



## A flood of euros for irrigated fields

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France is facing a water problem and agriculture has a prime responsibility in it. Farmers use less than 15% of all water used in France, but return hardly half of it. As a result, agriculture is the largest French water consumer, with almost 50% of total water consumption (Table 1) rising to 80% during the summer (Ministry of Ecology and Sustainable Development, 2005).<sup>2</sup>

### Irrigation grants : subsidies...

The Common Agricultural Policy (CAP) favors intensive, irrigated agriculture. France is the country with the largest annual increases in irrigated fields in the European Union (EU): 25,000 hectares per year between 1961 and 1980, 48,000 between 1980 and 1996, and 59,000 during the 1990's when the specific subsidies for irrigating land were set up (Institute for European Environmental Policy, 2000).

Irrigation grants can be high—up to 262 euros/ha in the *département* of Hérault—and they are on top of other direct farm subsidies. For instance, a crop farmer in the *département* of Vienne receives less than 340 euros per non-irrigated hectare, but more than 530 euros per irrigated hectare—a 56% increase. Roughly 80% of grants paid for irrigating the land devoted to cereals, protein and leguminous plants (LCPL) are captured by corn producers, even though less than 30% of corn fields are irrigated. Irrigated LCPL has increased to the detriment of irrigated land used for market gardening, horticulture and orchards (Institute for European Environmental Policy, 2000). Corn, an exotic crop in France in 1939 (less than 300,000 hectares cultivated) covered more than 3.1 million hectares in 2003. France is currently the largest European corn producer and exporter.

Estimating the total amount of irrigation grants can be done using data from ONIC-ONIOL<sup>3</sup> and the three possible theoretical yields included in the “crop plan” (*plan céréales*) of each French *département*. For the whole of France, estimated irrigation grants amounted to more than 148 million euros in 2003 (Table 2). This is an under-estimate because it does not include implicit subsidies to public infrastructure, such as dam construction and pumping network modernization, made necessary by the subsidized irrigation system.

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<sup>2</sup> A distinction needs to be made between “used” water (restituted after use) and “consumed” water (a definitive loss of the water resource).

<sup>3</sup> ONIC-ONIOL (resulting from the merger of the Office national interprofessionnel des céréales (ONIC) and the Office national interprofessionnel des oléagineux, protéagineux et cultures textiles (ONIOL)) is the largest public disbursement office for farm subsidies in Europe.

This considerable amount deserves two remarks. Firstly, French authorities actually spend less to protect water than to boost its use.<sup>4</sup> In 2003, programmes for protecting water and aquatic environments received less than 90 million euros (28.4 million from the budget of the Ministry of Ecology and Sustainable Development and 61.4 million from the French Water Agencies). Secondly, irrigation grants essentially benefit large farms which cultivate more than 95% of irrigated LCPL and represent almost 80% of irrigating farms.<sup>5</sup> And they are highly geographically concentrated: 80% (120 million euros) goes to 20 departments, mainly located in the western part of central and southern France (Table 2).

### ...and traps

Subsidies always have perverse effects—even for their beneficiaries—as best illustrated by the drought raging in a substantial part of France since the summer of 2005.

On August 22, 2005, 72 *départements* were enforcing decrees restricting the use of water. Among them, 29 were implementing so-called “level 3” decrees imposing a ban on water use in at least one river-basin (Table 3). The 20 largest beneficiaries of irrigation subsidies exhibit a restriction index roughly twice as high as that prevailing in the 72 other *départements* (Table 4).

On December 20, 2005, only 6 *départements* still had at least one decree in force, with among them, 5 “level 3” decrees. All of them belong to the 20 largest beneficiaries of irrigation subsidies, and they show a restriction index three times as high as that prevailing in the 72 other *départements* (Table 4).

In sum, the more farmers are subsidized for irrigating, the more they suffer in time of drought. Subsidies become a trap for the recipients, a trap that the most recent CAP reform leaves untouched because existing irrigation subsidies are integrated into the single payment scheme applied since January 1<sup>st</sup>, 2006.

