Irrigation in Spain
Strategies for conservation

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Strategies for conservation: how are water savings being used, the modernisation of irrigation systems, and the illegal pumping of ground water

• Irrigation in Spain
• Impact of CAP subsidies on the water bodies status
• Modernization of irrigation systems: Where is the water saved?
• Illegal pumping of ground water: WWF proposal to control
• Proposals
Irrigation in Spain
Agriculture in Spain

ÁREAS AGRÍCOLAS

Tierras de labor en secano
- Cultivos herbáceos
- Cultivos permanentes
- Mosaico de cult. herb. y perm.

Cultivos de regadío
- Cultivos herbáceos
- Arrozales
- Cultivos permanentes
- Mosaico de cult. herb. y perm.
- Cultivos bajo plástico
- Policultivos regados tradicionales
- Praderas y pastizales
- Sistemas agroforestales
- Áreas agrícolas con veg. natural

25 Mha; 15% UAA EU
Irrigation in Spain

- 75% water consumption
- 3.5 Mha (13% Utilized Agricultural Area)
- 1/3 still irrigated by flooding
Agriculture and water

Overexploited aquifers

Agricultural Nitrate Vulnerable Zones

Ramsar/Natura 2000 wetlands
CAP and Irrigation: Polluter pays?
Common Agriculture Policy

- Total Budget EU 2007-2013 > 350 billion euros
- Spain
  - 2nd largest CAP beneficiary (7.5 billion euros/año)

Pilar 1. “Direct payments” and “Other payments”
EAGF
77% CAP budget

Pilar 2. Rural Development
EARDF
22% CAP budget
Total payments 2008

59 municipalities (0.1% UAA) → 9% payments

20% beneficiaries → 54% total payments
Direct Payment 2008

Based on historic payments

**Mean payment:** 183.48 euros/ha
Other payments 2008

Fruits & vegetables; Vineyard

Mean payments: 40,50 euros/ha
Rural development 2008

More even distribution

Mean payment: 36,46 euros/ha
Table 4. Average payment rates (€/ha) by type of system or location

<table>
<thead>
<tr>
<th>Type of system / area</th>
<th>EAFRD</th>
<th>Other Payments-EAGF</th>
<th>Direct Payments-EAGF</th>
<th>Total Payments</th>
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</thead>
<tbody>
<tr>
<td>Inside Natura 2000 Network (&gt;50% TA)</td>
<td>51.63</td>
<td>27.22</td>
<td>140.78</td>
<td>219.63</td>
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<tr>
<td>Inside Natura 2000 Network (&gt;90% TA)</td>
<td>47.06</td>
<td>8.34</td>
<td>124.80</td>
<td>180.21</td>
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<tr>
<td>Outside Natura 2000 Network (&gt;50% TA)</td>
<td>57.93</td>
<td>45.57</td>
<td>202.72</td>
<td>306.22</td>
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<tr>
<td>Outside Natura 2000 Network (&gt;90% TA)</td>
<td>57.45</td>
<td>44.59</td>
<td>196.16</td>
<td>298.21</td>
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<tr>
<td>Rain-fed crops</td>
<td>39.45</td>
<td>29.58</td>
<td>211.47</td>
<td>280.51</td>
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<tr>
<td>Irrigated crops</td>
<td>87.13</td>
<td>209.31</td>
<td>321.50</td>
<td>617.94</td>
</tr>
<tr>
<td>Pastures</td>
<td>57.90</td>
<td>6.68</td>
<td>159.27</td>
<td>223.85</td>
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<tr>
<td>“Dehesas”**</td>
<td>22.10</td>
<td>3.64</td>
<td>103.89</td>
<td>129.63</td>
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<tr>
<td>Permanent crops</td>
<td>54.53</td>
<td>170.62</td>
<td>191.80</td>
<td>417.32</td>
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<tr>
<td>Herbaceous crops</td>
<td>49.50</td>
<td>36.68</td>
<td>277.57</td>
<td>363.75</td>
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<tr>
<td>Over-exploited underground water bodies</td>
<td>26.80</td>
<td>96.69</td>
<td>174.87</td>
<td>302.26</td>
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<tr>
<td>Nitrate Vulnerable Zones (NVZ)</td>
<td>52.70</td>
<td>92.21</td>
<td>232.58</td>
<td>377.49</td>
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<tr>
<td>Irrigated crops in NVZ</td>
<td>74.03</td>
<td>206.56</td>
<td>297.28</td>
<td>577.86</td>
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<tr>
<td><strong>Total Municipalities (UAA&gt;50%TA) – N 4436</strong></td>
<td>60.33</td>
<td>45.02</td>
<td>203.30</td>
<td>308.65</td>
</tr>
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</table>

