



Seminar  
Pig farming & the  
environment



19 de novembro de 2013

# partnership

Federação Portuguesa de Associações de Suinicultores (FPAS)



Instituto Nacional de Investigação Agrária e Veterinária I.P. (INIAV)



Instituto Superior de Agronomia (ISA)



Universidade de Évora (UE)



Terra – Engenharia e Ambiente Lda.

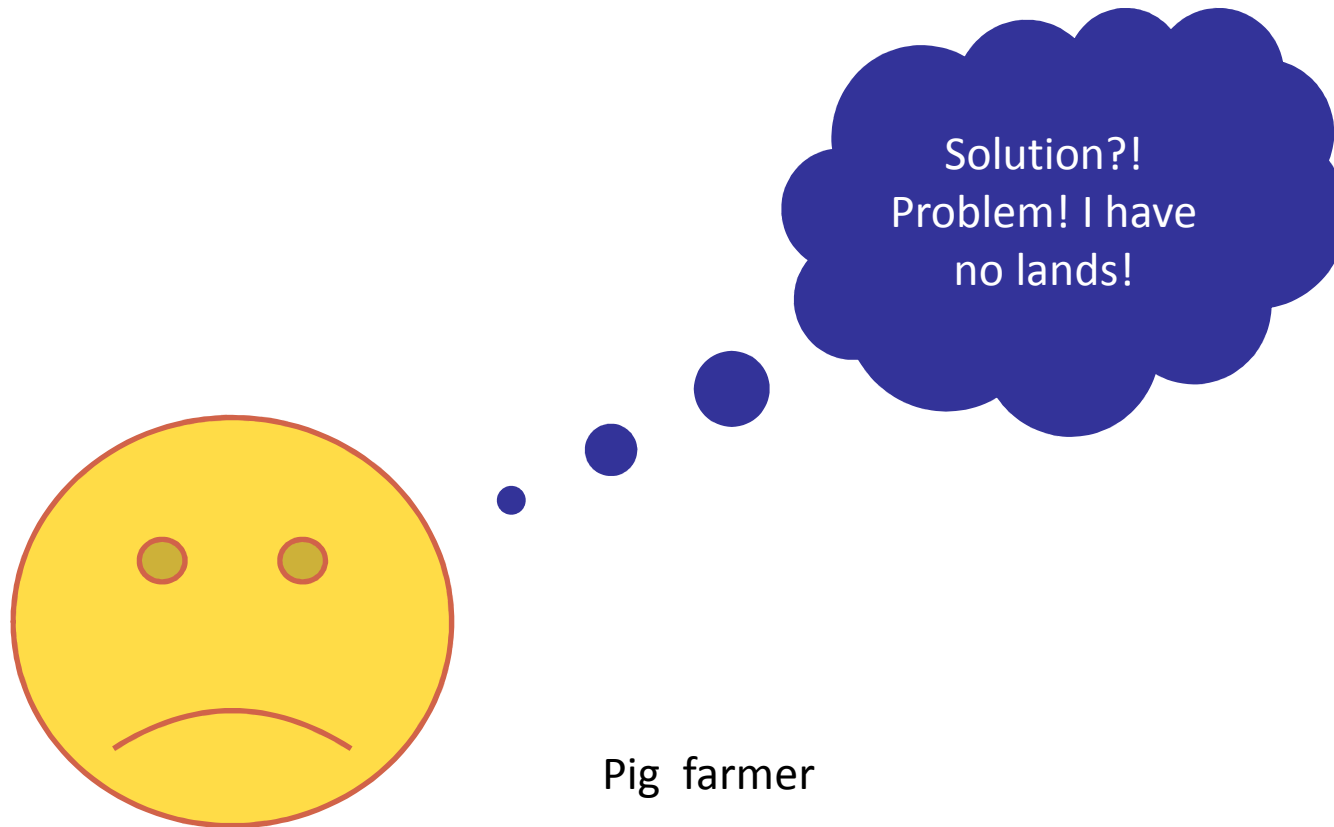


# Livestock effluent management



- ❑ Several methods for livestock waste management (Portaria n.º 631/2009, de 9 de Junho)
- ❑ Agricultural Valorization, considered the most cost-effective and feasible technique.

# Agricultural valorization of livestock effluent



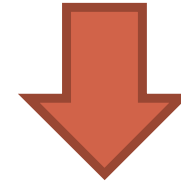
# Agricultural valorization of livestock effluent



# Agricultural valorization of livestock effluent



Land use allocation demands and procedures to increase agricultural land value seems to be challenging for both parties.



The livestock producer doesn't have land use available to increase livestock effluent value, and the farmer is unwilling to cede his land for appraisalment

# land & effluent

## objectives



## [crossing demand and supply]

**simplifying** procedures related to agricultural development from livestock effluent

**matching demand and supply as a simple and intelligent perspective for resource management**

# land & effluent



## objectives

To design and conceive the implementation of a farm tool for a better agronomic valuation of livestock effluents and also provide information about crop- available nutrients.

[simplify procedures by fulfilling the best environmental practices]

| contribute to the sustainable management of livestock effluent| increase land fertility| reduce the risk of soil erosion| foster good agricultural practices| minimize environmental impact| contribution for a sustainable agro-livestock sector|



# Land & Wastewater



## assumptions

- legal regulations, in particular decree n. º 631/2009 June 9th (PGEP) and Decree-Law No. 214/2008 November 10 th, and partly amended by Decree-Law No. 316/2009 October 29 th (REAP);
- characterization of livestock effluents;
- characterization of soils and crops.

