

Questionnaire - AQALYP3

Dear participant,

Thank you very much for your participation in this questionnaire.

The study should last about 15 minutes.

The information provided in this questionnaire will only be used for academic/scientific purposes (no commercial purposes).

Confidentiality, Disclosure of Information, and Declaration of Voluntary Participation

You will not be asked for your name or any other information that could be used to identify you. The information you provide will be stored anonymously and can never be linked to you, your real name, or your IP address. Anonymous data will initially be accessible only to the team of researchers involved in this project, then the anonymized data will be stored indefinitely on a data-sharing account for the purpose of replication and to promote reproducible science. Participation is completely voluntary. You can end your participation at any time.

If you have any questions about this study, you can contact Romain Espinosa: romain.espinosa@cnrs.fr

We thank you for your participation!

Note: Loading the next page might take a few seconds but it occurs only at this stage and loading is quicker for the next screens.

Next

In the following screens, we are going to ask you a few questions about animal welfare and the lives of animals. We ask you to **think about the problem as much as possible from the animal's perspective, thinking about what the best situation for the animal would be**. Note that for these questions, there is no correct or incorrect answer, we just ask you to report the most honest answer about what you think would be in the animal's best interest.

*I understand the objective of my participation and agree to participate in the study.

Yes

No

Next

In this survey, **we will use a framework of animal welfare that covers four domains of the animal's life: nutrition, environment, health, and behavior.** This model was developed by animal-welfare scientists and aims to consider the most prominent aspects of the welfare of the animals.

On the following screens, we are going to show you the evaluation tables of the four domains at stake. You will see a list of criteria for each domain that enables researchers and applied experts to assess animal welfare.

- In red, you will see the factors that can *negatively* affect the welfare of the animals. When an expert assesses how the factor affects the welfare of the animal at stake, she assigns a grade ranging from none (i.e., no negative impact) to very severe (i.e., very negative welfare impact).
- In green, you will see the factors that can *positively* affect the animals' welfare. Here, the expert can assign a grade taking values from none (i.e., no positive impact) to high-level (i.e., very high positive welfare impact).

What represent grades that are shown in **green**?

! Choose one of the following answers

- Factors that positively affect animal welfare
- Factors that do not affect animal welfare
- Factors that negatively affect animal welfare
- No answer

What represent grades that are shown in **red**?

ⓘ Choose one of the following answers

- Factors that positively affect animal welfare
- Factors that do not affect animal welfare
- Factors that negatively affect animal welfare
- No answer

Check all the domains of animal welfare that the model contains

ⓘ Check all that apply

- Nutrition
- Health
- Environment
- Behavior

Next

In what follows, we will introduce you to the four domains of the animal welfare framework. For each domain, you will see the assessment tables as well as an example of how a table could be filled out by an animal welfare expert to reflect a particular animal housing situation. You can assume that when the expert filled in the table, they have taken into account the species-specific needs of the animal.

After the introduction to the four domains, you will receive a survey that asks you to report your perception of the welfare of an animal in some hypothetical scenarios. You will see four grades that summarise the overall welfare experienced by the animal in each of the four domains you have already encountered (please assume that these grades have been determined by an animal welfare expert after they have filled in the domain-specific assessment tables).

For each domain, the overall welfare experience grade can take any of the following values:

| How do you evaluate the overall welfare experienced by the animal in this domain? <i>In your opinion, overall, the animal experiences mostly...</i> | | | | | | | | |
|--|-----------------------------|---------------------------|----------------------------|---|----------------------------|---------------------------|----------------------------------|---------------------------------|
| Very severe negative experiences | Severe negative experiences | Mild negative experiences | Minor negative experiences | Neutral: Negative and positive experiences compensate | Minor positive experiences | Mild positive experiences | Significant positive experiences | High-level positive experiences |
| o | o | o | o | o | o | o | o | o |

To summarise, the survey will consist of two parts:

- Part 1: You will be introduced to each of the four domains with examples to illustrate how they are assessed.
- Part 2: We will show you some hypothetical scenarios representing the welfare of different animals in different conditions, and ask you to report which situation you think is best for the animal.