Water subsidies are also a trap for other economic sectors. Indeed, the severe problems faced by oyster producers of the Marennes-Oléron area are, for a large part, the result of lack of water from two rivers (the Seudre and the Charente) flowing in a region where irrigated fields have increased by tenfold between 1961 and 1996—the largest ever increase in anywhere in France (Institute for European Environmental Policy, 2000). And water subsidies are a trap because CAP-driven intensive farming has a negative impact on the quality of water in many French regions, even if some measures are beginning to be implemented in order to decrease water pollution of agricultural origin.<sup>6</sup>

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<sup>4</sup> It is interesting to highlight the preamble of the October 23, 2000 Directive Establishing a Framework for a Common Policy in the Field of Water (Directive 2000/60/CE). It emphasizes the necessity of integrating the protection and management of water in European policies. But the CAP seems to have escaped from this principle.

<sup>5</sup> ONIC-ONIOL makes a distinction between small and large producers depending on their theoretical production (inferior or superior to 92 metric tons).

<sup>6</sup> “60% of European fields contain fertilizer and pesticides at dangerous levels for the quality of underground aquifers » (European Commission, 1999).

## For an economically sound water price

Revealing the economically sound price of water, including water consumed by farmers, should be a crucial goal. According to a Report from the French Senate released in 2000, the agricultural sector contributes to only 6.5% of the total receipts of the French Water Agencies—whereas the agricultural sector represents 48% of total water consumption. This implies that the price paid by farmers for their water consumption is seven times lower than the average water price in France, an unsustainable situation in the long run. The progressive elimination of irrigation subsidies is a first step towards improving this situation. Far from penalizing French farmers in international competition, this price policy may well reveal one of their decisive advantages (Le Vernoy, 2006).

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**Table 1. Quantities of used and consumed water by usage type, 2001**

Uses	Power plant	Drinking water	Irrigation	Industry	Total
Volume of used water					
• in millions of m <sup>3</sup>	19 161	5 966	4 767	3 650	33 544
• % of total use	57.1%	17.8%	<b>14.2%</b>	10.9%	100.0%
Volume of restituted water					
• in millions of m <sup>3</sup>	17 890	4 534	1 989	3 395	27 808
• % of total restitution	64.3%	16.3%	7.2%	12.2%	100.0%
Volume of consumed water					
• in millions of m <sup>3</sup>	1 271	1 432	2 779	256	5 737
• % of total consumption	22.2%	25.0%	<b>48.4%</b>	4.5%	100.00%

*Source* : French Water Agencies - RNDE - IFEN, 2003.

**Table 2. The 20 largest beneficiaries of irrigation subsidies, 2003**

<i>Département</i>	Irrigated fields – corn seed and ensilage (ha)	Irrigated CPL land - corn seed and ensilage excluded (ha)	Irrigation subsidies – corn seed and ensilage (€/ha)	Irrigation subsidies – corn seed and ensilage excluded (€/ha)	Total irrigation subsidies paid (thousand €)	Shares of total irrigation subsidies paid (%)	State of decree restricting water use [b]	
							August 22, 2005	December 20, 2005
Gers	61 332	21 473	167.58	167.58	13 876.5	9.35%	3	0.5
Lot et Garonne	50 941	9 897	162.54	162.54	9 888.6	6.66%	3	0.5
Landes	88 605	9	105.21	0	9 322.1	6.28%	3	3
Haute-Garonne	29 982	19 348	173.88	173.88	8 577.5	5.78%	2	0.5
Charente-Maritime	48 343	18 346	124.11	124.11	8 276.8	5.57%	3	3
Tarn et Garonne	31 370	12 885	182.07	182.07	8 057.5	5.43%	3	0.5
Vienne	35 568	4 543	199.71	199.71	8 010.6	5.40%	3	3
Charente	27 553	2 979	185.85	185.85	5 674.4	3.82%	3	3
Maine et Loire	28 313	5 064	168.84	168.84	5 635.4	3.80%	3	0.5
Drôme	19 566	6 943	203.49	203.49	5 394.3	3.63%	2	0.5
Vendée	41 579	3 693	117.81	117.81	5 333.5	3.59%	3	0.5
Loiret	31 772	35 773	74.97	74.97	5 063.8	3.41%	3	0.5
Isère	14 766	2 574	233.73	233.73	4 052.9	2.73%	2	0.5
Tarn	14 964	7 104	179.55	179.55	3 962.3	2.67%	2	0.5
Dordogne	25 154	1 930	137.34	119.7	3 685.7	2.48%	3	0.5
Hautes-Pyrénées	27 516	29	132.3	0	3 640.4	2.45%	2	0.5
Eure et loir	20 155	23 944	75.6	75.6	3 333.9	2.25%	3	0.5
Deux-Sèvres	20 048	2 807	140.49	140.49	3 210.9	2.16%	3	3
Pyrénées-Atlantiques	26 366	51	105.21	0	2 774.0	1.87%	1	0.5
Allier	12 318	1 257	187.11	187.11	2 540.0	1.71%	2	0.5
Other <i>départements</i> (72)	229 562	44 779	65.83 [a]	62.52 [a]	28 151.4	18.96%	108	27
<b>France</b>	<b>885 773</b>	<b>225 428</b>	--	--	<b>148 462.4</b>	100%	160	49.5

