



# Life HAGAR Ecoschemes also for the rivers

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**Alberto Fernandez,  
Felipe Fuentelsaz  
Rafael Seiz  
Celsa Peiteado  
WWF España**



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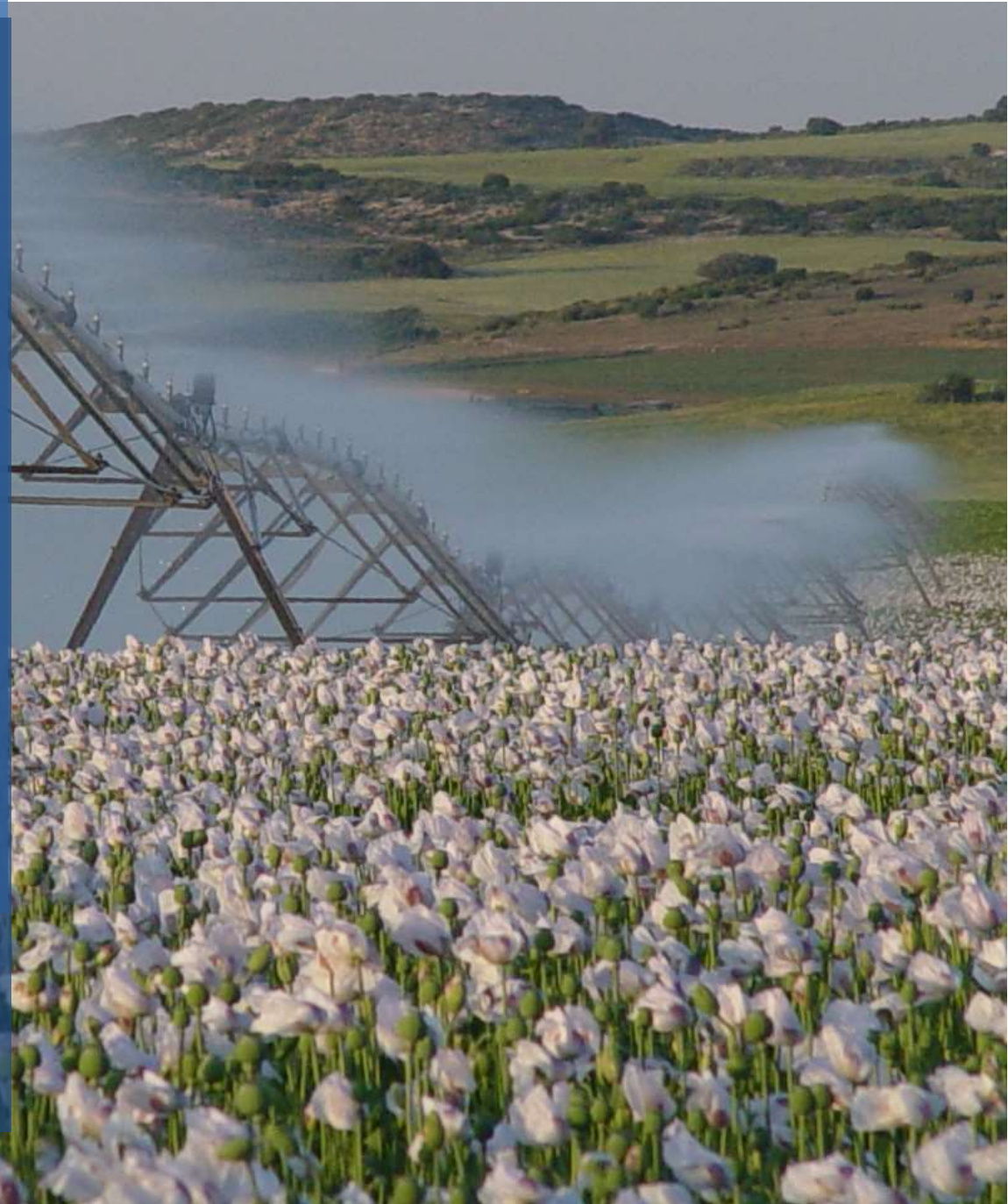
Solid  
foundations  
for a new  
blue CAP  
architecture