* I read the instructions.



Yes



No

We now show you the Nutrition domain. In the assessment table below, you can see the criteria that are used to evaluate the welfare of the animal regarding Nutrition. Please have a look at it.

Domain #1: Nutrition

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Restricted water intake | | | | | | |
| Excessive water intake | | | | | | |
| Restricted food intake | | | | | | |
| Poor food quality | | | | | | |
| Low food variety | | | | | | |
| Voluntary overeating | | | | | | |
| Force-feeding, excessive energy intake | | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|-----------------------------------|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| Drink correct quantities of water | | | | | | |
| Eat enough food | | | | | | |
| Eat a balanced diet | | | | | | |
| Eat a variety of foods | | | | | | |
| Eat correct quantities of food | | | | | | |

We now illustrate how the Nutrition Table can be used by experts.

Imagine that an animal has restricted access to food and water and that the very small amounts of food it has access to are of poor quality and low variety.

The expert would fill in the Table as follows.

Domain #1: Nutrition

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Restricted water intake | | | | X | | |
| Excessive water intake | X | | | | | |
| Restricted food intake | | | | | X | |
| Poor food quality | | | | | X | |
| Low food variety | | | | | X | |
| Voluntary overeating | X | | | | | |
| Force-feeding, excessive energy intake | X | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|-----------------------------------|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| Drink correct quantities of water | X | | | | | |
| Eat enough food | X | | | | | |
| Eat a balanced diet | X | | | | | |
| Eat a variety of foods | X | | | | | |
| Eat correct quantities of food | X | | | | | |

We now show you the Physical Environment domain. In the assessment table below, you can see the criteria that are used to evaluate the welfare of the animal regarding the Environment. Please have a look at it.

Domain #2: Physical Environment

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Close confinement, overcrowding | | | | | | |
| Unsuitable substrate, wet/soiled ground | | | | | | |
| Air pollutants (NH3, CO2, dust, smoke) | | | | | | |
| Aversive odors | | | | | | |
| Thermal extremes | | | | | | |
| Loud or unpleasant noise | | | | | | |
| Inappropriate light intensity | | | | | | |
| Unpredictable events (source of fear, anxiety, hypervigilance) | | | | | | |
| Physical limits on rest and sleep | | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|--|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| Space for spontaneous locomotion | | | | | | |
| Suitable substrate, well-drained ground | | | | | | |
| Fresh air dissipates contaminants | | | | | | |
| Foul smells dissipated by fresh air & good hygiene | | | | | | |
| Effective shelter and shade available | | | | | | |
| Effective noise control measures | | | | | | |
| Light intensity kept at tolerable levels | | | | | | |
| Within-day environmental variability maintained | | | | | | |
| Predictability achieved by established routines | | | | | | |
| Conditions conductive to rest and sleep | | | | | | |

We now illustrate how the Physical Environment Table can be used by experts.

Imagine that an animal lives indoors. It lives in a somewhat confined space with a few other animals, but has sufficient room to move around. The space is well-ventilated and dissipates most odours and air contaminants. The ground is clean of waste, but does not provide comfortable flooring. Resting conditions are relatively good, but the long lighting cycle means the animals suffer from some light nuisance during part of the night. The routine is well-established and there are no unpredictable events.

The expert would fill in the Table as follows.

| | | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Close confinement, overcrowding | | | X | | | | |
| Unsuitable substrate, wet/soiled ground | X | | | | | | |
| Air pollutants (NH3, CO2, dust, smoke) | X | | | | | | |
| Aversive odors | X | | | | | | |
| Thermal extremes | X | | | | | | |
| Loud or unpleasant noise | X | | | | | | |
| Inappropriate light intensity | | X | | | | | |
| Unpredictable events (source of fear, anxiety, hypervigilance) | X | | | | | | |
| Physical limits on rest and sleep | | X | | | | | |

| | | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|--|---|--|---------------|-----------------|-------------------|-------------------|--------------|
| | | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| Space for spontaneous locomotion | | | | X | | | |
| Suitable substrate, well-drained ground | X | | | | | | |
| Fresh air dissipates contaminants | | | | X | | | |
| Foul smells dissipated by fresh air & good hygiene | | | | X | | | |
| Effective shelter and shade available | X | | | | | | |
| Effective noise control measures | | | | X | | | |
| Light intensity kept at tolerable levels | X | | | | | | |
| Within-day environmental variability maintained | X | | | | | | |
| Predictability achieved by established routines | X | | | | | | |
| Conditions conducive to rest and sleep | | | | X | | | |

| How do you evaluate the overall welfare experienced by the animal in this domain? <i>In your opinion, overall, the animal experiences mostly...</i> | | | | | | | | | |
|--|-----------------------------|---------------------------|----------------------------|---|----------------------------|---------------------------|----------------------------------|---------------------------------|--|
| Very severe negative experiences | Severe negative experiences | Mild negative experiences | Minor negative experiences | Neutral: Negative and positive experiences compensate | Minor positive experiences | Mild positive experiences | Significant positive experiences | High-level positive experiences | |
| O | O | O | O | O | X | O | O | O | |

We now show you the Health Domain. In the assessment table below, you can see the criteria that are used to evaluate the welfare of the animal regarding Health. Please have a look at it.

Domain #3: Health

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Acute, chronic injuries | | | | | | |
| Husbandry mutilations | | | | | | |
| Acute, chronic diseases | | | | | | |
| Functional impairments (due to amputations, therapies or genetics) | | | | | | |
| Obesity or leanness | | | | | | |
| Poisons | | | | | | |
| Poor physical fitness | | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|----------------------------------|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| No risk of injury | | | | | | |
| No risk of disease | | | | | | |
| No functional impairment | | | | | | |
| No extreme body condition scores | | | | | | |
| No risk of poisoning | | | | | | |
| Good level of fitness | | | | | | |

We now illustrate how the Health Table can be used by experts.

Imagine that an animal belongs to a slow-growth strain. The animal lives in an area where there are very limited risks of diseases or poisoning. The animal has good fitness within its environment and suffers from no functional impairment. Due to the well-adapted environment and provision of health treatments, the animal faces very little risk of injury or disease.

The expert would fill in the Table as follows.

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|--|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| Acute, chronic injuries | X | | | | | |
| Husbandry mutilations | X | | | | | |
| Acute, chronic diseases | X | | | | | |
| Functional impairments (due to amputations, therapies or genetics) | X | | | | | |
| Obesity or leanness | X | | | | | |
| Poisons | X | | | | | |
| Poor physical fitness | X | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|----------------------------------|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| No risk of injury | | | X | | | |
| No risk of disease | | | | X | | |
| No functional impairment | | | X | | | |
| No extreme body condition scores | | | X | | | |
| No risk of poisoning | | | | X | | |
| Good level of fitness | | | | X | | |

We now show you the Behavioral Interactions domain. In the assessment table below, you can see the criteria that are used to evaluate the welfare of the animal regarding Behavioral Interactions. Please have a look at it.