\*Data cover 92 French *départements*. Overseas *départements*, Seine-Saint-Denis, Val de Marne, Hauts-de-Seine and City-of-Paris are excluded.

<sup>[a]</sup> The two irrigation subsidies “corn seed and ensilage” and “corn seed and ensilage excluded” of the “Other *departments*” included in the table are the results of a simple average of the 72 *départemental* subsidies which have been used for subsidy estimates by *départements*.

<sup>[b]</sup> Based on the information provided by the Water Directorate of the Ministry of Ecology and Sustainable Development, the following restriction index was set up by the author :  
**No decree** (restriction index: 0).

**Planned measures: Non-effective limitation** measures on water use but measures have been planned in the long-run in case of necessity (restriction index: 0.5).

**Effective limited measures:** limitation measures on water use inferior or equal to 1 day/week or to 15% of the volume in at least one river-basin (restriction index: 1).

**Effective strong measures** limitation measures on water use superior or equal to 1 day/week in at least one river-basin but inferior to 7 days/week (restriction index: 2).

**Total bans:** bans on water use in at least one river-basin (restriction index: 3).

*Sources* : ONIC/ONIOL, DDAF, Ministry of Ecology and Sustainable Development. Author's calculations.

**Table 3. State of decrees restricting the use of water, 2005**

Decree restricting the use of water	Number of <i>départements</i> concerned	
	August 22, 2005	December 20, 2005
None	13	21
Planned measures	8	65
Effective limited measures	15	0
Effective strong measures	27	1
Total bans	29	5

\*Data cover 92 French *départements*. Overseas *départements*, Seine-Saint-Denis, Val de Marne, Hauts-de-Seine and City-of- Paris are excluded.

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**Effective limited measures:** limitation measures on water use inferior or equal to 1 day/week or to 15% of the volume in at least one river-basin (restriction index: 1).

**Effective strong measures:** limitation measures on water use superior or equal to 1 day/week in at least one river-basin but inferior to 7 days/week (restriction index: 2).

**Total bans:** bans on water use in at least one river-basin (restriction index: 3).

*Source* : Ministry of Ecology and Sustainable Development, 2005.

**Table 4. The irrigation subsidies “trap”, 2005**

Rankings of largest beneficiaries of irrigation subsidies	Average of restriction index	
	August 22, 2005	December 20, 2005
4 largest beneficiary <i>départements</i>	2.75	1.12
8 largest beneficiary <i>départements</i>	2.87	1.75
12 largest beneficiary <i>départements</i>	2.83	1.33
20 largest beneficiary <i>départements</i>	2.60	1.12
72 other <i>départements</i>	1.50	0.37
the whole of France (92 <i>départements</i> )	1.74	0.54

*Sources and notes* : cf. Tables 2 and 3. Author's calculations.