

MANAGEMENT OF INVASIVE ALIEN SPECIES.



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

Sevilla, octubre 2018

INTRODUCTION, DEFINITIONS AND CONCEPTS



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.



¿A NEW PROBLEM?

The IAS are **the second cause of biodiversity loss in the world**, behind the destruction of habitats.

Causes that aggravate the problem of bioinvasions in the last years:

- ❖ Increasing trades, travels and transport of goods (**GLOBALIZATION**).
- ❖ **Alteration** suffered by ecosystem along these years.
- ❖ **Climate Change**.
- ❖ Ignorance about the effects of these introductions.
- ❖ The lack of effective legislation on IAS (2014).
- ❖ **REACTION TIME OF ADMINSTRATIONS. LACK OF PLANNING.**



LEGAL COMPETENCES

The control of the IAS is part of the **concurrent competences** of the Hydrographic Confederations, given their cause-effect relationship with the loss of water quality, and of the Autonomic Administrations, in matters of ecosystem protection.



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

GOVERNANCE AND STRATEGIES FOR THE FIGHT AGAINST THE INVASIVE ALIEN SPECIES IN GUADIANA RIVER BASIN



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

METHODS OF FIGHT AGAINST IAS:

- Mechanics.
- Chemicals.
- Biologics.
- **Management.**



Neochetina eichhorniae



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

To determine the **Strategies of action in the fight against IAS** we must have a "serious" and continuous knowledge about:

- Ecosystems.
- Presents and potencias IAS: propagation mechanism and ways, growth rates, etc.
- Relationships IAS- Natural Environment : T^a, nutrients, flows, habitats, etc.

**THE STRATEGIES
SHOULD BE
DYNAMIC AND
CONTINUED TO
REVIEW**



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

Actually, the efforts of the Administration has the focus in to increase extraction, control eradication or prevention work.

However the eradication of the IAS present in the Guadianas river needs to develop of actions pograms in the médium and long term, **in order to recover the good health of the fluvial ecosystem.**

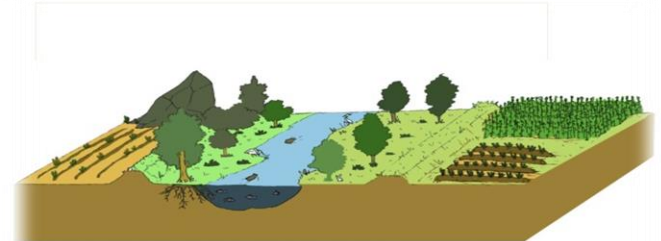
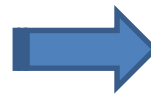
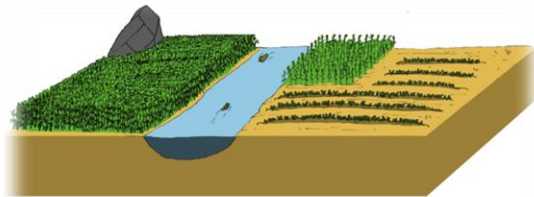


