



**EFSA's information meeting:  
identification of welfare indicators  
for monitoring procedures at  
slaughterhouses**

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# EFSA's approach to address the EU Commission mandate requesting a scientific opinion on monitoring procedures at slaughterhouses

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# The Working Group



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# Key points of the mandate

## Nine groups: methods + species

1. Penetrative captive bolt for bovines
2. Head-only electrical stunning for pigs
3. Head-only electrical stunning for sheep and goats
4. Electrical waterbath for chickens and turkeys
5. Carbon dioxide for pigs
6. Gas methods for chickens and turkeys
7. Slaughter without stunning for bovines
8. Slaughter without stunning for sheep and goats
9. Slaughter without stunning for chickens and turkeys

# Key points of the mandate (Terms of Reference - ToRs)

## Indicators to be investigated:

- For unconsciousness
- For death

## Investigations should aim at:

- ToR1. Sensitivity/specificity of the indicators
- ToR2. Finding a minimum of 2 indicators per group
- ToR3. Possible practical limitations
- ToR4. Potential risk factors and welfare consequences
- ToR5. Sampling protocols on the slaughterline

# The 4 scientific opinions

The AHAW Panel agreed to address the 9 key points of the mandate by producing 4 Scientific Opinions, on indicators and their role in a monitoring protocol, divided by species:

- 1) Bovines (captive bolt and slaughter without stunning)
- 2) Pigs (head-only electrical and carbon dioxide)
- 3) Chickens and turkeys (electrical waterbath, gas methods, slaughter without stunning)
- 4) Sheep and goats (head-only electrical and slaughter without stunning)

# Approach to address the mandate: 3 sources of information (activities)

**1.** Systematic Literature Review

**2.** Questionnaires to experts from practical field

**3.** Working group discussions (based on revision of previous EFSA's opinions)

ToR5. Sampling protocols on slaughterline

ToR4. Potential risk factors and welfare consequences

ToR1. Sensitivity / specificity  
ToR2. Finding a minimum of 2 per group  
ToR3. Possible practical limitations

# 1. Systematic Literature Review

The literature review will be carried out by a consortium led by the IOWA State University of Science and Technology.



They will look for studies describing the sensitivity, specificity and feasibility of indicators for consciousness and death

They will complete their review by **beginning of May 2013**



## 2. Questionnaires to experts from practical field

Two step activity:

Questionnaire 1 asks a selected group of potential experts about the indicators they use (type and practicability of the indicators, frequency and timing of the sampling procedures)

Q1 has started. We will distribute the questionnaire for the exercise in this meeting (afternoon session). **Answers to the questionnaire will be collected and discussed today.**

Questionnaire 2 will be an online survey conducted by an external communication company and will ask a larger group of users (food business operators and vet inspectors of all around EU) about the performance (i.e. sensitivity and specificity) of the indicators.

Q2 will be finished by **June 2013**

### 3. Working group discussions

The EFSA working group (WG) will collate all information from the literature review and the questionnaires.

