# Brief for Transport WG

- *the Commission shall present a report to the European Parliament and to the Council on the impact of this Regulation* (Regulation (EC) No. 1/2005) *on the welfare of animals being transported and on the trade flows of live animals within the enlarged Community. In particular, the report shall take into account scientific evidence on welfare needs of animals, and the report on the implementation of the navigation system"*

# Community Legislation
## Regulation (EC) 1/2005

- Based on EFSA Transport reports (2002, 2004)

- **DID** comprehensively review science, identify hazards and recommend standards (e.g. space)
- **DID NOT**
  - Structure, analyze and ‘score’ hazards and risks
  - Identify animal-based indicators of impaired welfare

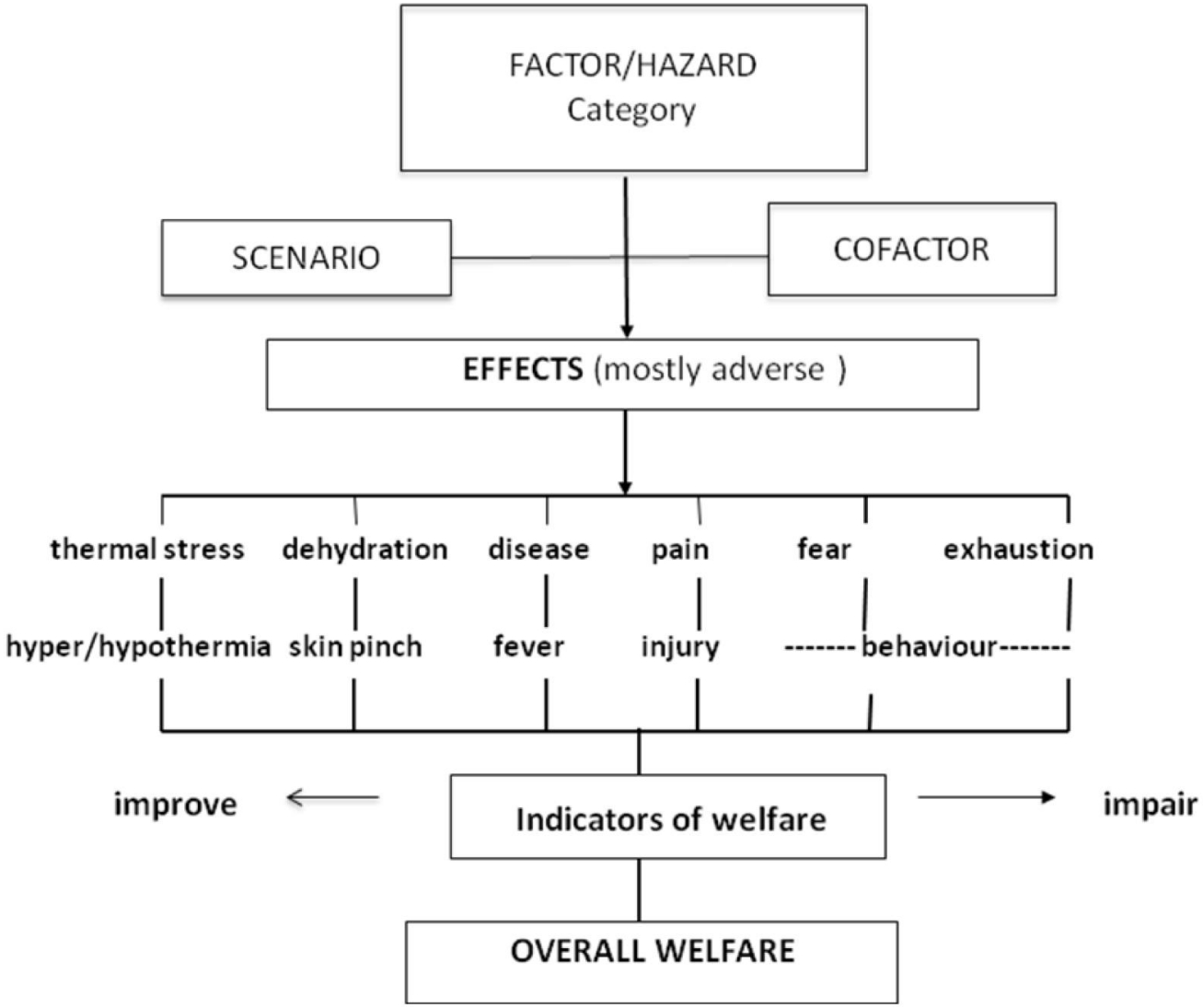
# *We have set ourselves four tasks*

- review new science for the target species
  - Horse, pigs, sheep, goats, cattle, poultry, rabbits
- Identify and rank hazards and risks
  - Assuming compliance with EC 1/2005
- Identify and evaluate outcome-based animal welfare indicators
  - For use by transporters, veterinary inspectors etc.
- Make recommendations
  - Reduce adverse effects of transport factors
  - Monitoring protocols for animals
  - Monitoring protocols for journeys

# Review of science

- Fitness for transport
  - Physical & emotional
- Means of transport
  - Road, rail, sea, air
- Transport practices
  - Loading and unloading
  - Journey times : water, feed, rest
  - Space allowances
  - Ventilation and temperature control
  - Special provisions for long journeys.

# Hazard and Risk Assessment



# *Hazards and Risks*

- **Magnitude of hazard** is defined according to the severity and duration of its adverse effect.

- **Risk of hazard** is defined as a product of the magnitude of the adverse effect and the probability of its effect on an individual given a scenario of exposure.

# Risk analysis:
## Species: Sheep, Target population: slaughter lambs

| Hazard | Poor vehicle design Short journey | Poor vehicle design Long journey |
|---|---|---|
| Cofactors | Heat load | Heat load + prolonged stops |
| Adverse effects | Heat stress | Heat stress + dehydration |
| Severity (!-4) | 2 | 3 |
| Duration (% max,$_{72h}$) | 1.5 | 5.8 |
| Probability (%) | 60 | 30 |
| Magnitude (SxD) | 3.0 | 17.4 |
| Risk (MxP) | 1.2 | 5.2 |

# Adverse effects: clinical and 'scientific' indicators

| Hazard /Factor | Adverse effect | Clinical indicators (observable) | Scientific indicators (measurable) |
|---|---|---|---|
| Lack of ventilation | Heat stress | Panting and/or sweating<br>Gaping (poultry)<br>Extreme thirst | Elevated body temperature<br>Elevated haematocrit |
| | Exhaustion | Inability/reluctance to rise<br>Lack of reaction | Blood enzymes, CK, CPK |
| | Dehydration | Extreme thirst<br>"Skin-pinch" test | Elevated haematocrit<br>Abnormal blood pH, $pCO_2$ |

# *Monitoring long journeys*

- EC 1/2005 require
- Journey logs
- Vehicles *"have to be fitted with"*
  - a navigation system
  - a temperature monitoring, recording and alarm system

# *"Autonomous" monitoring systems*

- Navigation
  - Position, time, duration of stops
- Load
  - Stocking density, weight losses in transit?
- Environmental control
  - Air temperature, humidity ?, air movement?
- Motion and vibration