In this final phase, consensus thresholds were elicited for each ABM identified above, to determine whether a farm was deemed to require corrective action for cow welfare (e.g. a farm that had limited space allowance and that exceeded the threshold for the number of aggressive interactions would require corrective action) (see Table 2).

Figure 2 shows a diagrammatic representation of the proposed risk-based approach to welfare assessment on dairy farms (resulting from Phases 1 and 2).



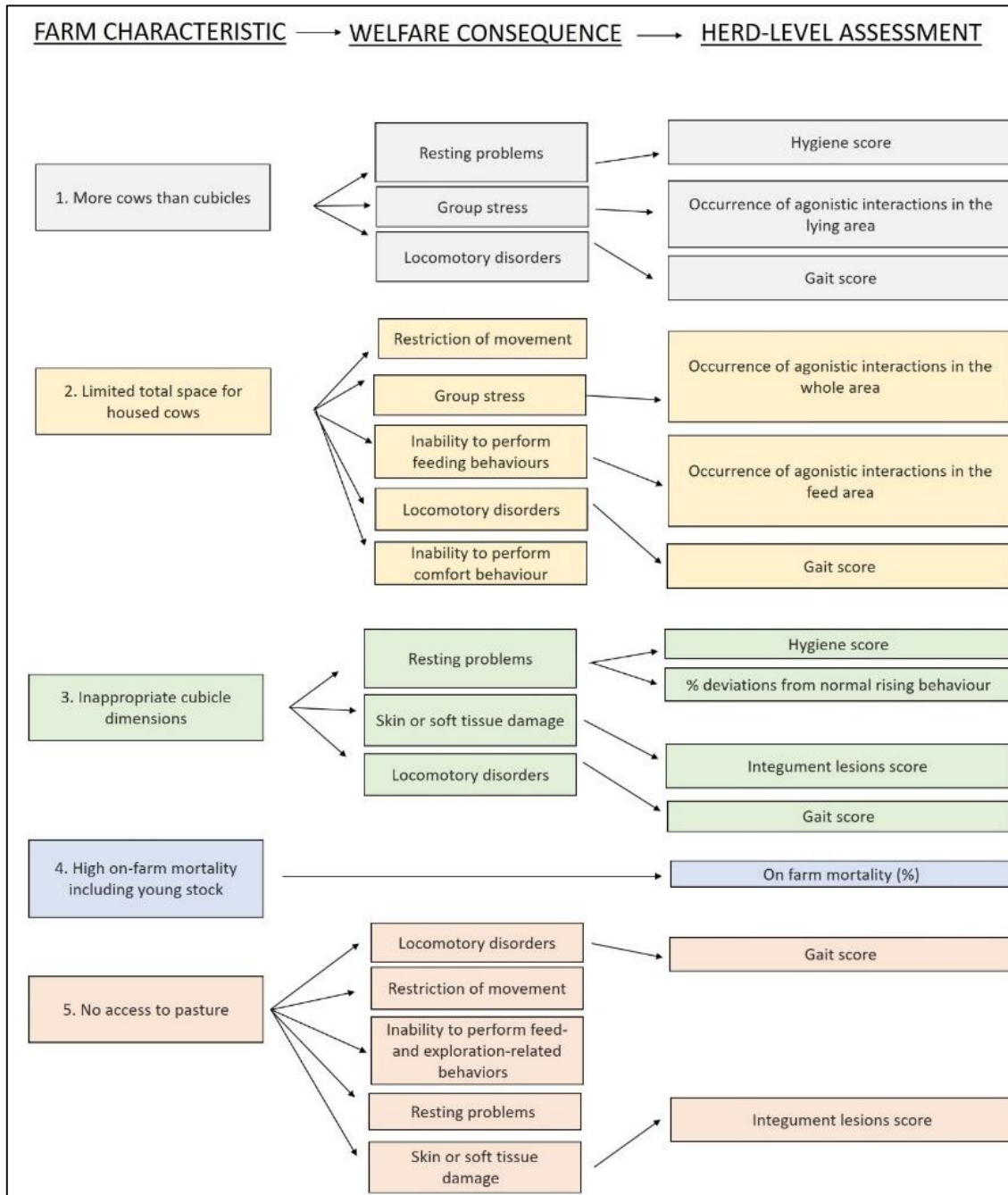


Figure 2. Diagrammatic representation of the proposed risk-based approach to welfare assessment on dairy farms. The boxes on the left-hand side represent the farm characteristics, and the boxes on the right-hand side the proposed animal-based measures to assess on farm.

A proposed definition of the herd-level assessment variables (resulting from phase 1 above) is shown in Table 1.

Table 1. List of farm characteristics to be assessed, with the outline definition as described in the EFSA risk-based approach.

Farm Characteristic	Outline of EFSA definition





More cows than cubicles (>1:1)	Each separate cubicle building is evaluated (including those housing dry and hospital cows). The cow:cubicle ratio is calculated as; the maximum number of cows housed in a building at any time during the year divided by the total number of cubicles available in that building. If any building exceeds a ratio of 1:1, for any period of time, the farm is classed as 'at risk' for cow welfare.
Limited space for housed cows (<7m²/cow in total)	Each separate building is evaluated (yards, cubicles, tie stalls) for each group of cows (including dry and hospital cows). The total space available to cows, at all times throughout the day is measured. This includes lying areas, indoor and outdoor loafing areas, passageways (including crossover passageways) and feeding areas. Collection yards used solely at milking times are not included unless they remain available to cows between milkings. The maximum number of cows that are placed in each building during the year is used. The space per cow is calculated as the total space available divided by the maximum number of cows for each building. If the space allowance in any building is <7m ² /cow, for any period of time, the farm is classed as 'at risk' for cow welfare
