

Brazil: The Sustainable Pantaneira Ranch programme



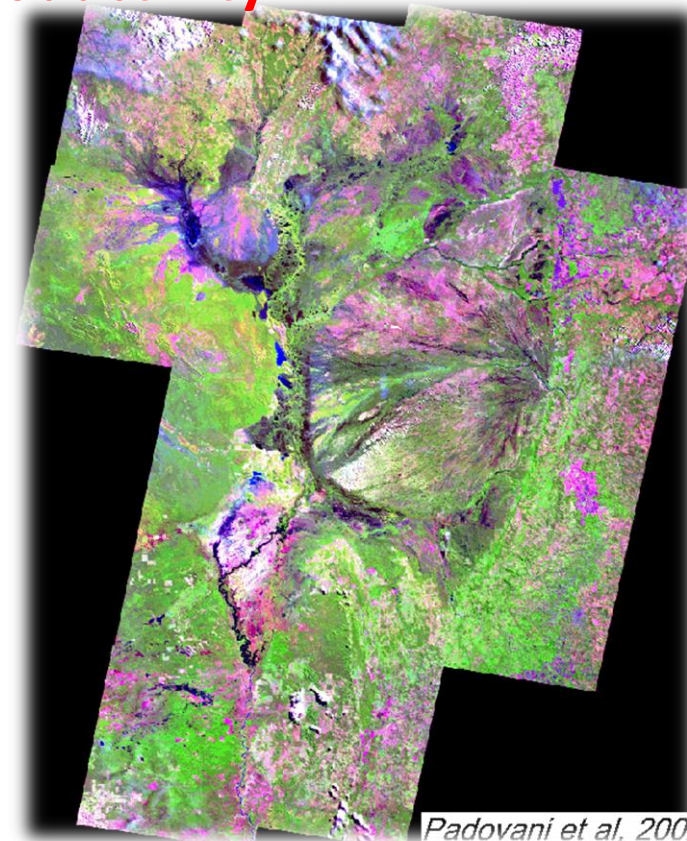
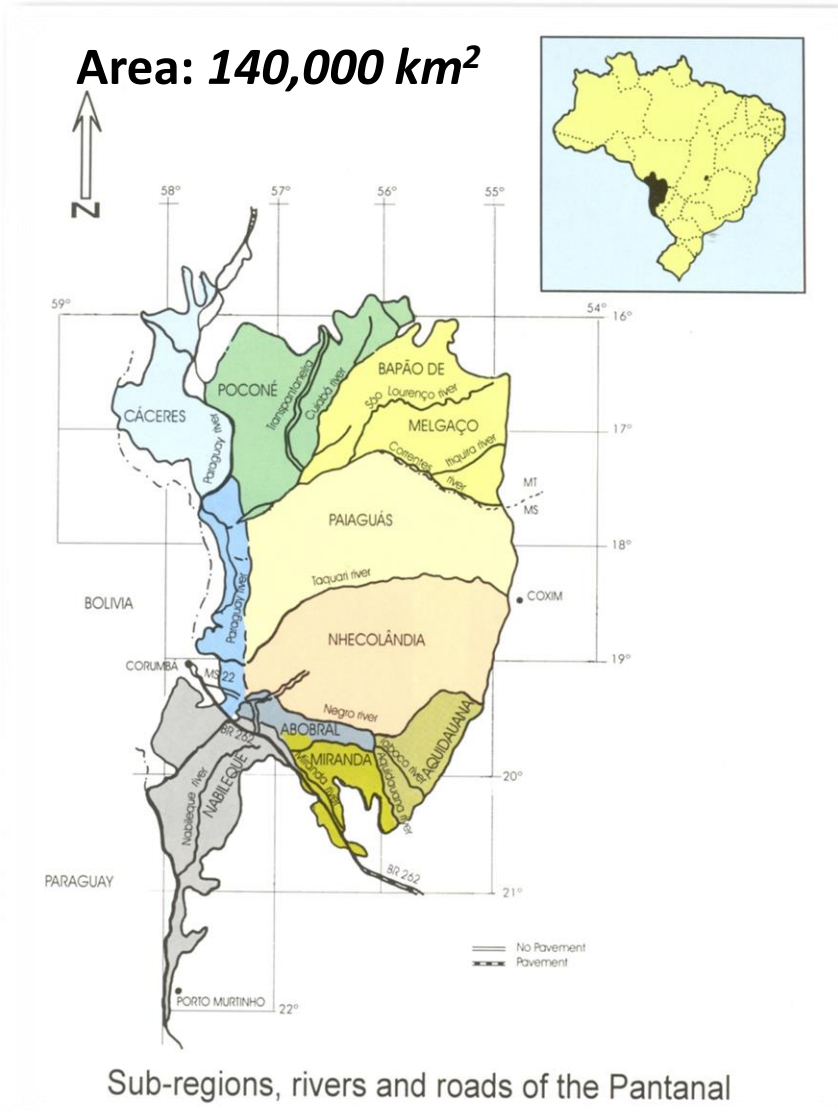
**Sandra Aparecida Santos
Embrapa Pantanal**

