

# Comunicazione



**Innovazione**  
Come funzionano le navi ecologiche



**Ecologico**

Mini guide to **invasive alien species**



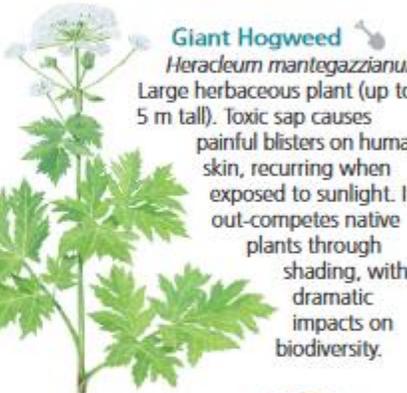
**Emerald Ash Borer**  
*Agilus planipennis*  
Small beetle whose larvae feeds under the bark of Ash trees causing substantial damage and dieback, and even death of infected trees.



**Monk Parakeet**  
*Myiopsitta monachus*  
Loud and noisy parakeet that damages crops, changes communities of urban birds and transmits wildlife disease. It also builds nests which can cause damage to infrastructure.



**Water Primrose**  
*Ludwigia grandiflora*  
Aquatic plant that spreads rapidly, changing species communities but also interfering with navigation, abstraction and drainage.



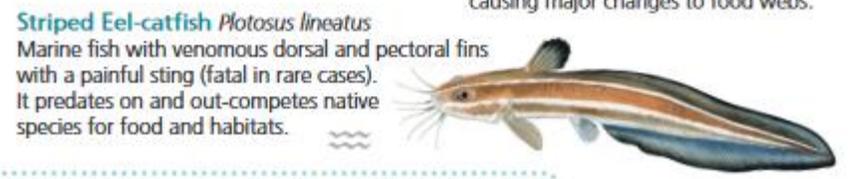
**Giant Hogweed**  
*Heracleum mantegazzianum*  
Large herbaceous plant (up to 5 m tall). Toxic sap causes painful blisters on human skin, recurring when exposed to sunlight. It out-competes native plants through shading, with dramatic impacts on biodiversity.



**Finlayson Squirrel**  
*Callosciurus finlaysonii*  
Squirrel that causes damage to both deciduous and coniferous trees, stripping bark which can cause trees to die.



**Killer Shrimp**  
*Dikerogammarus villosus*  
Highly aggressive freshwater amphipod shrimp that preys on other invertebrates, causing major changes to food webs.



**Striped Eel-catfish** *Plotosus lineatus*  
Marine fish with venomous dorsal and pectoral fins with a painful sting (fatal in rare cases). It predate on and out-competes native species for food and habitats.

- Cluster groups**
- Forest ecosystems
  - Angling
  - Aquatic ornamentals
  - Pet species
  - Soil transport

Illustrations © Chris Shields **FSC**

# Biodiversità

# Invasive Alien Species

## How they impact

- Competition
- Grazing
- Predation
- Parasitism
- Hybridisation
- Bio-fouling
- Poisoning
- Flamability
- Disease transmission
- Interactions with other IAS



## Outcomes of impact



**Environmental**

e.g.

- Modification of hydrology
- Native species declines
- Soil erosion
- Primary production alteration
- Plant/animal health
- Habitat degradation

**Socio-economic**

e.g.

- Agricultural damage
- Reduced access to water
- Infrastructure damage
- Human health
- Damage to forestry
- Reduction in tourism

