



Project: Technical assistance to improve implementation of food safety standards and disease crisis preparedness

Training course: General biosecurity principles

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Date:

Place: Nicosia, Cyprus

*Project funded by the European Union within the scope of the Aid Programme for the Turkish Cypriot community,
implemented by the NSF Euro Consultants Consortium*

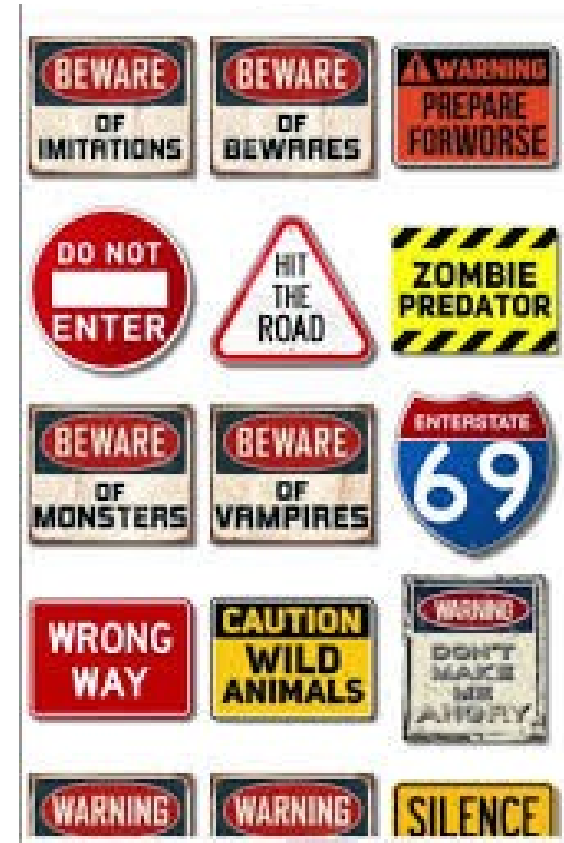


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Content



- What is Biosecurity?
- Key principles
- Hazard identification
- Best approach to biosecurity





- Biosecurity is most important tool to **prevent disease introduction, spread and transmission**. Strict implementation of the biosecurity measure can **greatly reduce** the risk of diseases.
- Biosecurity is **not only** improving infrastructure or installing footbath
- The biosecurity **require change in the behavior** of the staff implementing the biosecurity, good understanding of the risk factors for transmission of the disease
- **Biosecurity** means a set of **management and physical measures** designed to reduce the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population (OIE, TAC – Glossary)



- AHL, Article 4, point 23
- **'biosecurity'** means the sum of **management and physical measures designed** to reduce the risk of the introduction, development and spread of diseases to, from and within:
 - (a) an animal population, or
 - (b) an establishment, zone, compartment, means of transport or any other facilities, premises or location;
- **Veterinary service** is responsible to be a **good example** and provide of good risk communication for the purpose of the biosecurity processes



Physical measures

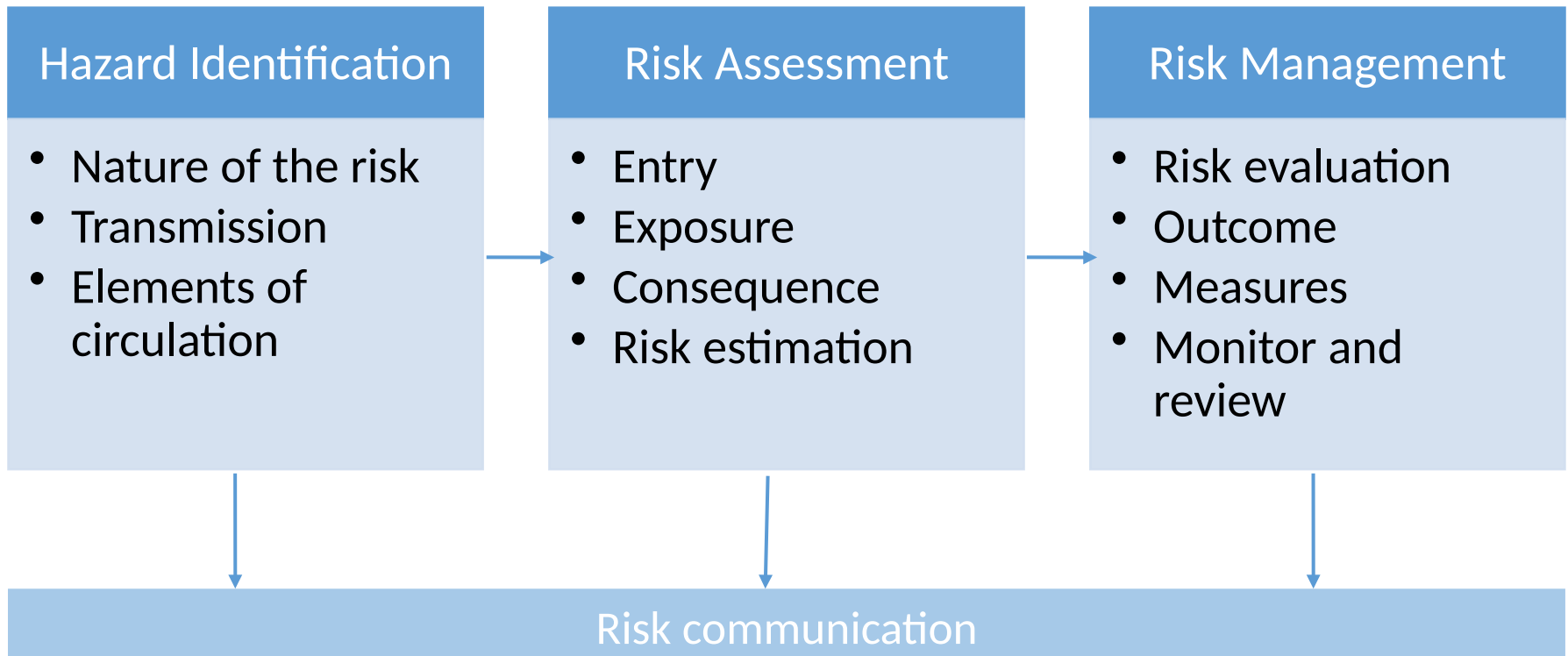
- Infrastructure, building, fences, ...
- **Hardware component**

