







## Supplementary feeding – key learnings from yesterday

- Availability of food is one of the key aspects for vulture conservation (Vulture MsAP)
- Increasing food availability through supplementary feeding key tool for the conservation of vultures
- Supplementary feeding can be done in different formats. Gradient goes from regular, ex-situ apportation of food (centralized feeding stations) to variable in-situ natural recycling of food (farm feeding stations - FFS)
- Supplementary feeding can have negative impacts: salmonella, behavioural changes, interspecific unbalances, etc
- Evidence that farm feeding stations offers the best tool, in terms of conservation impact (considering behaviour, sustainability, etc); increase of populations in Spain & France, doubling population in Sardinia
- In practice, in most places and countries there is either only centralized feeding systems (e.g. Portugal, Cyprus) or a dual system in operation: centralized + FFS
- Generally speaking, moving away from centralized towards FFS is recommended

# Supplementary feeding – key learnings from yesterday

- Before deciding on supplementary feeding, important to establish resource availability (assessment of feeding needs): how much food is there for the birds, adapt the management
- Key aspects: biomass and season
- Season – variable. Some suggest winter more important (e.g. Bulgaria), others summer (e.g. Sardinia?)
- Location is also important – away from known threats, criteria needed. Strategic positioning to increase dispersion & recolonisation (e.g. bearded vulture, FFS in Sardinia for island repopulation)
- Distance to colonies secondary?
- Need to try to establish impacts of supplementary feeding: monitoring supp. feeding (quantity of food, usage of sites)
- Patchy monitoring of food quality (e.g. in mainland Italy, Balkans no checking). Vet medicines + lead key issues
- Absence of data on costs & savings – priority to establish!

# Farm feeding stations

- Supported by EU legislation - flexible
- Fenced (e.g. french placettes or sardinian FFS) or unfenced (spanish model)? Fenced a (temporary?) stepping stone from centralized to abandonment of carcasses?
- Criteria and rules (location, sanitary conditions, type of food, disposal of remains, etc)
- Type of food – hunting remains, with associated lead, controversial – key food resource in some areas (e.g. Spain), but some indirect-long term threat/population impact?
- Scientific validation essential step for regulation change (e.g. ISPRA in Sardinia)
- Drivers of interest by livestock breeders
  - a) Interest-recognition of vultures/scavenging
  - b) Financial (reduction of insurance costs)
  - c) Reduction of operational liabilities (easier than incineration system)
- Key to success
  - i. Champions at the vet authorities (France & Sardinia)
  - ii. Targetting-selection of livestock breeders (choosing the best)
  - iii. Close contact with breeders
  - iv. System of carcass control (percentagem sampling) – quality control

# Farm feeding stations – important issues to consider

- Resources (vet service time, cost of tests)
- Food quality
- Management of carnivores (& perception)
- Sustainability – who leads and supports the system? Initially NGOs/projects, but long term? Livestock breeders associations? French going from NGO-led to livestock led national-committee.
- Marketing opportunities associated maybe key to sustainability?

# Farm feeding stations – implementation & bottlenecks

- Sardinia: **main conservation tool, helped duplicate population, but monitoring gaps** (assess impact, usage of FFS, coverage); Plans: 31 new FFS in the rest of the island, expansion of the system island wide (parallel to release of 60 GV)
- Forestas Sardinia: CFS near release site important to fix released birds in S Sardinia
- Corpo Forestale Sardinia: anti-poisoning work, including engaging with livestock breeders. Plans: focus on new project areas where vultures are new
- Abruzzo/Rewilding Apennines: **champions in vet services key** (address regulations, vet medicines/food safety); Plans: Refine assessment of food availability & need, patterns of usage of SFS, strengthen links with national parks; Creation of two centralized FS (tourism, research, other scavengers/mammals); guidelines on location
- Pollino: **Need to work with vet authorities**; Issue of **fences** important because of **wolf**; Plans: feeding area for GV?, but decline of livestock
- Friuli: **Interpretation of regulations different from place to place**; few extensive farms, strong seasonality; international collaboration (because transborder area); disturbance @ CFS. Plans: better food quality control, gruppo avvoltoio?
- Lombardi/Trentino/Alto Adige: No FS, but interest to attract CV & serve as bridge for west and east GV; **collaboration with livestock breeders**
- ISPRA-Italy: **National coordination of horizontal issues needed (national committee?)**



# Farm feeding stations – implementation & bottlenecks

- France: **long term sustainability of management of FFS & food supply for vultures; need to work with livestock breeders; lead contamination of hunting remains in FFS**; Plans: tackling threats (windfarm, poisoning) through feeding strategies; poisoning big issue
- Spain: **implementation of regulation is possible**, need to **reduce fears of some vet services about FFS**; Build confidence of **farmers, show this tool is advantageous** (economic, scavenging function); **useful conservation tool but not the only one!**; Re. costs – **factor in incineration costs (trade-off)**. Plans – continue shift from CFS to FFS (without fences), focus on threats
- Cyprus: **poison** main problem (foxes); **FFS are feasible; CFS resource-heavy**; Plans: try to establish FFS, more sustainable
- Balkans: **advantages FFS vs CFS re. sustainability, impact, cost-efficiency; assessment of usage vs natural foraging; assessment biomass needed in SFS**
- Bulgaria: **Diverse implementation of regulations**; Vet authorities not interested; **Zoonosis & food quality** a concern; Plans: more FFS, more sustainable, establishment of collective fenced FFS, need to test food provided, increase natural food (wild ungulates) to buffer reduction of livestock
- Germany: Strategy needs to take in consideration local context; reappearance of wolf an issue

# Farm feeding stations – summary of key issues

- **FFS more sustainable and effective, CFS have a role**
- **Monitoring gaps:** assessment of food availability & need, patterns of usage of SFS
- **FFS and other threats** – poison, lead
- **Regulation** is applicable and possible, interpretation diverse
- Relationship **vet services key** (address regulations, vet medicines/food safety)
- **Relations with livestock breeders**
- **Food quality**
- **Wolf/predators**
- **Long term sustainability of management of FFS & food supply for vultures; costs, factor in cost of alternatives**
- **National coordination of horizontal issues needed**