80% water consumption  
by irrigation

16% Nitrates  
Vulnerable area

44% water bodies in  
bad status

Saturation markets and  
falling prices Need:  
adaptation of  
agricultural production  
to available resources  
and expected impacts  
of climate change  
(decrease of 15%  
runoff)





## The foundations...

- Ecosystem services for food security
- **Lessons learned:**
  - **Efficiency as precondition**
  - **Structural changes needed (water rights review)**
  - **Associative character**
- Holistic and coherent approach
- Territorial contract per farm
- **Public participation**
- **Ex ante conditionality**
- **Robust evaluation and monitoring system**



# Building the new blue architecture

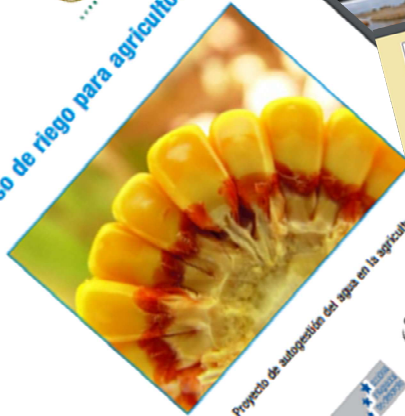
- **Enhanced conditionality:**
  - WFD and GAEC for good status of water bodies
- **Basic payment redesigning**
  - Income support to most valuable socio-environmental farms
- **Ecoschemes for the good status of river and aquifers**
  - **Priority: maintenance of environmental farming practices** (Natura 2000, HNVF/rainfed crops + extensive grazing,
  - **Proper control and measuring of results**
  - **Promote structural changes**



# Building a water future through architecture



Uso eficiente del agua en la agricultura  
**Curso de riego para agricultores**



water  
ts



# 2

Ecoschemes  
also for the  
rivers



## Blue Ecoscheme

- **Objective:** 15% of water saving in irrigation regarding legal water permits to ensure good status of water bodies according WFD, by combining quality harvests and ecosystem services recovery
- **Tools:**
  - ACUAS: crop plan design
  - SITAR: irrigation recommendations adapted to each farm
- **Background:** Life HAGAR Project, Misión Posible Alto Guadiana y Estuario Guadalquivir projects.
- **Priority:** irrigated areas in water bodies in bad status (aprox. 500.000 ha) – Water risk filter



