

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

DROUGHT WATER SAVING PROGRAM

Objectives and Impacts

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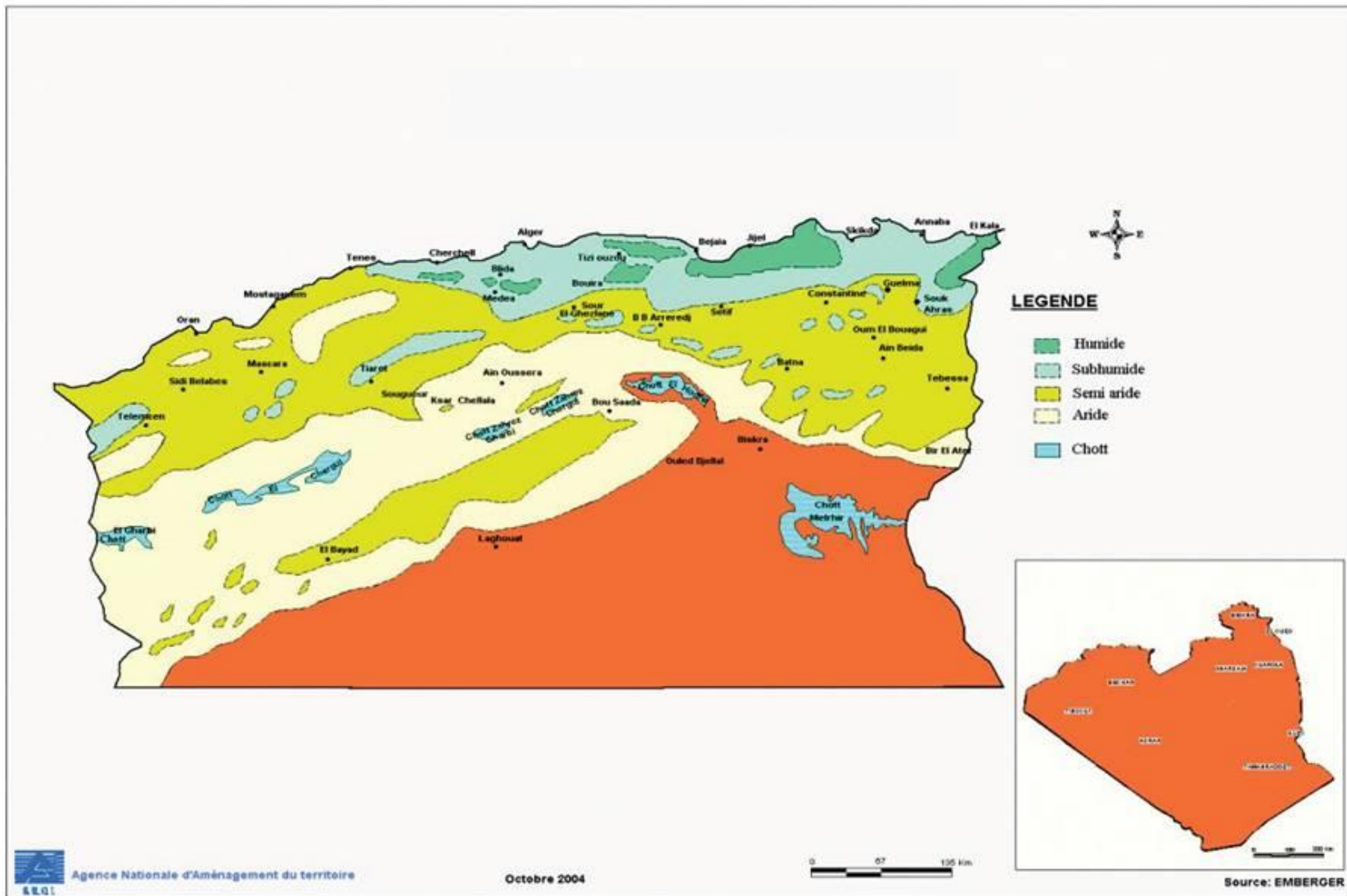