GOBIERNO
DE ESPAÑA

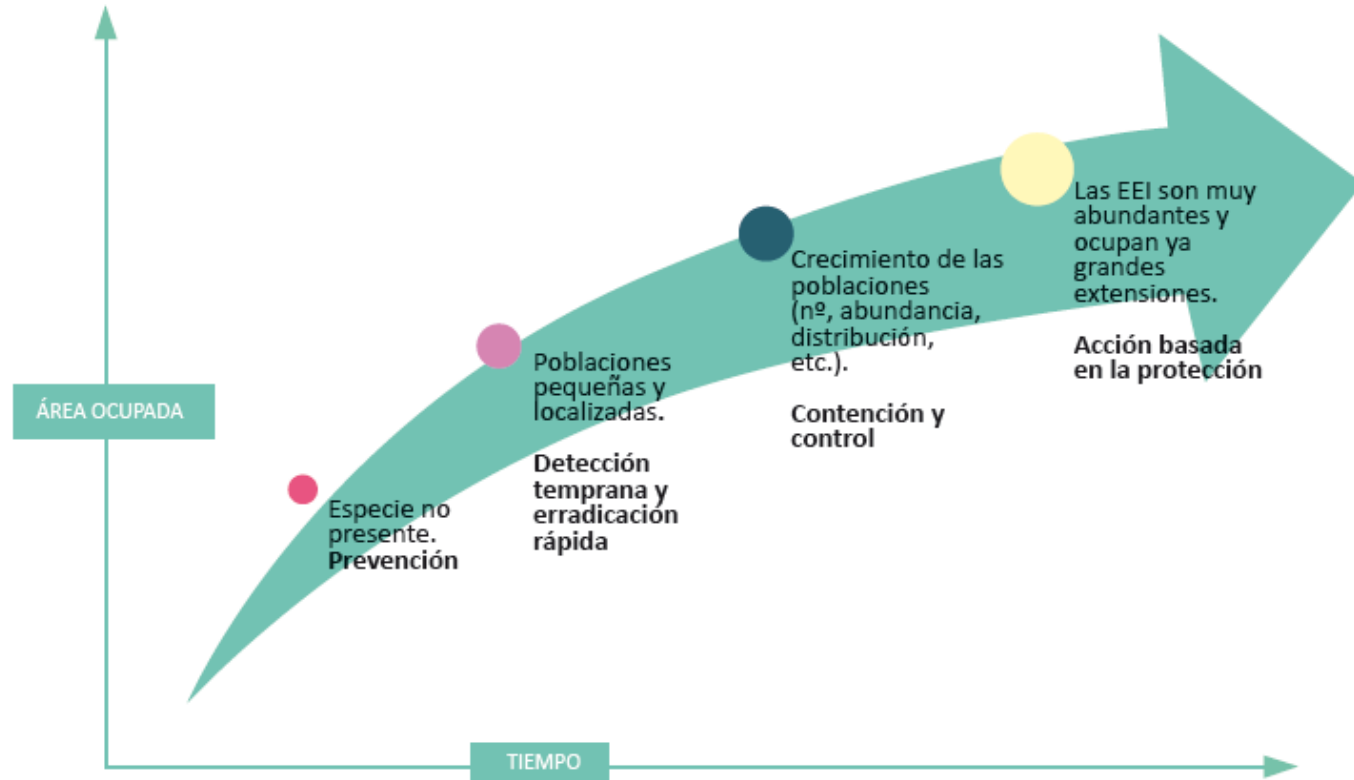
MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

Need to restore ecosystems



Management and fight against IAS



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

EARLY WARNING AND ACTION PROTOCOL

In the **Guadiana River Basin** action protocols are structured in case of early detection in two horizons :



NOTICE OF PRESENCE



REAL PRESENCE



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

ENVIRONMENTAL PREVENTION AND SENSITIZATION ACTIONS

- **SPREAD CHANNELS: (Tríptychs, guides,...etc)**
- **EARLY WARNING: (web CHG, APP...)**
- **INFORMATION, EDUCATION Y SENSITIZATION**
- **TECHNICAL STUDIES**
- **CONTROL Y MONITORING: remote sensing, enviromental damages, etc**

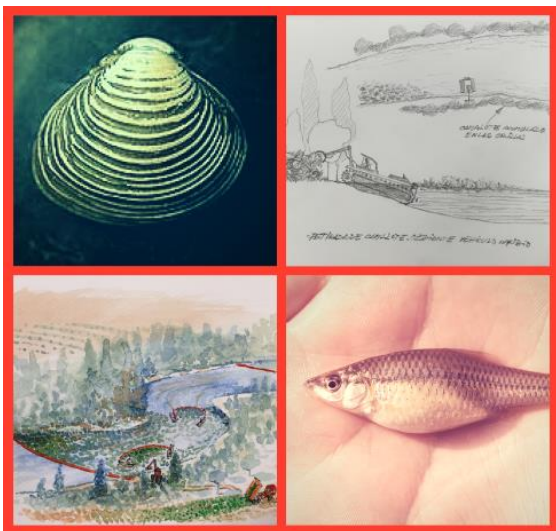


GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

FINANCING MEASURES



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

FINANCING MEASURES

- Direct budgets of the competent agencies.
- European cofinance.

FUTURE PROYECTS

- Indirect measures of financing through other aids.
- Holding each USER responsible for their actions. ("The polluter pays")
- None is sufficiently fulfilled.