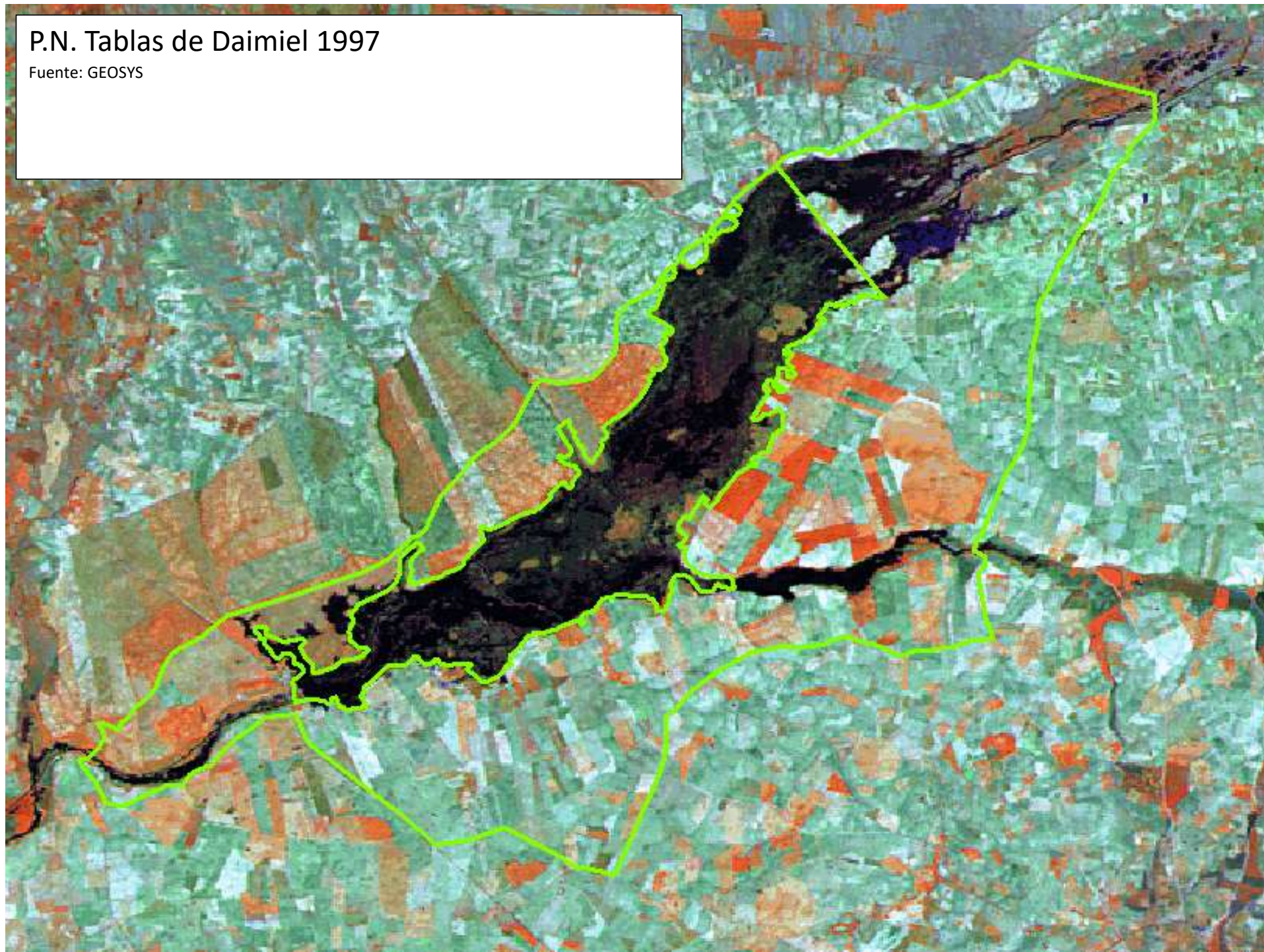


# Blue Ecoscheme

- **Expected results** : Costs savings (water, fertilizers...); Improvement (maintenance) status of the water bodies; Climate change adaptation; crop planning; harvest quality improvement.
- **Scope**: arable and permanent crops
- **Potential beneficiaries**: Water users associations,...
- **Managing authorities**: Water and agriculture administrations
- **Indicators**: % irrigated área under ACUAS and SITAR commitments; Water saving (m<sup>3</sup>/ha) and total (m<sup>3</sup>) and destination;  
**Water bodies status evolution**
- **Control mechanism**: satellite images, water metering data; anual irrigated área plan per farm; Water rights review