Figure 1 : Bioclimatic

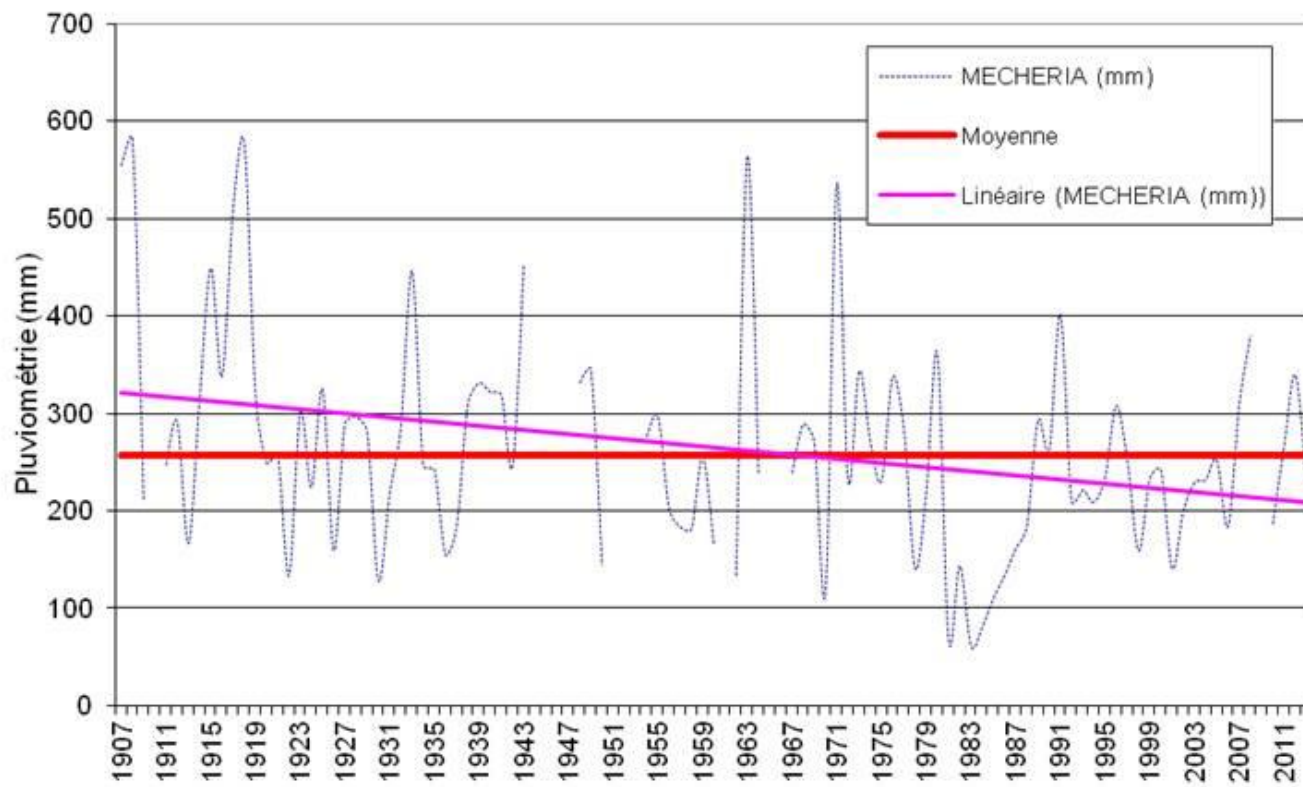


Figure 2. Evolution of rainfall in an arid station south of Oran.

PROGRAM OF AGRICULTURAL AND RURAL RENEWAL



WATER SAVING

- ✓ Fundamental component of Agricultural and Rural Renewal Program.
- ✓ It is a transversal program compared to other components.
- ✓ It is an inter-sectorial program.