Inappropriate cubicle dimensions for cows in the herd	The length and width of each different type of cubicle on farm is measured and the cubicle with smallest dimensions considered further. The average cow size is estimated for the herd. If the length or width of the smallest cubicle is more than 10% shorter than that recommended for the relevant size of cow the farm is classed as 'at risk' for cow welfare.
High on-farm mortality (≥8%) including emergency slaughter (annual incidence including young stock)	To calculate on farm mortality per annum the numerator is the number of cattle of all ages that die on-farm or are culled through emergency slaughter in a specified 12-month period. Young stock would be included from 48 hours after birth (i.e., stillbirths not included). The denominator is the number of cattle-years (of any age) at risk on farm during the 12-month period. If the farm exceeds a specified threshold of 8% for annual mortality, the farm is classed as 'at risk' for cow welfare.
No access to pasture for at least 2 months of the year	All lactating cows are required to spend at least 60 days of a calendar year at pasture, although not necessarily for a continuous period. The minimum daily time at pasture during the 60 days is 8 hours. A farm not providing such access to pasture is classed as 'at risk' for cow welfare.

The list of animal-based measures to be assessed, proposed scoring systems and defined thresholds (resulting from phase 2 above) are shown in Table 2.

Table 2. List of animal-based measures to be assessed and proposed scoring systems.

ABM	Outline of scoring system	Farm-level measurement	Threshold
Whole farm annual mortality score	The number of animals that die or are culled through emergency slaughter on farm over a 1-year period, excluding stillbirths, divided by the number of animal-years at risk in that period. Data would be collated from national birth-death recording systems (e.g. national livestock databases) and calculated electronically. Final value calculated as a percentage.	% of cows that die or are culled on-farm per annum; continuous scale	8 %