Domain #4: Behavioral interactions

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|---|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| <i>Interactions with the environment</i> | | | | | | |
| Invariant, barren, confined environment | | | | | | |
| Inescapable sensory impositions | | | | | | |
| Choices markedly restricted | | | | | | |
| Environment-focused activity constrained | | | | | | |
| Foraging drive impeded | | | | | | |
| <i>Interactions with other animals</i> | | | | | | |
| Animal-to-animal interactive activity constrained | | | | | | |
| Significant threats | | | | | | |
| Limits on threat avoidance, escape or defensive activity | | | | | | |
| Limitations on sleep/rest | | | | | | |
| <i>Interactions with humans</i> | | | | | | |
| Attitude: uncertain, fearful, indifferent, insensitive, impatient, oppressive, belligerent, domineering, callus, cruel, vindictive | | | | | | |
| Voice: hesitant, angry, loud, shouting | | | | | | |
| Aptitude: inexperienced, unskilled, untrained, unqualified | | | | | | |
| Handling/controlling: erratic, rough (slap, hit, kick, grab, poke, beat, whip); excessively forceful, violent, punishment-focused; more negative pressure than needed | | | | | | |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|---|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| Interactions with the environment | | | | | | |
| Varied, novel environment | | | | | | |
| Congenial sensory inputs | | | | | | |
| Available engaging choices | | | | | | |
| Free movement | | | | | | |
| Exploration, foraging | | | | | | |
| Interactions with other animals | | | | | | |
| Bonding/reaffirming bonds | | | | | | |
| Rearing young | | | | | | |
| Playing | | | | | | |
| Sexual activity | | | | | | |
| Hunting | | | | | | |
| Absence of threats | | | | | | |
| Using refuges, retreat or defensive attack | | | | | | |
| Sleep/rest sufficient | | | | | | |
| Interactions with humans | | | | | | |
| Attitude: confident, caring, sensitive, patient, kind, empathetic | | | | | | |
| Voice: confident, calm, clear, encouraging, pleasantly rhythmic | | | | | | |
| Aptitude: experienced, skilled, trained, qualified | | | | | | |
| Handling/controlling: skillful, gentle (stroke, touch, push, guide); firm, temperate, restrained; reward-focused; mimics allo-grooming by conspecifics; using subtle pressure cures, secondary reinforcers and timely release of aversive stimuli | | | | | | |

We now illustrate how the Behavioral Interaction Table can be used by experts.

Imagine that an animal lives in a partially confined environment (such as a barn stall) that it can leave for a few hours each day. The stall itself is partially enriched but offers limited overall opportunities for interactions with the environment. The outside area offers a relatively more varied environment with free movement and exploration possibilities (within the limits of the paddock). The living conditions are sufficiently good to allow positive interactions with other animals, and for a few hours each day the animals can to some degree form social bonds and play together. Animals have sufficient space to retreat when conflicts arise, and can rest safely.

The expert would fill in the Table as follows.

Domain #4: Behavioral interactions

| | Animal-welfare Compromise Grade | | | | | Not relevant |
|---|---------------------------------|--------|---------------------|---------------------|----------------|--------------|
| | A: None | B: Low | C: Mild to Moderate | D: Marked to Severe | E: Very Severe | |
| <i>Interactions with the environment</i> | | | | | | |
| Invariant, barren, confined environment | | X | | | | |
| Inescapable sensory impositions | | X | | | | |
| Choices markedly restricted | | X | | | | |
| Environment-focused activity constrained | | X | | | | |
| Foraging drive impeded | | X | | | | |
| <i>Interactions with other animals</i> | | | | | | |
| Animal-to-animal interactive activity constrained | X | | | | | |
| Significant threats | X | | | | | |
| Limits on threat avoidance, escape or defensive activity | | X | | | | |
| Limitations on sleep/rest | X | | | | | |
| <i>Interactions with humans</i> | | | | | | |
| Attitude: uncertain, fearful, indifferent, insensitive, impatient, oppressive, belligerent, domineering, callus, cruel, vindictive | | | | | | X |
| Voice: hesitant, angry, loud, shouting | | | | | | X |
| Aptitude: inexperienced, unskilled, untrained, unqualified | | | | | | X |
| Handling/controlling: erratic, rough (slap, hit, kick, grab, poke, beat, whip); excessively forceful, violent, punishment-focused; more negative pressure than needed | | | | | | X |

| | Animal-welfare Enhancement Opportunity | | | | | Not relevant |
|---|--|---------------|-----------------|-------------------|-------------------|--------------|
| | None (0) | Low-level (+) | Mild level (++) | Significant (+++) | High-level (++++) | |
| <i>Interactions with the environment</i> | | | | | | |
| Varied, novel environment | | X | | | | |
| Congenial sensory inputs | | X | | | | |
| Available engaging choices | | X | | | | |
| Free movement | | | X | | | |
| Exploration, foraging | | | X | | | |
| <i>Interactions with other animals</i> | | | | | | |
| Bonding/reaffirming bonds | | X | | | | |
| Rearing young | X | | | | | |
| Playing | | X | | | | |
| Sexual activity | X | | | | | |
| Hunting | | | | | | X |
| Absence of threats | | X | | | | |
| Using refuges, retreat or defensive attack | | | X | | | |
| Sleep/rest sufficient | | | X | | | |
| <i>Interactions with humans</i> | | | | | | |
| Attitude: confident, caring, sensitive, patient, kind, empathic | | | | | | X |
| Voice: confident, calm, clear, encouraging, pleasantly rhythmic | | | | | | X |
| Aptitude: experienced, skilled, trained, qualified | | | | | | X |
| Handling/controlling: skillful, gentle (stroke, touch, push, guide); firm, temperate, restrained; reward-focused; mimics alto-grooming by conspecifics; using subtle pressure cures, secondary reinforcers and timely release of aversive stimuli | | | | | | X |