PANTANAL

The world's largest inland floodplains. Privates ranches: nearly 95% of the floodplains

FLOOD PULSE

The main ecological factor shaping the landscape, nutrient cycling, species distribution, and ecosystem productivity



Padovani et al, 2002

Main threats

- Development of the highlands surrounding the floodplain: erosion, siltation and pollution
- Replacement of native vegetation by cultivated pastures using African grasses
- Introduction of exotic species
- Development projects :
 - Hydroelectric power plants in Paraguay river basin – interference in the flood pulse and nutrient cycling
 - Hydrovia in the Paraguay river – potential impacts on the hydrological signature of the Pantanal.

**EXTREMES EVENTS – FLOOD AND DROUGHTS
WILDFIRE**

EXTREMES EVENTS

Drought - 2021



Flood - 2011

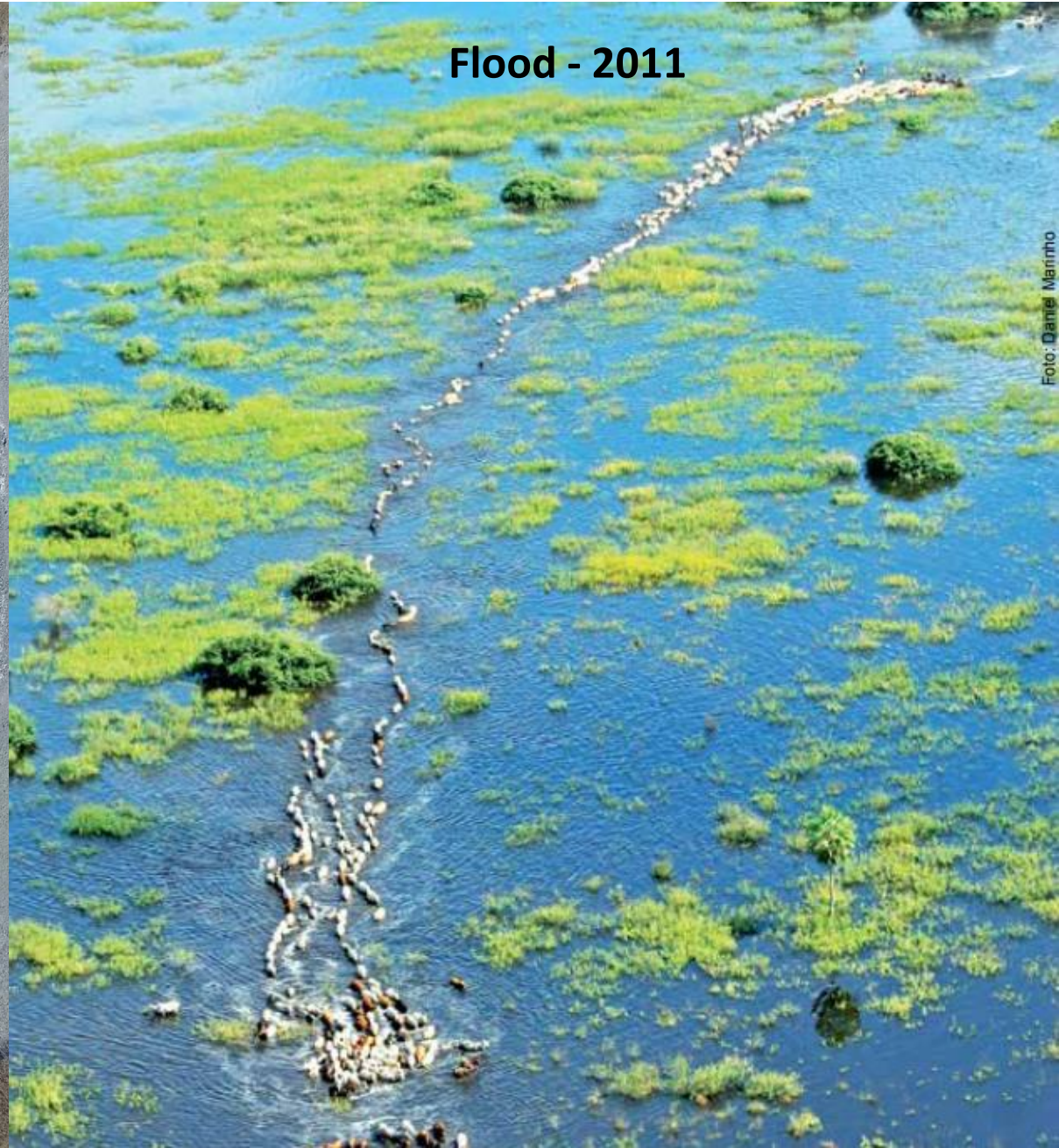
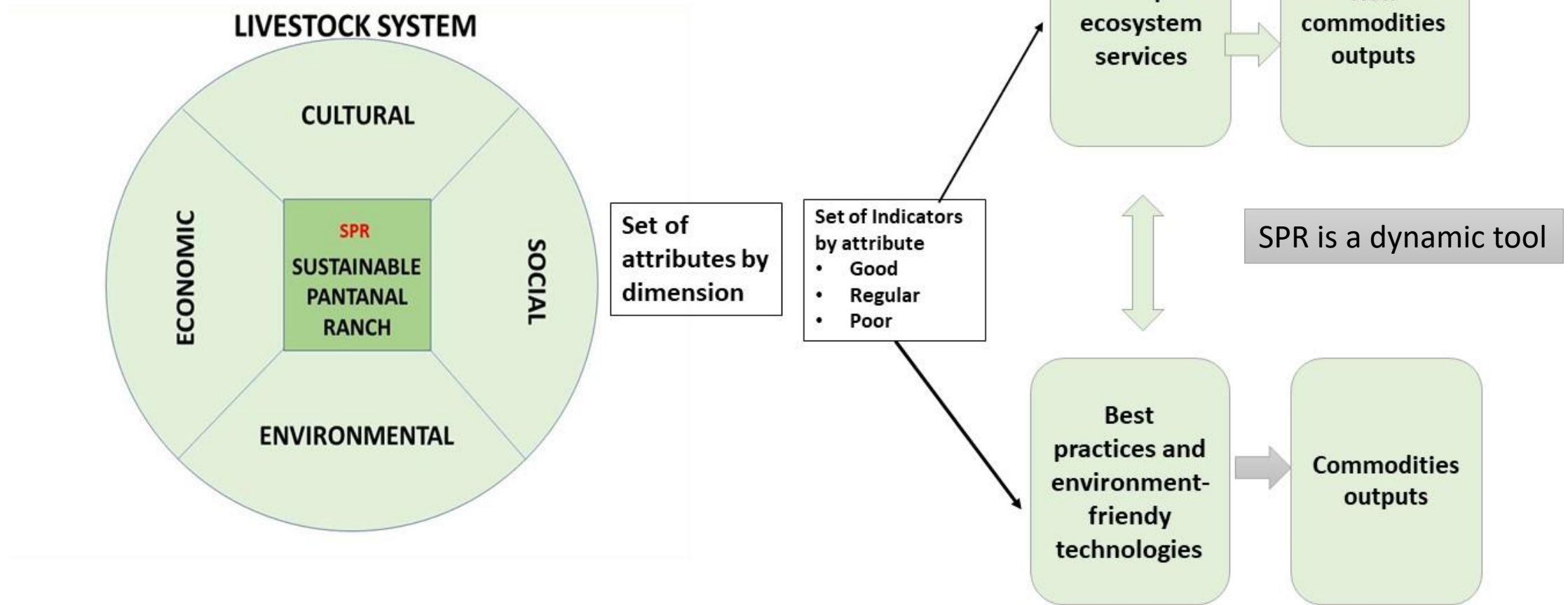