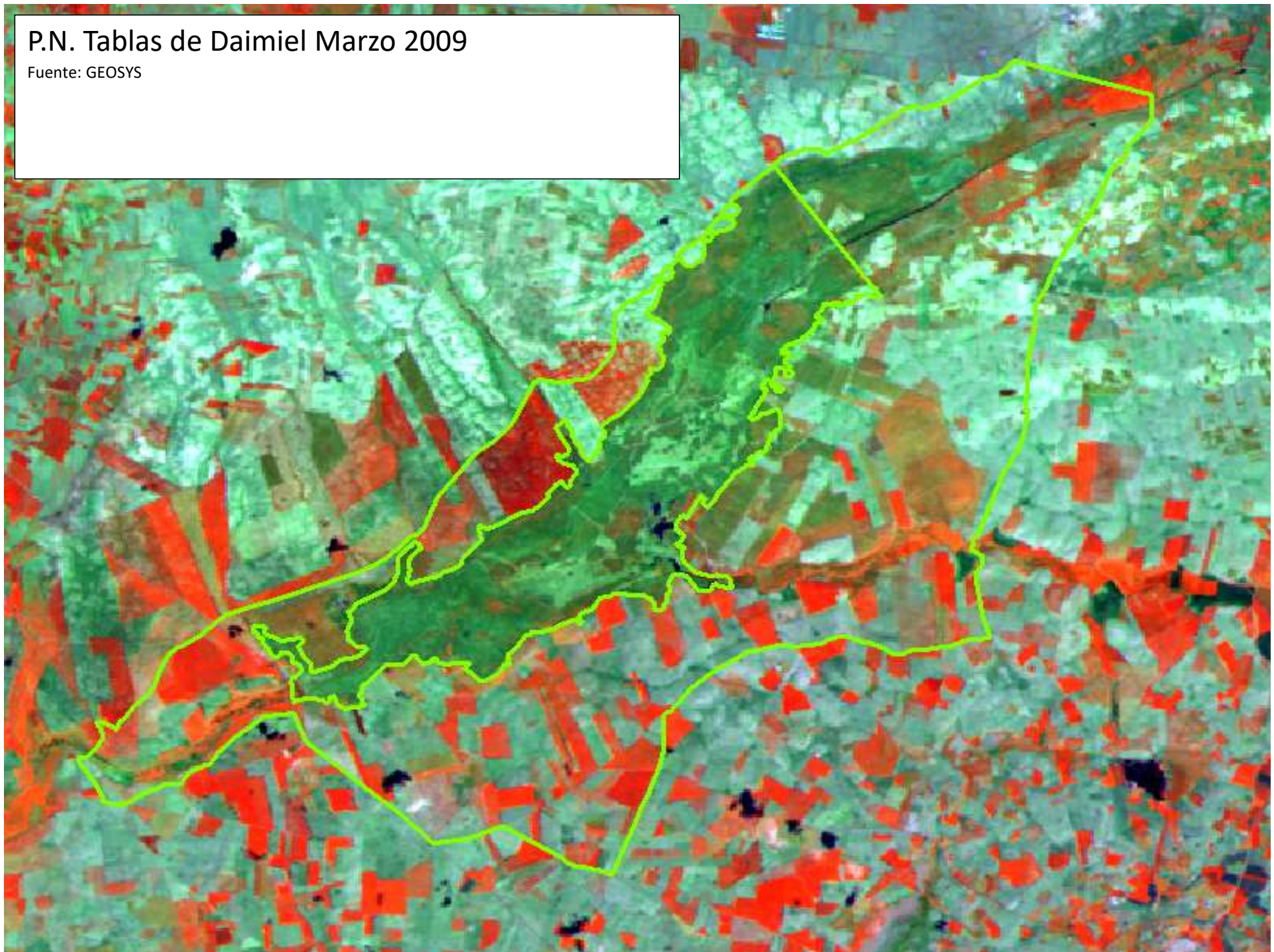
# P.N. Tablas de Daimiel 1997

Fuente: GEOSYS



# P.N. Tablas de Daimiel Marzo 2009

Fuente: GEOSYS





## ACUAS: Irrigated área plan

Provide to the Water User Communities with a customized self-management tool, to advice to their members.

Elaboration of crop plans to decrease 15% annual water consumption with respect to legal concession

Water rights downward revision at the end of the Ecoscheme to ensure structural changes and permanently recovering water for the basin



# ACUAS: crop plan design

Aguas v1.0 - Proyecto nuevo - [[DSG]: Municipios.dsg daimiel.dsg [GRD]: fondo.jpg]

Archivo Edición Ver Insertar Herramientas Aguas Ventana ?

Buscar polígono: 13039002

Titular

modelo, Agricultor - DNI/NIF: 0000000-A

Aprovechamiento 201200001

Gráfico Aprovechamiento

Expedientes

(441066,52;4332165,05) m.