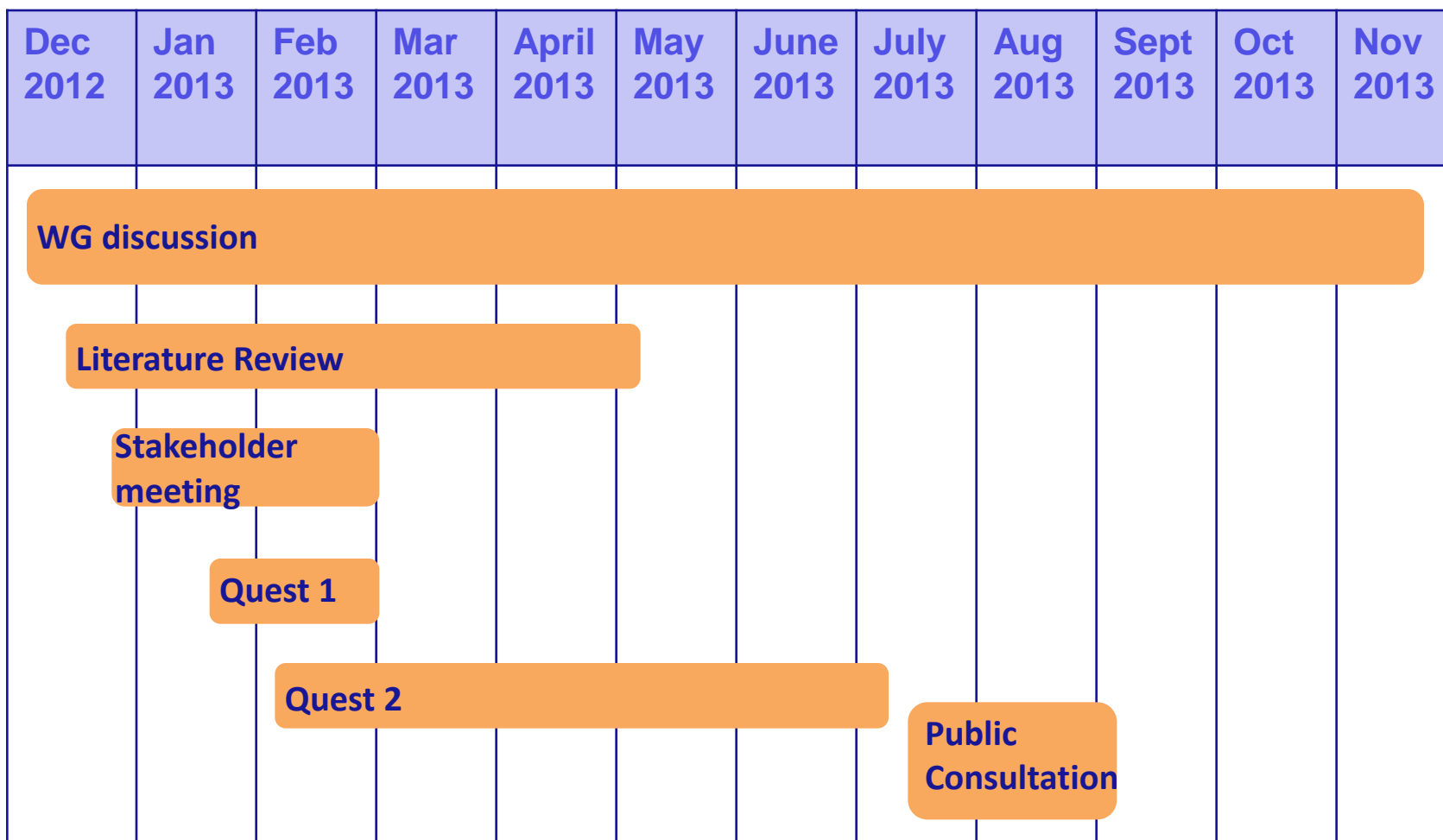
The WG will summarise this in the 4 scientific opinions and propose conclusions and recommendations, which are to be evaluated & approved by the AHAW Panel.

The WG will use one species as example (bovines) and develop that opinion first.

The 4 draft opinions will be published on the EFSA's website for "public consultation" in the summer.

They will be ready by **November 2013**

# Road map



## General part:

- Intro
  - Mandate
  - Methods
- Definitions
- Overview of indicators
  - Unconsciousness
  - Death
  - Criteria for including indicators