Foto: Daniel Marinho

Project: Sustainable Pantaneira Ranch (SPR)

Multidimensional and holistic tool for decision-making

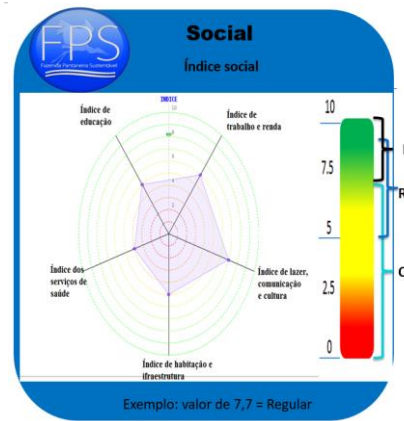
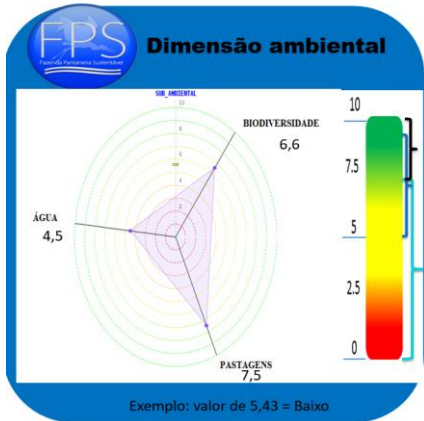
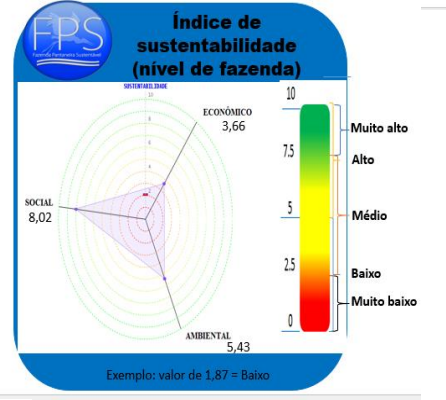
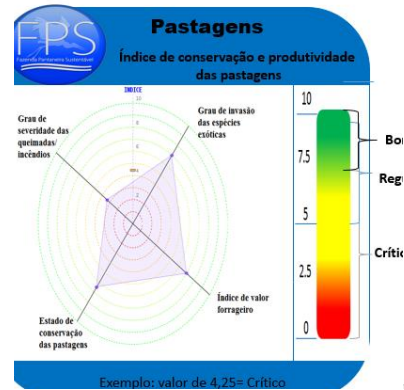
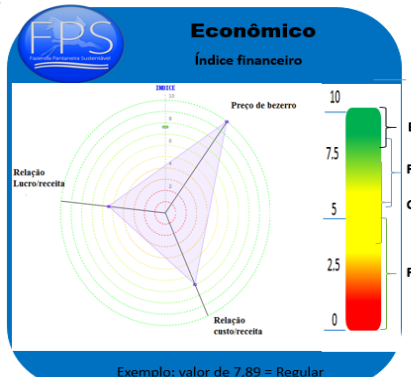
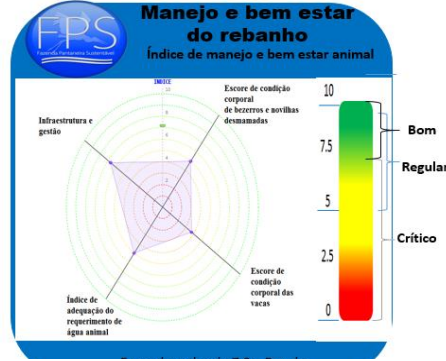
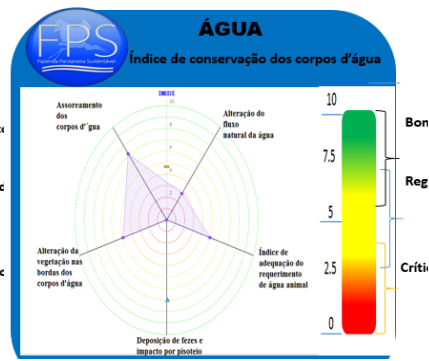
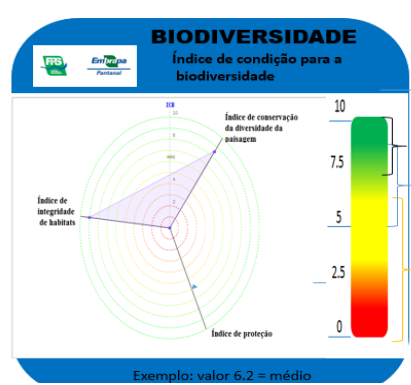