Mindset and attitude

- Procedures, implementation, monitoring, verification
- **Software component**



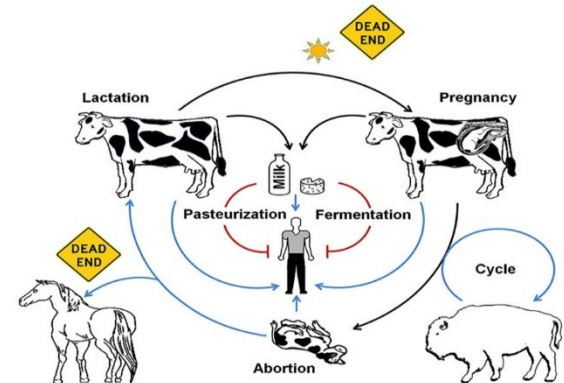
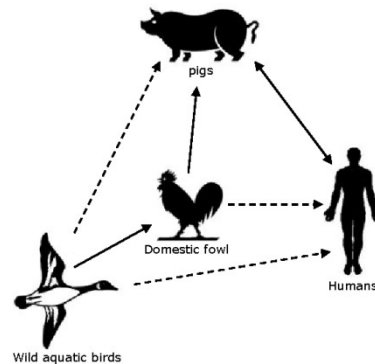
- Can biosecurity eliminate the disease?
- **Reduce** the risk of transmission
- In order to completely eliminate disease you have to **manage the risk**





Identify the risk

- Nature of the risk
- Transmission
 - Direct transmission (introducing animals, contact with wild animals, borrowing animals)
 - Indirect transmission (feed, water, workers, veterinarians, visitors, equipment...)
- Elements of circulation





Likelihood vs Consequences

		Consequence				
		Negligible	Low	Moderate	High	Very high
Likelihood	Very high	Moderate	Moderate	High	Very high	Very high
	High	Low	Moderate	Moderate	High	Very high
	Moderate	Low	Low	Moderate	High	High
	Low	Negligible	Low	Moderate	Moderate	High
	Negligible	Negligible	Low	Low	Moderate	Moderate

Very high	Occur frequently
High	Has occurred before, will occur again
Moderate	Possible but not common
Low	Could occur but is not likely
Negligible	Has never occurred before and is very unlikely to occur

Risk level	Action
Very high	Urgent attention
High	Intervention required
Moderate	Active management
Low	On-going monitoring
Negligible	Acceptable risk



- Segregation
 - Cleaning
- Disinfection



- Ask the visitors to park can outside the farm
- Ensure that dirt from the vehicles that enter the farm is removed
- Build a fence around the farm
- Build second fence around the farm
- Ask the truck driver not to exit the vehicle
- Ensure that veterinarian is using new needled for collecting blood
- Use separate unit for new animals on the farm

Segregation



- Prevent contact
- Applying physical barrier
- In time
- Examples
 - Fence
 - Restricting access
 - Separate equipment
 - Not sharing equipment
 - Separate workers
 - Quarantine
 - Secure source



Cleaning



- Mechanically remove all the dirt
- Remove the movable object
- Use water and soap
- No visible dirt should remain
- Proper cleaning **can remove** very high percentage of the pathogen
- Organic matter can protect pathogen



Disinfection



- After the cleaning
- Approved disinfectant
- Applied in accordance with the instruction of the manufacturer
- Safety rules for personnel, environment and equipment
- Rinse after disinfection





- Consider all we discussed before
- Mindset is more important than the infrastructure
- **Human factor** reason for spreading disease
- Dedicated more time to develop measures for **identified the risk**
- Do not look your farm as isolate island
- Same plan do not fit all establishments



veterinary
'department'

veterinarian

farmer

business

neighbor



Procedures principles

- Procedures should be risk and evidence based
- Identify the purpose
- Be pragmatic and realistic
- Be strict in implementing measures
- Adjust the frequency
- Monitor, verify and improve



Can we apply what we learned



- Example: one of the measures ordered by veterinary service is foot bath to clean and disinfect footwear (*image 1 - source EuFMD*)
- What is your opinion?
- Are there any other solution?
- What would be the best one?



Image 1 - foot bath



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THANK YOU FOR YOUR ATTENTION



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France Vétérinaire International

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