Abdomen hygiene score	A hygiene score based on that reported in Ruud et al. (2010). The number of cows with an abdominal hygiene score of 4 (very dirty) is recorded. Final value calculated as the percentage of cows that score 4 on the day of assessment ^a .	% of cows with a belly hygiene score =4; continuous scale	4 %
Lameness score	Gait scoring using a 3-point system (e.g., Welfare Quality, 2009; Amory et al., 2006; 1= sound, 2 = moderately lame, 3 = severely lame). Final value calculated as the percentage of cows that score >1 on the day of assessment ¹ .	% of cows with a gait score >1; continuous scale	25 %
Lesions/ integument alteration score	Visual assessment of one side of the body (head/ears, shoulders/back/neck, tarsus including hocks, hindquarter, carpus, flank/side/udder, tail) according to Welfare Quality (2009). Score 0: The cow has no lesion (>2 cm), no swelling on all body parts, although it might have a hairless patch Score 1: at least one body part of the cow has at least one lesion or one swelling. Final value calculated as the percentage of cows that score 1 on the day of assessment ¹ .	% of cows with score =1; continuous scale	15 %
Rising behaviour score	Lying animals are gently encouraged to stand up, and rising behaviour is scored as either Score 0: regular (no deviations from normal standing up, fluid movement), or Score 1: deviated (break: resting ≥ 3 s on carpal joint counted from the moment when they have stretched the hind legs – kneeling; difficulties: repeated lunging, colliding with housing equipment; or abnormal: deviation from normal standing up, e.g., horse-like rising (Schenkenfelder and Winckler, 2021). Final value calculated as the percentage of cows that score 1 on the day of assessment ¹ .	% of cows with score 1; continuous scale	13.5 %
Number of agonistic interactions in the feed area	Continuous behaviour sampling (Bateson and Martin, 2021) of displacements in the feed area (i.e., cow is forced by another cow to leave the feeding place/step aside by one cow width, Winckler et al 2015)) for in total 1 hour, starting after morning milking (at least 75% of cows back from milking). Cows in oestrus should be excluded from the assessment. Observations may also be split into periods of minimum 10 min in representative segments of the feed bunk. The number of animals in the (respective) feed area(s) must be counted before and after the observations. Final value calculated as the number of displacements occurring divided by the average number of cows present in the feed area (on a per hour basis).	Number of displacements per cow per hour that occur in the feeding area; continuous scale	1.25 ^a
Number of agonistic interactions	Continuous behaviour sampling of displacements in the lying area (i.e., cow that is either standing or lying is forced to leave the cubicle by another cow; Winckler et al., 2015) for in total 1 hour, starting	Number of displacements per cow per hour that occur	0.09 ^a





in the lying area	<p>approx. 1 h after morning milking. Cows in oestrus should be excluded from the assessment. Observations may also be split into periods of minimum 10 min in representative segments of the pen(s). The number of animals in the (respective) lying area(s) needs to be counted before and after the observations.</p> <p>Observations may be combined with the assessment of agonistic interactions in the whole area by recording where displacements occur (i.e., lying area, remainder of the housed area). Final value calculated as the number of displacements occurring divided by the average number of cows present in the lying area (on a per hour basis).</p>	in the lying area; continuous scale	
Number of agonistic interactions in the whole area	<p>Continuous behaviour sampling of displacements in the whole housed area (i.e., cow that is either displaced from the lying area, walks away by half a cow length or steps aside by one cow width after forceful physical contact; Winckler et al., 2015; Welfare Quality, 2009) for in total 1 hour, starting 1 h after morning milking. Cows in oestrus should be excluded from the assessment. Observations may also be split into periods of minimum 10min in representative segments of the pen(s). The number of animals in the (respective) area(s) needs to be counted before and after the observations.</p> <p>Final value calculated as the number of displacements occurring in the whole housed area divided by the average number of cows present (on a per hour basis).</p>	Number of displacements per cow per hour that occur in the whole area; continuous scale	1.65 ^a

^a For agonistic interactions, a value of 1.0 means, that on average each cow is displaced once per hour. Likewise, a value of 0.05 indicates that 5 out of 100 cows are displaced from the cubicles within one hour.