Inicio Bandeja de entrada Life-Hagar (beta) LifeHagar Documento1 - Micros... ES 12:26



# ACUAS

## Crop plan declaration

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
14							SISTEMA DE CONTROL: TABLAS Ó CONTADOR		PLAN DE CULTIVOS							CONSUMO DE AGUA (m <sup>3</sup> ) (caso de tablas)
15	Nº EXPEDIENTE	Nº POZO	MUNICIPIO	POLIGONO	PARCELA	SUPERFICIE INSCRITA Ó EN TRÁMITE (ha)			TIPO DE CULTIVO	SUPERFICIE DEL CULTIVO (ha)	SISTEMA DE RIEGO	POLIGONO	PARCELA	TÉRMINO MUNICIPAL		
16	Aseso01		Daimiel			25,94	Melon / Calabaz			3,82	Goteo	23	15	Daimiel	14.611,5	
17							Sandía			1,01	Goteo	23	15_a	Daimiel	5.554,5	
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28	D./D*											TOTAL CONSUMO (m <sup>3</sup> )	20.166,0			
29	DECLARA QUE LOS DATOS ANTERIORMENTE EXPUESTOS SON CIERTOS															
30	En Daimiel, a 5 de junio de 2017										DOTACIÓN DEL EXPEDIENTE (m <sup>3</sup> )	51.880,0				
32	Fdo.															
33																
34																
35	A LA CONFEDERACIÓN HIDROGRÁFICA DEL GUADIANA (CIUDAD REAL)															
36																



## SITAR. Personalized irrigation advice

- Based in official data provided by Public Irrigation Advisory Services
- Software adaptation by CSIC
- Personalized irrigation advice taking into account crop and irrigation system per farm vía SMS
- **Ecoscheme stress coefficient for deficit irrigation**





próximos 7 días

Descripción de la zona

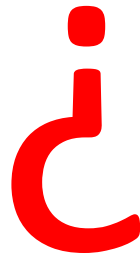
Recomendaciones diarias

Recomendaciones semanales

### NECESIDADES NETAS DE AGUA EN MILÍMETRO

FECHA	ETo	Precipitación Estación de Daimiel (AÑO HIDROLÓGICO)	CEBA
Viernes (03/05)	4,1	0,0	4,1
Sábado (04/05)	3,8	0,0	3,8
Domingo (05/05)	4,6	0,0	4,6
Lunes (06/05)			
Martes (07/05)	4,5	0,9	3,6
Miércoles (08/05)	3,7	0,8	2,9
Jueves (09/05)	5,5	0,7	4,8
Total semanal	28,5	2,9	25,6
LITROS/ÁRBOL	-	-	-
PREVISIÓN PRÓXIMA SEMANA	30	5	25
Acumulado campaña	104,7	3,2	101,5

## IRRIGACIÓN DECISIÓN



movistar 3G 12:46 78%

Mensajes +34 605 065... Editar

Llamar FaceTime Añadir

Mensaje de texto  
29/10/2013 12:44

[13-39-144-80](tel:13-39-144-80), sector  
[13-39-144-80](tel:13-39-144-80) melón;  
09/09/2013 al  
13/09/2013;  
Nec.H.Brutas: 20.3 mm;  
Recomendaciones Riego  
en Tiempo: 15:13  
(hh:mm)

Ejemplo de mensaje de texto "sms" con recomendaciones de riego en horas y minutos

Mensaje de texto Enviar





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Summarizing



# A new CAP for the WFD

## A WFD for the future of agriculture

- Ecosystems services as food security guarantee (nature based solutions)
- Value for public money: coherence, holistic approach. To this:
  - Solid grounded for a global change context
  - Priorization of Ecoschemes to maintaining current benefit practices: Natura 2000, HNVS...
  - Other measures
- Las calle: A new CAP for the need agroecological transtion toward Sustainable Food Systems

Thank you



Celsa Peiteado [agricultura@wwf.es](mailto:agricultura@wwf.es)