TA: Total Area of Municipality I UAA: Utilized Agricultural Area I N: num. of municipalities included in the category
"Other payments" vs Overexploited aquifers

Mapa 3a. Acuíferos sobre-exploatados

In red. Aprox. limits of overexploited aquifers
“Other Payments” vs. Nitrate Vulnerable Zones

In orange: aprox. limit of Nitrate vulnerable zones
Other payments vs. Irrigation in overexploited aquifers and NVZs

Irrigation and overexploited aquifers

Natura 2000/Ramsar wetlands affected: Doñana, Tablas de Daimiel, Albufera, Mar Menor…
Methodology and information availability:

- Improve the quality and availability of information (environmental and payment data)
- Continue with more studies and repeat them to detect changes
- Try different approaches (e.g., socio-economic effects) for a more complete vision

An open, plural debate well-founded in the facts about the current distribution of payments and the effects this produces.
Findings

Distribution of payments
- Large share of the funds was absorbed by a small number of areas or large or intensive enterprises, benefiting farming practices with a negative environmental impact.

Biodiversity
- Less support was directed at enterprises of higher environmental value (e.g. Natura 2000) → Contradiction between CAP and Birds & Habitats Directives

Natural resources
- Higher payments in areas with overexploited or polluted aquifers
- Higher payments to systems with high impacts on Natura 2000 wetlands
  → Contradiction between CAP and Water Framework Directive

Incompatibility in Spain between current CAP and EU environment policy
Future of the Common Agricultural Policy

• Urgent need for changes to the CAP according to the ‘public money for public goods’ principle

• True application of ‘Polluter pays principle’, including removal of perverse subsidies and WFD as Legal requirement to get public payments
3
Modernization of irrigation

• Goal: 1.162 hm³/year of water savings;
Modernization of 866.898 hectares
• Total investment: 2.4 billion euros
  (Public investment: 1.8 billion euros)

But, where is the water saved?
“Plan de Choque” approved without public participation

WWF information request (2006) on water saved and destination

No answer from the Spanish Ministry although a WWF complaint on lack of information supported by the Ombudsman (2008)

2011, still waiting for response…
Meanwhile…draft of the New Strategy for Modernization of irrigation

<table>
<thead>
<tr>
<th>Actuaciones en el ámbito de red de transporte y regulación</th>
<th>SUPERFICIE (ha)</th>
<th>ESTIMACIÓN AHORRO AGUA (hm³/año)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>425.633</td>
<td>348,449</td>
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<tr>
<td>Actuaciones en el ámbito de redes de distribución en zonas regables</td>
<td>436.873</td>
<td>782,754</td>
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<tr>
<td>TOTAL ENMSRH 2015</td>
<td>862.506</td>
<td>1,131,203</td>
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</table>
WWF proposals

Transparency:

• Assessment and monitoring of current modernization of irrigation plans.

Public money for public goods and polluter pays

• Assurance of real water savings to contribute to WFD objectives,
Illegal use of water
Current situation

- 510,000 illegal wells (urban and agriculture uses) in Spain → 3,600 hm³/year of groundwater extracted illegally → average water consumption of 58 million people
WWF proposals

• Legal and efficient use of water compulsory
  – to receive any public money (CAP, Farming Insurance, etc)
  – to be included into market retailers’ buying protocols
  – to get Quality certified labels (Protected Designation of origin, Organic Farming, etc)
WWF proposals

• The responsible authorities should be supplied with all the resources to effectively control the use of water
• Ensuring the immediate closure of illegal water withdrawal and the prosecution of violators
• Improving the coordination among the different authorities and stakeholders
WWF proposals

• Raising awareness
• Farming plans have to be subject to environmental objectives: environmental flows allocation, water pricing that includes real environmental costs, etc.
• Promoting and supporting non-irrigated High Value Nature Systems.
Summaryzing
Farming policies according to “Public money for public goods” and “polluter pays” principle

Ensure water saved in modernization goes to nature

Stop illegal water use
Healthy rivers require a sustainable agriculture
Only healthy rivers make agriculture possible
Thank you

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