Bright Future for Black Vulture LIFE14 NAT/BG/649
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Strategy and adequate protocols for human managed feeding practices for scavenging birds

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AIM

- to give an overview on the different types of feeding practices and sites and their function, through examples in Europe and elsewhere in the world, with a main focus on vultures, but also other facultative avian scavengers

- to propose a new and uniform nomenclature applicable everywhere that should reduce the confusion between different project objectives for the conservation and management of avian scavengers populations.

PURPOSES

- Conservation of rare species
- Management of carcasses
- Research purposes
- Public viewing and education

CONSERVARTION PURPOSE

- **Food shortage leading species or populations to a risk of extinction**
- **Problems with food quality**
- **Promoting restoration of populations**
- **Controlling and limiting the expansion of large scavenger populations**

FEEDING SITES FOR MANAGEMENT ACTIONS /PURPOSE

- **Collective feeding sites**
  - Predictable
  - “Muladares” or “heavy feeding sites” (>10 tons per year)
- **Individual feeding sites without transportation (farm feeding sites)**
  - Unpredictable
  - “light feeding sites” (from few animals to <10 tons per year)

RESEARCH PUROPSES

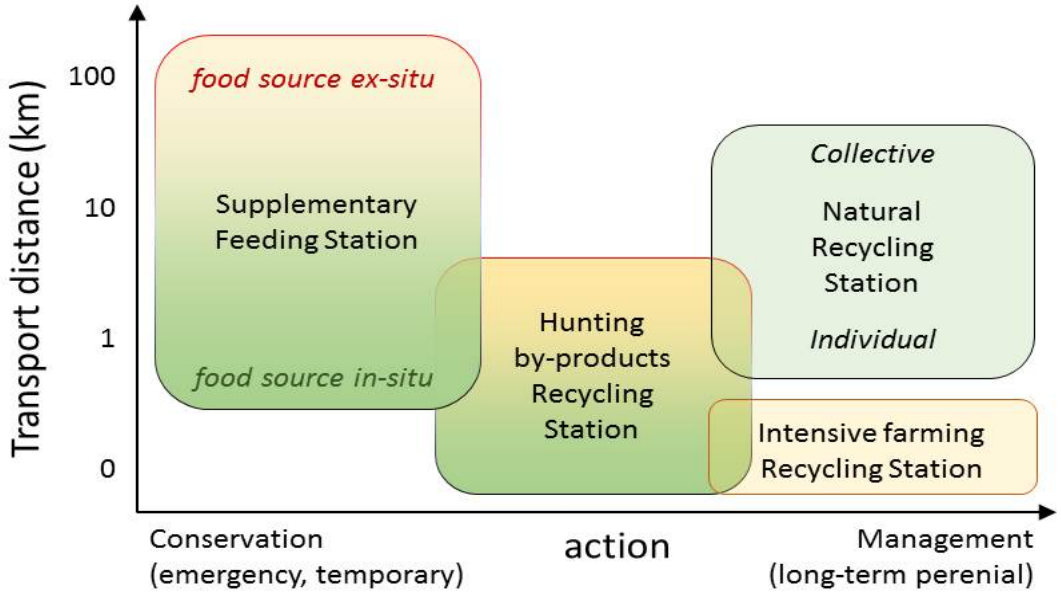
- Monitoring activities
  - Counting individuals
  - Identifying individuals with rings or wing-tags
  - Camera-traps
- Capturing
  - Scientific monitoring (bio-telemetry and tracking devices)
  - Bio-sampling

OBSERVATION AND PUBLIC EDUCATION PURPOSES

- Touristic feeding sites
- Feeding sites dedicated for photographers
- As tools for public education and awareness

NOMENCLATURE

- Supplementary feeding station
- Collective natural recycling station
- Individual natural recycling station



POSTIVE EFFECTS OF FEEDING PRACTICES

- Vultures are very efficient cleaners in the nature
  - When they are present in large numbers, they are able to get rid of carcasses (or offal) from nature within a few hours and avoid spreading of diseases
- Vultures prevent to use ecologically unfriendly industrial quartering
  - help reducing petrol consumption and CO_2 emission

POSSIBLE NEGATIVE EFFECTS OF FEEDING PRACTICES

- Food quality
  - Veterinary products (antibiotics and anti-inflammatories)
  - Poisoned animals
  - Lead (hunting ammunition)
- Potential change in scavenger habits
  - Movements – occupation of new territories
- Potental impacts on the community ecology of scavengers
  - Favouring only some species and reducing food availability to other
- Attract many facultative mammalian scavengers
- Parasite transmission

CONCLUSIONS

- **Definition of feeding practices (purposes, quantity, quality and supply practice)**
- **Standardize nomenclature**
- **General guidelines for managing feeding sites**
- **Positive and negative effects**
- **Specific/selective, species oriented feeding sites**

Annex: Practical recommendation for establishment of vulture feeding site

Positioning

Feeding sites should be placed away from settlements, busy roads, dangerous infrastructure power-lines, railways, wind-generators) and should be accessible for vultures – open landscape and/or opening into a loose forest in a steep slope, where from vultures may easily take off in any kind of weather conditions. Good visibility of the landing vultures is of utmost importance.

Frequency of food disposal

Depending from the type of the feeding site and its purpose, food should be delivered from twice a week to once a month or upon availability (farm light vulture feeding site). The traditional – heavy feeding sites should be supplied once, but better twice a week. Long-term functioning is important, as the vultures from a wider region get used to the place and may rely on visiting for food even from 100-220 km away on a regular basis. This increases the importance of the feeding site.

Quantity of food disposal

The amount should be in accordance with the local vultures population size. It is not a good idea to have too much food that gets rotten and fill the feeding site area. For a colony of 100 large vultures – Griffon, Cinereous and the like, some 200-300 kg twice a week is proven to be sufficient. In hotter summer periods, the more frequent disposal even of smaller quantities is better than too much at once and rarely.

Quality of food disposal and ways of serving, changes in accessibility

Opposite to the common laymen's beliefs, the vultures do not like and avoid feeding on rotten carcasses/meat. Also, they prefer muscles then guts and least accept and feed on intestines. Surely they do not feed massively on bones, although they need some calcium ingestions. The best food source represents a full corpse of sheep, goats, deer, boar, pig, horses, cattle. The carcass should be opened as like it is eaten by wild predators. So, when a full corpse is delivered from a farm at the feeing site, it should be opened or skinned off (the great success of vultures in India, where corpses of cows are skinned off in rubbish dumps – perfectly exposed to the vultures for full composition until only bones remain).

Annex: Recommendations for installing species orientated feeding sites

Positive selection of different characteristics of the carrion provided at experimental feeding sites (from categorical variables, see a detailed description in Table 1) by the four European vulture species (up to bottom, bearded, Egyptian, cinereous and griffon vulture). Tick-marks show statistically significant relationships, being their size related to *p*-values (greater size = $p < 0.001$; medium size = $0.001 \leq p < 0.01$; smaller size = $0.01 \leq p \leq 0.05$).

	Format				Scattering		Prey species		
	Whole carcass	Divided carcass	Meat/bone remains	Bones	Concentrated	Dispersed	Ovine-caprine	Porcine-bovine	Wild ungulates
				√		√	√		
			√				√		
		√				√	√		
	√				√				