| How do you evaluate the overall welfare experienced by the animal in this domain? <i>In your opinion, overall, the animal experiences mostly...</i> | | | | | | | | |
|--|-----------------------------|---------------------------|----------------------------|---|----------------------------|---------------------------|----------------------------------|---------------------------------|
| Very severe negative experiences | Severe negative experiences | Mild negative experiences | Minor negative experiences | Neutral: Negative and positive experiences compensate | Minor positive experiences | Mild positive experiences | Significant positive experiences | High-level positive experiences |
| O | O | O | O | O | X | O | O | O |

You have now seen the four Domains of animal welfare and some examples of how practitioners can use the associated assessment tables to evaluate the welfare of animals.

In what follows, we will show you a series of situations in which a salmon can be. For each situation, we describe the situation of the salmon with the grades for the four Domains and the number of years the salmon will live in this situation (after which the salmon dies).

We ask you, for each set of situations, to report what situation you think is the best for the salmon in terms of welfare.

Example:

| Welfare level related to... | Welfare assessment | |
|--|----------------------------------|---------------------------------|
| | Situation 1 | Situation 2 |
| ...Nutrition | Very severe negative experiences | Mild negative experiences |
| ...Environment | Mild negative experiences | Neutral |
| ...Health | Neutral | Mild positive experiences |
| ...Behavior | Mild positive experiences | High-level positive experiences |
| Numbers of years of life in this state (after which the salmon dies) | 4 years | 2 years |
| In your opinion, what is the most preferable situation for the salmon? | <input type="radio"/> | <input type="radio"/> |

Choice 1/10

*In your opinion, what is the best situation for the salmon?

| Welfare level related to... | Welfare assessment | |
|--|----------------------------------|----------------------------------|
| | Situation 1 | Situation 2 |
| ...Nutrition | High-level positive experiences | Very severe negative experiences |
| ...Environment | Mild negative experiences | Very severe negative experiences |
| ...Health | High-level positive experiences | Very severe negative experiences |
| ...Behavior | Very severe negative experiences | Neutral |
| Numbers of years of life in this state (after which the salmon dies) | 3 years | 4 years |
| In your opinion, what is the most preferable situation for the salmon? | <input type="radio"/> | <input type="radio"/> |

! Choose one of the following answers

Situation 1 is better

Situation 2 is better

*Above, we have presented you with situations describing the welfare of a salmon across four domains.

We are interested in knowing how much importance you think each domain has in determining the overall welfare of the salmon. Imagine that you have 100 points that you can distribute between the four domains to represent what you see as the relative importance of each domain. How would you assign these points?

Note: The more points you assign to a domain, the greater its importance in your eyes. If you assign 0 points to a domain, it means you consider it not to matter for the animal's overall welfare. Assigning the same number of points to each domain means you see them as mattering equally.

! Only numbers may be entered in these fields.

! The sum must equal 100.

! Your answer must be between 0 and 100

Nutrition

Environment

Health

Behavioral Interactions

Remaining:

100

Total:

0

What was the topic addressed in this survey?

 Choose one of the following answers

- The welfare of humans
- The welfare of animals
- The welfare of plants

What point was not addressed in the survey:

 Choose one of the following answers

- Factors that positively affect animal welfare
- Factors that explain ecosystem services
- Factors that negatively affect the welfare of animals

Next

Thank you very much for your participation in this survey!

Please free to type below any comment you have about the survey. It is still a work in progress, and your feedback would be valuable.

Please, type your comment (if any) here:

Submit