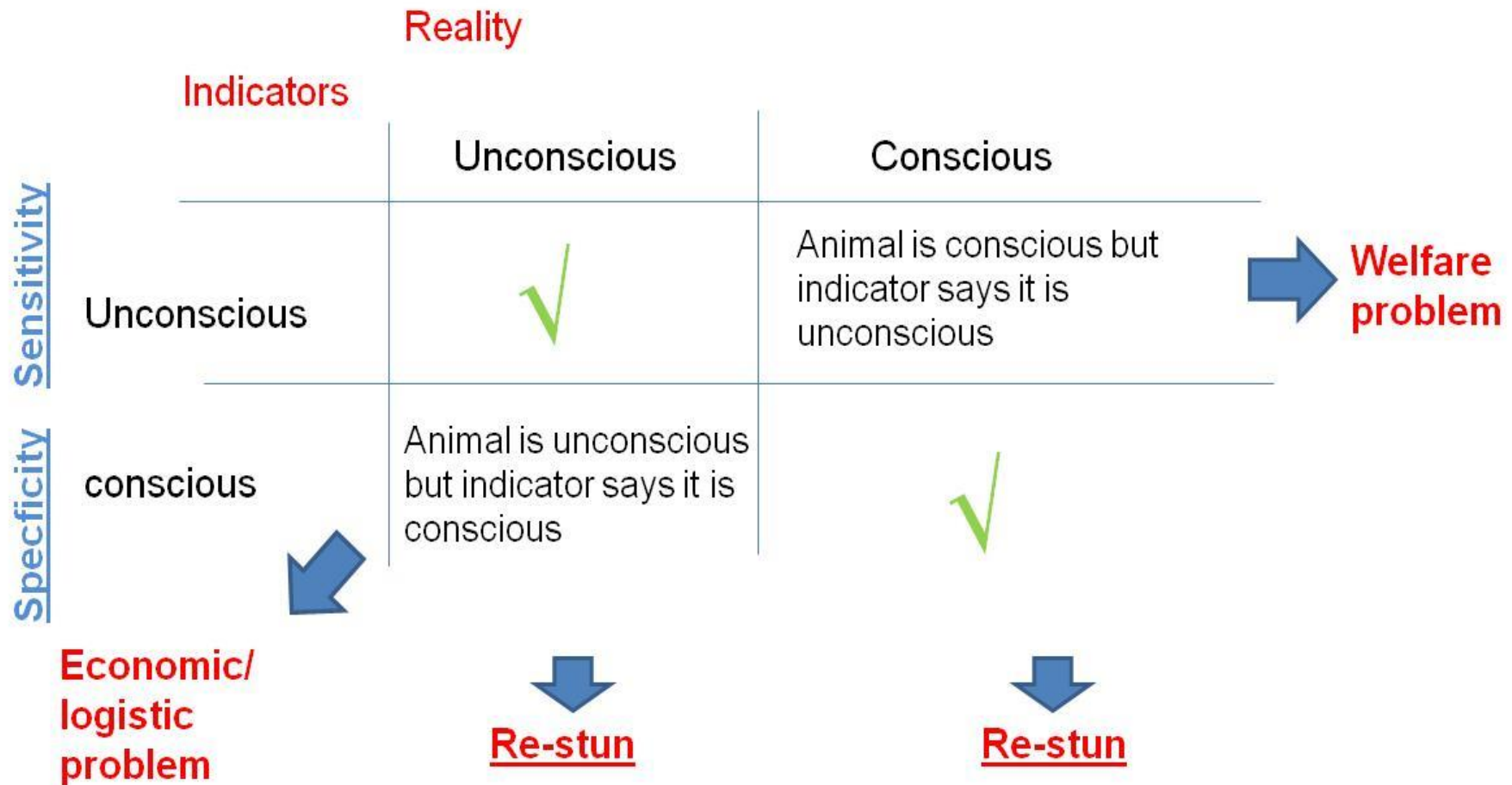
The overview will include a wide range of indicators, and will comment on their suitability for inclusion in a monitoring system

## Species specific part:

- Intro
  - Referring to the General Part
- Key indicators for unconsciousness (and death) of the species (at least 2)
  - Description of method to collect indicator
  - Sensitivity and specificity
  - Feasibility
- Risk factor analysis
  - What can go wrong when using these indicators?
- Sampling protocol
  - Where, when and how often?
- Conclusions & recommendations

# ToR1. Sensitivity & specificity of the indicators

- How reliable are indicators in assessing the efficacy of the stunning procedure?



# Stakeholder involvement

We need help!

- Compilation of questionnaire 1;
- Contact details of people with much practical experience for compilation of questionnaire 2

## Questionnaire on "Monitoring procedures at slaughterhouses"

NAME \_\_\_\_\_ LAST NAME \_\_\_\_\_

AFFILIATION \_\_\_\_\_

1. Have you personally assessed unconsciousness of the animals after stunning at slaughter?  
YES, AT PRESENT       YES, IN THE PAST       NO
2. Have you personally assessed unconsciousness of the animals after killing without stunning?  
YES, AT PRESENT       YES, IN THE PAST       NO
3. Have you personally assessed death of the animals at slaughter without stunning?  
YES, AT PRESENT       YES, IN THE PAST       NO

### FOLLOW-UP

EFSA will soon run a second questionnaire with the aim of getting information on the performance (i.e., sensitivity and specificity) of the indicators. We will address such questionnaire to people with practical experience in monitoring the process of stunning and killing at slaughter (e.g., stunning/killing operators, welfare officer operators, official veterinarians at slaughterhouses ...).

Could you please indicate the name of one or more persons with that practical experience?

**Name of one or more persons with practical experience, with contact (when available):**

Name: .....contacts: .....

Name: .....contacts: .....

Name: .....contacts: .....