**Ricerca scientifica**

**Conoscenza**

**Educazione ambientale**

**Capacità di gestire l'informazione**

**Consapevolezza della complessità ambientale**

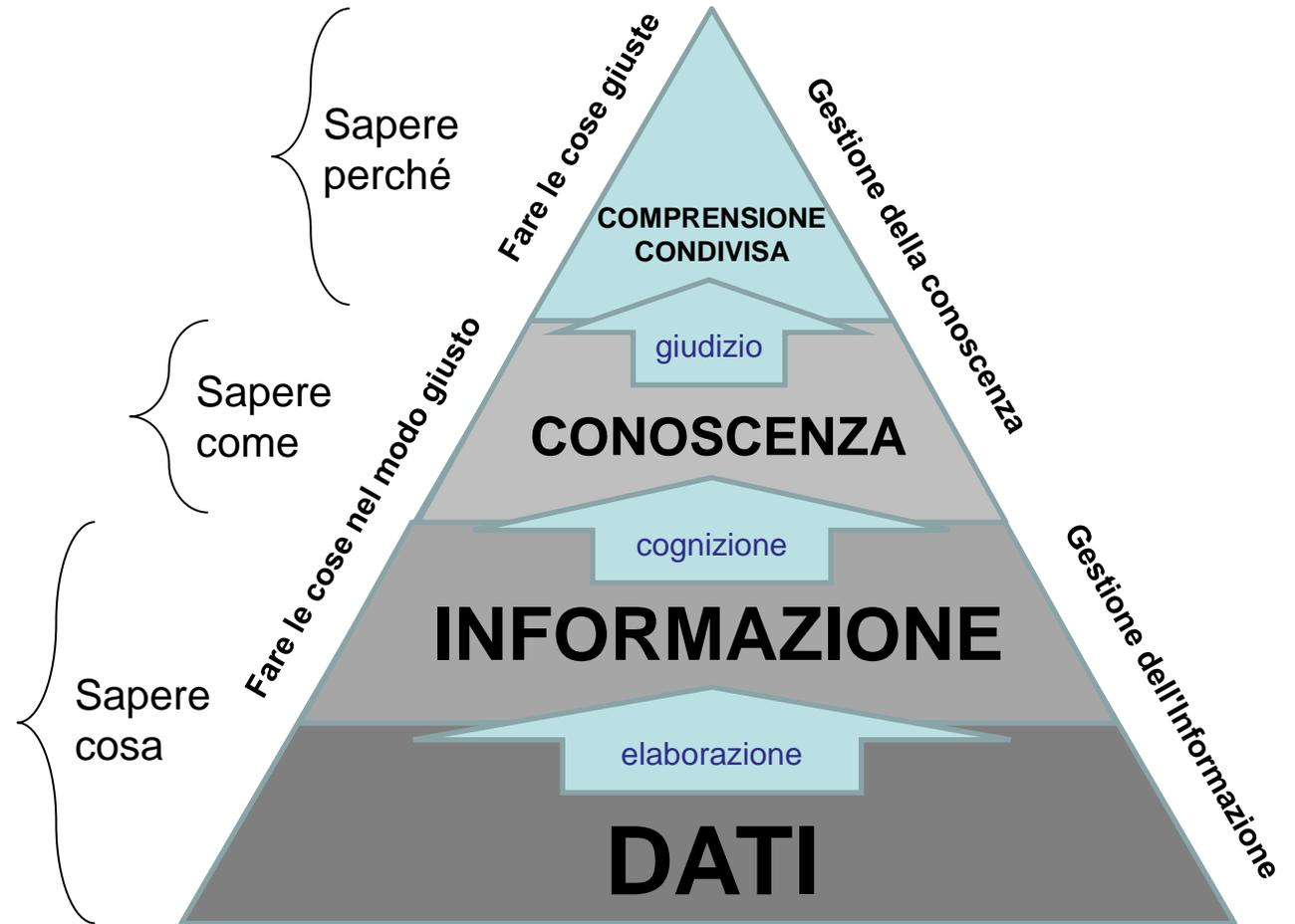
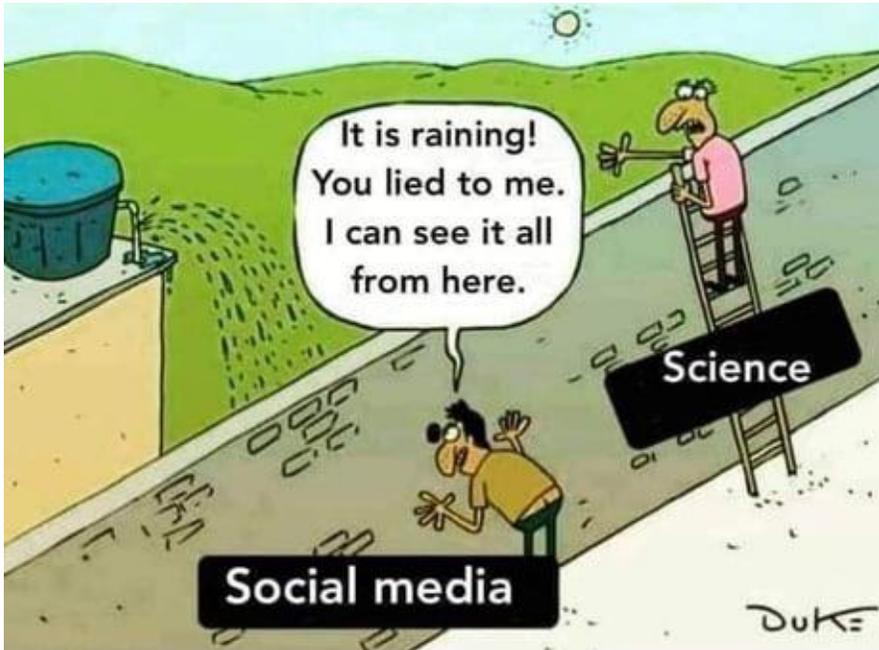
**Corretto approccio all'ambiente naturale**

**Gestione del patrimonio naturale come risorsa sostenibile**

**Relazione con il proprio territorio**



Informazione disintermediata



Ogni giorno vengono generati circa 3 quintilioni  
(3 \* 1.000.000.000.000.000.000.000.000.000.000) di byte  
(1 byte = 8 bit)



think **GLOBAL**,  
act **LOCAL**