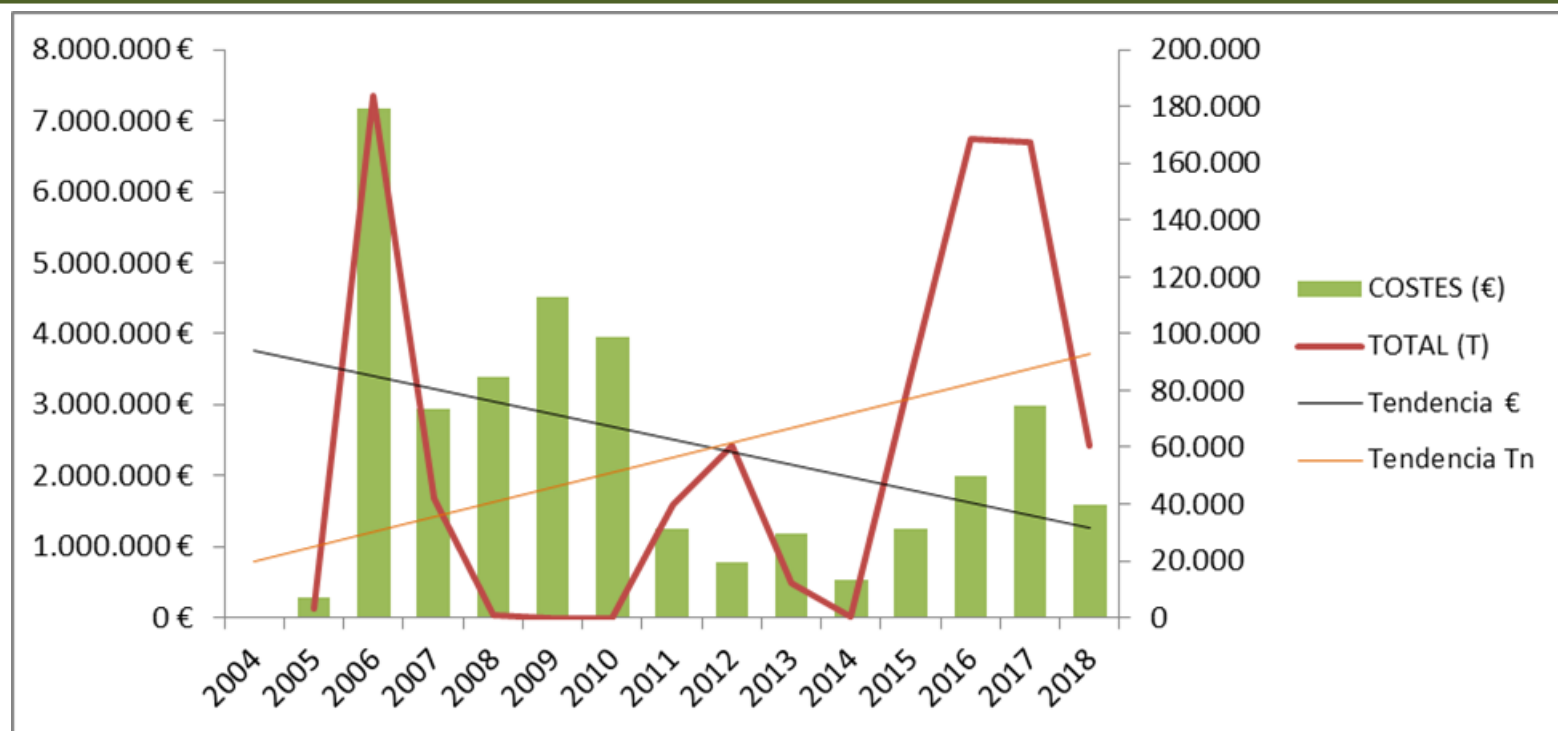


GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.

WATER HYACINTH EVOLUTION IN THE GUADIANA RIVER BASIN



Money – Tn of extracted material

In spite of the efforts since the appearance of the problem and the investment made, the experience of these years shows that the water hyacinth needs **CONTINUOUS AND CONSTANT jobs and budgets.**



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

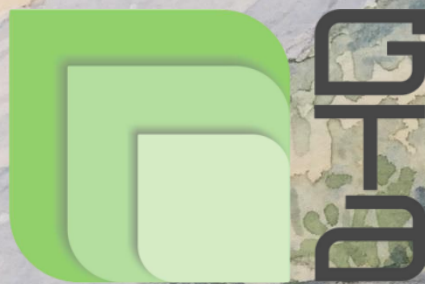
CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA

CONFEDERACIÓN
HIDROGRÁFICA
DEL GUADIANA O.A.



Gabinete Técnico Ambiental

OFICINA TÉCNICA ESPECIES INVASORAS

e-mail: especiesinvasoras@gtaingeniería.es
www.gtaingeniería.es