Assessing impact of beef cattle ranching in wetland integrating fuzzy rule-based system and indicators

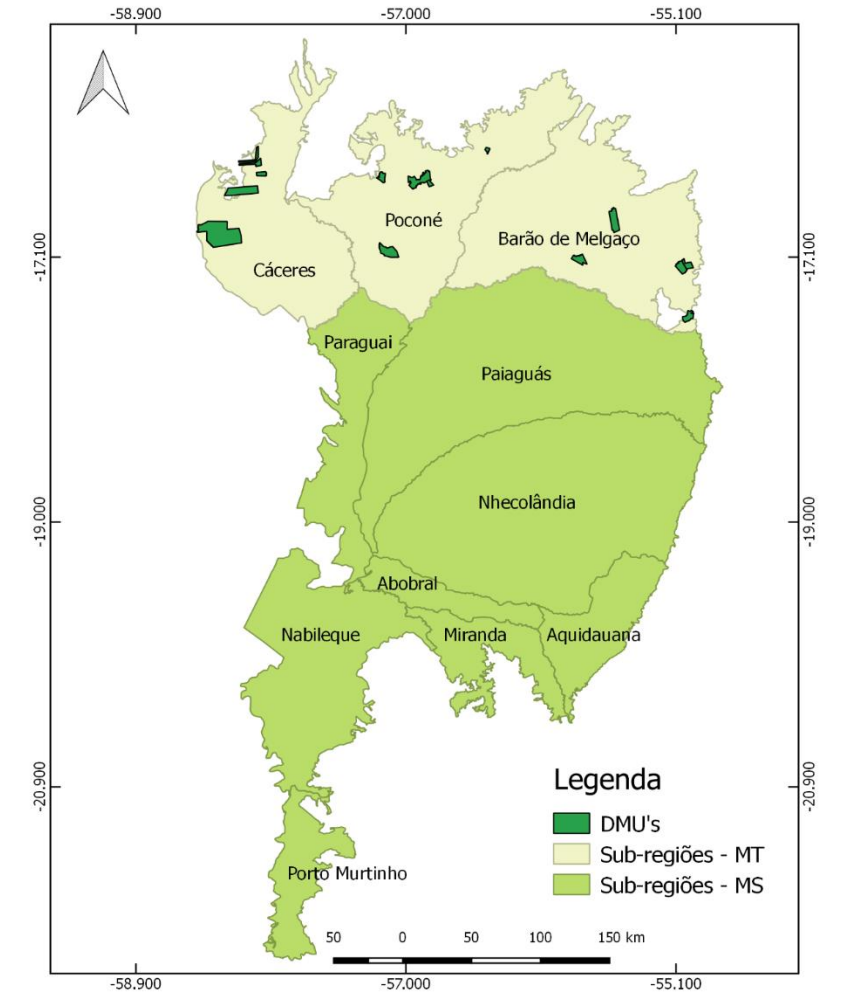
Software developed by Embrapa Pantanal and Embrapa Agricultura Digital