# land & effluent

## system characteristics



- geographic information regarding agricultural land value can be centralised in a single database;
- visual display of information in a simple manner by farmers and producers;
- farmers can easily add land parcels to the system;
- information management and storage;

# land & effluent

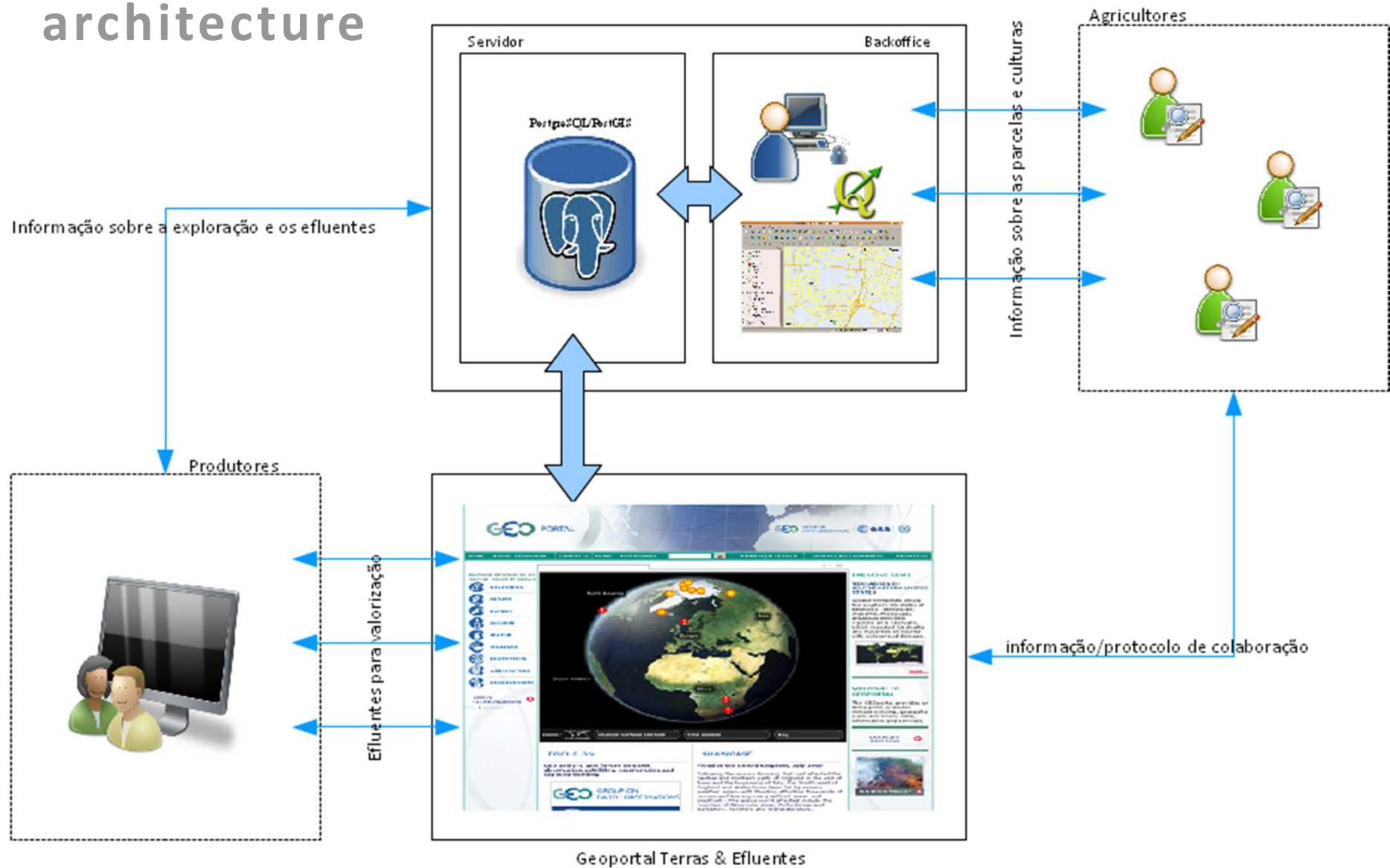
## system characteristics



- attributes related to livestock effluent (quality and volumes);
- attributes related to land parcels (physical and chemical properties of soil, cultures, ...);
- Biophysical and territorial specificities (soil, water resources, planning);
- spatial analysis used to determine viable plots for the agricultural effluent appraisal throughout a certain period

# land & effluent

## architecture



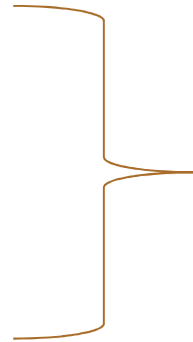
# land & effluent

pilot study areas



Leiria

Montijo



Different realities according to agricultural exploitations: dimensions, cycles, agricultural areas, ...

# land & effluent

## calendar



1ª phase – pilot study– 12 months

DB and interface construction & configuration phase	5 MONTHS
awareness training phase	1 MONTHS
Management phase of DB	6 MONTHS
<b>TOTAL</b>	<b>12 MONTHS</b>

# land & effluent

## strengths



- **simplification of procedures**
- compliance with applicable legal requirements
- **systematization of information and georeferenced database construction**
- **provide linkage between farmers and producers**
- Adoption of the best environmental practice

# land & effluent

---

## weaknesses



- the project feasibility relies on the adherence of producers and farmers : commitment to a useful e *userfriendly*
- the adoption rate of information technology by farmers is very low (besides, there are many associations and organizations providing support on consulting services)
- Understanding of administration



# land & effluent



## final assumptions

- financing requirements needed for the implementation and conceptualization of the tool
- The binding commitment needed to simplify procedures fulfilling the best practice, including the environmental
- The success depends strongly on the commitment among everyone involved.

THANK YOU FOR YOUR ATTENTION