Why this program?

- *Arid and semi-arid country, agricultural development strongly influenced by irrigation, scarcity and non regular distribution of rainfall and domination of rainfed agriculture (90%).*
- *Country characterized by a population growth rate thus make essential the increase of agricultural productivity to ensure food security.*
- *Water resources very sensitive to weather variations.*
- *Potential soil resources weakened by the aggressiveness of natural phenomena (limited natural resources).*
- *Agriculture has become highly strategic than other sectors.*

WATER SAVING PROGRAM

The water saving program is an operational plan for implementation of the Hydro-agricultural development strategy, ensuring the consistency of inter-sectorial actions around the fundamental goal of improving food security.

This program will ensure the achievement of objectives to rationalize the use of water for agriculture, a fundamental prior in securing the national production system that is fundamentally based on rainfall.

It aims to:

- ↳ The rational use of existing water resources.
- ↳ Preservation of natural resources (water and soil).

Objectives of Water Saving Program, adapted to the context of natural resources

"Water - soil" :

- 1/ To **Develop** water saving systems, the extension and conversion of existing gravity systems;
- 2/ To **Promote** the potential of unconventional water;
- 3/ To **Preserve** the producing field and the environment.

Objectives translated into indicators of evolution:

- **Increase** in irrigated area to achieve 2 million hectares at the end of 2019, with a new extension of 900 000 ha;
- **Valuation and preservation** of existing water saving systems for an area of 518 505 ha (Sprinkler: 284 321 ha and Drip: 234184 ha);
- **Generalization** of saving water systems for a new area of 1 000 000 ha, representing 50% of the irrigated land.

Objectives translated to food security, by:

Including, a production system to:

- *Secure a cereal production by irrigation for a target of **600 000 ha**;
(Notably, supplemental irrigation and total irrigation for cereal in Southern region);*
- *Develop an intensive olive crop for a target of **1 million ha**;*
- *Develop irrigated fodder crops for a target of **200 000 ha**;*
- *Develop a strategic vegetable crops.*

Environmental, social and especially economic impacts, to achieve:

- *Considerable water saving (**an average dose of 6 000 m³/ ha / year**);*
- *Satisfaction of the objectives of the performance contracts (increase of agricultural production) of **70%**;*
- *A security of national agricultural production systems, the irrigated area will represent **20%** of useful agricultural land;*
- *A rationalization in the use of natural resources.*

And irrigation water need by 2019:

- For an irrigated area of **2 million hectares** at the end of 2019,
- and for developing a water saving systems for **one million ha**.



For an average dose of **6 000 m³/ha/year**, the development of the proposed irrigated area will require a theoretical volume of water to use of **12 billion m³** to provide from conventional and unconventional waters.

The Situation of irrigation

*Irrigated areas has been only **350 000 ha in 2000** to increase to **1119 259 ha at the end of 2013**, with a gain of **750 000 ha in irrigated areas**.*

This is due mainly to efforts and boosted dynamic, in particular by simplifying the procedures for the water resources mobilization for the small and medium hydraulic and the introduction of new irrigation techniques such as drip, and this also to the support systems by the state, particularly in supporting the achievement of mobilization works, pumping equipment and irrigation water saving equipment to the field.

Tools needed for the water saving program:

- *Technical and scientific support (stakeholders);*
- *Training, information, entertainment, awareness and extension;*
- *Inter-sectorial coordination and consultation (central and local);*
- *The support of the State (different devices);*
- *Monitoring - evaluation (Indicators of evolution);*
- *Strengthening and adapting the regulatory framework;*
- *The promotion for the development of water-saving systems;*
- *Support for the organization of water users for its rationalization and management;*
- *Awareness for the use of unconventional water resources;*
- *Valuation and exploitation of small dams;*
- *The development of supplemental irrigation of cereals;*
- *Assistance in setting up irrigation projects;*
- *The explanation of technical references related to irrigation ... Etc.*



THANKS

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