General diagnosis of the ranch using fuzzy logic

By dimension, aspects, indicators/indices



Pilot Project in Pantanal, MT- 15 ranches



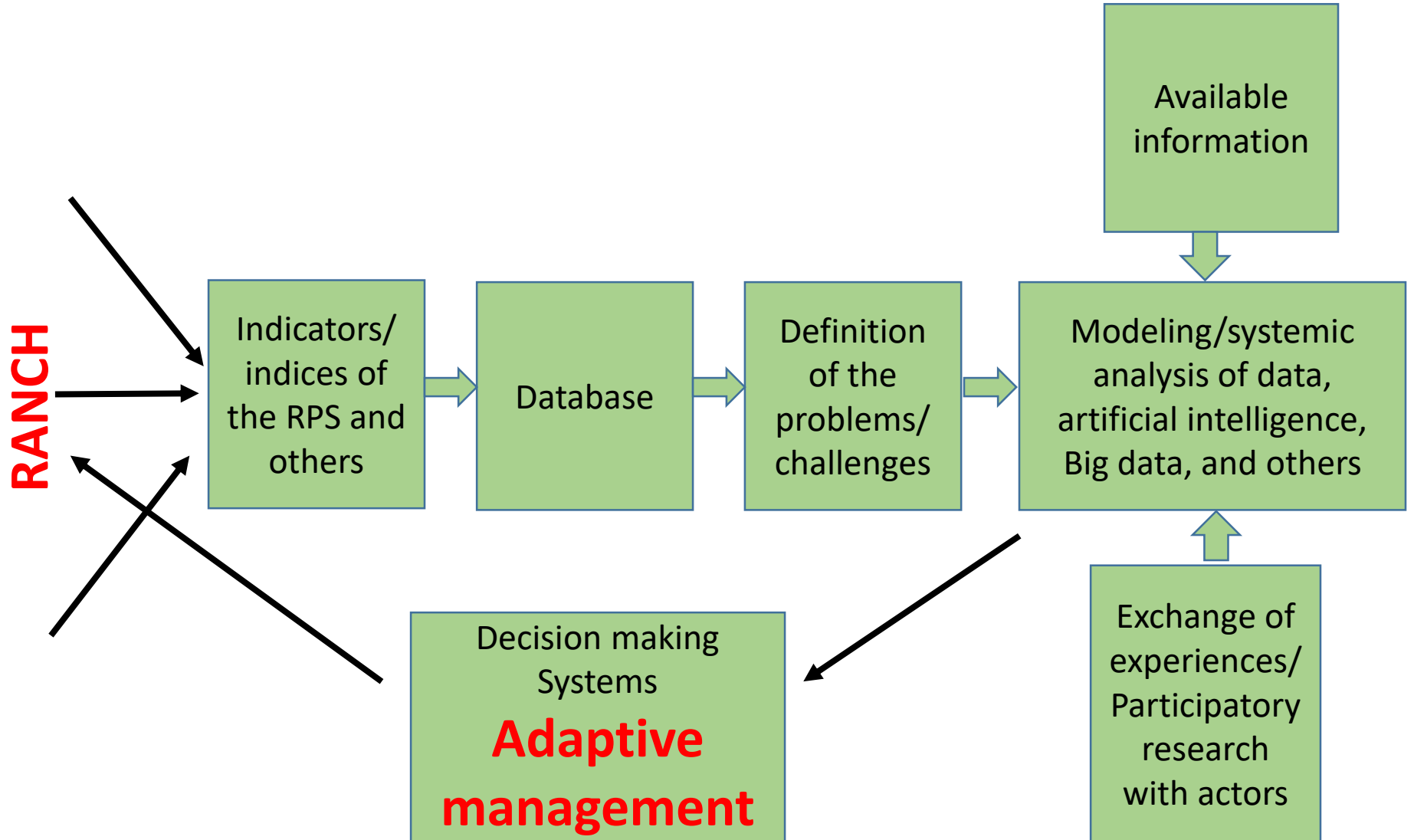
Partners



SPR BENEFITS FOR RURAL PRODUCERS

- Assist producers in finding solutions to meet demands/challenges/problems;
- Exchange of experiences and information/knowledge;
- Opening markets to sustainable products and payments for ecosystem services;
- Provides knowledge to support public policies based in sustainability;
- Helping in strategic use of data to discover gaps, opportunities and insights transforming data into agile and efficient and intelligent decision making;
- Evaluates the productive potential of the ranch in terms of weather conditions and management;
- Assists in best practices for knowledge management adoption;
- And others

GREAT CHALLENGE: How to analyze in an integrated and holistic the indicators evaluated in the different dimensions



Thanks a lot!!
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