



# P3A



## Support Programme for the implementation of the Association Agreement Algeria-EU

### **Twinning Project Fiche**

**Project Title:** “Support to the modernisation and capacity building of the National Agency for Hydraulic Resources (ANRH)”

**Beneficiary administration:** National Agency for Hydraulic Resources (ANRH), Ministry of Water Resources (MRE)  
People's Democratic Republic of Algeria

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**TWINNING INSTRUMENT**

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## **List of acronyms**

ABH	Hydrographic Basin Agency*
ADE	Algerian Water Company*
AFD	French Development Agency*
AfDB	African Development Bank
AGIRE	National Agency for Integrated Water Resources Management*
ANBT	National Agency for Dams and Transfers*
ANCC	National Agency for Climate Change*
ANRH	National Agency for Hydraulic Resources*
BC	Beneficiary Country
BNEDER	National Office for Rural Development Studies*
CL	Component Leader
DAPE	Directorate of Sanitation and Environmental Protection*
DBMS	Database Management System
DEAH	Directorate of Studies and Hydraulic Facilities*
DGF	General Directorate of Forests*
DPAE	Directorate of Planning and Economic Affairs*
DPH	Hydraulic Public Domain*
DRE	Water Resources Directorate*
ENSH	National Superior School of Hydraulics*
EPA	Public Administrative Body*
EPIC	Public Industrial and Commercial Institution*
EU	European Union
EUD	European Union Delegation
EWS	Early Warning system
FNE	National Water Fund*
GIS	Geographic Information System
GPEC	Jobs and Skills Management Planning*
HR	Human Resources
INSID	National Institute of Soils, Irrigation and Drainage*
INSPIRE	Infrastructure for Spatial Information in the European Community
MAO	Mostaganem-Arzew-Oran (seawater desalination)*
MENA	Middle East North Africa
MRE	Ministry of Water Resources*
MS	Member State
ONA	National Office of Sanitation*
ONID	National Office of Irrigation and Drainage*
ONM	National Office of Meteorology*
OVI	Objectively Verifiable Indicator
P3A	Support Programme for the implementation of the Association Agreement*
PDARE	Master Plan for Water Resources Management*
PL	Project Leader
PMH	Small and Medium Hydraulics*
PNE	National Water Plan*

PPQ	Qualitative Protection Perimeter*
PPRI	Flood Risk Prevention Plan*
PSI	Public Service Information
PSC	Project Steering Committee
P&L	Profit and Losses
RTA	Resident Twinning Advisor
SEAAL	Algiers Water and Sanitation Company*
SDG	Sustainable Development Goal
SNDA	National Sanitation Development Plan*
SOP	Standard Operation Procedure
STE	Short Term Expert
SWIM	Sustainable Water Integrated Management
UNCCD	United Nations Convention to Combat Desertification
UGP	Programme Management Unit*
WFD	Water Framework Directive

*NB: Acronyms with \* were left in French language.*

This is a translation of the official version written in French with the goal of having a wider distribution and in case of discrepancy between the French and the English, the French version shall prevail.

## **1 GENERAL INFORMATION**

### **1.1 PROGRAMME**

Support programme for the implementation of the Algeria-European Union Association Agreement: P3A-IV (ENI / 201740250). Financing Decision No ENI / 2017 / 040-250 - Indirect management with ex-ante control.

*[For British applicants: Please be aware that eligibility criteria must be complied with for the entire duration of the grant. Applicants from the United Kingdom: If the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article 12.2 of the General Conditions of the Grant Agreement]*

### **1.2 TWINNING SECTOR**

Environment (water and sanitation) EN

### **1.3 EU FUNDED BUDGET**

€ 1.000.000

## **2 OBJECTIVES**

### **2.1 OVERALL OBJECTIVE**

Support the Ministry of Water Resources for a sustainable management of water resources integrating the risks due to climate change (drought, floods).

### **2.2 SPECIFIC OBJECTIVE**

Support the modernisation of the ANRH in order to reinforce its public service missions and develop its service delivery activities related to the knowledge of water and soil resources.

### **2.3 RELATED STRATEGIC DOCUMENTS**

#### **2.3.1 Strategic Framework**

This twinning project specifically refers to Article 52 of the Association Agreement (AA) concluded on 22 April 2002 between the People's Democratic Republic of Algeria and the European Union (EU), which states:

“The Parties shall encourage cooperation in preventing deterioration of the environment, controlling pollution and ensuring the rational use of natural resources, with a view to ensuring sustainable development and guaranteeing the quality of the environment and the protection of public health.”

Paragraph 2 of the same article states that “cooperation shall in particular focus on:

- issues related to desertification;
- rational water resource management;

- salinization;
- The impact of agriculture on soil and water quality.”

Similarly, the roadmap for the implementation of the AA adopted at the end of the first Association Committee meeting (Algiers, 16 September 2008) indicates in Annex 1:

“Environmental protection: deepen cooperation in key sectors, such as water and marine environment, deepen cooperation in the field of the environmental governance: strengthen cooperation in the implementation of multilateral environmental agreements, in particular in the fields of climate change and protection of marine environment and the Mediterranean coastline: cooperation on regional initiatives of common interest, such as Horizon 2020.”

On 31 August 2015, Algeria officially requested an evaluation of the AA, which led to the adoption of new partnership priorities at the 10th Association Committee meeting held in Brussels on 13 March 2017. These new priorities include the environment and sustainable development:

“In the field of the environment, the parties undertake to promote a sustainable management of their resources, particularly water, good governance, the integration of good environmental practices into all their activities, the impact assessment system and better access to information.”

The activities included in the twinning project will contribute to meeting these objectives of cooperation between the People's Democratic Republic of Algeria and the EU.

### **2.3.2 Contribution to the implementation of the government's action plan**

The ANRH with its expertise and its data base relating to water resources is a key contributor in building infrastructures for mobilization and distribution of water resources, as well as in carrying out prospective studies aimed at ensuring population safety and agriculture sustainability with mid and long term water availability, including large water transfers from Albian aquifer to the highlands region.

The strengthening of the ANRH fits perfectly into the reform axes of the Government’s Action Plan<sup>1</sup> relating to drinking water supply and connection to sewerage networks (Chapter 2, Part 4) as well as further development of basic infrastructures for mobilization and distribution of water resources (Chapter 3, Part 3).

### **2.3.3 National guidelines**

Water has become a major concern for the country, a social, cultural and above all economic issue and consequently a national political issue.

The main strategic focuses of the water resources sector in Algeria are based on:

- improving knowledge of resources;
- mobilising as many conventional and unconventional resources as possible;
- interconnections between the dams in order to compensate the spatial flow variability, and the misallocation of resources;
- continuing the ongoing programme of major regional transfers;

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<sup>1</sup> Government’s Action Plan for the Implementation of President of the Republic’s Programme, May 2014, updated September 2017.

- securing drinking water supply to coastal zone populations through desalination of seawater;
- establishing instruments for good governance and better water management (institutional, legal and organisational reforms, modernisation of management instruments, public-private partnership);
- guarantying a better access to sanitation;
- improving the efficiency of drinking water supply and irrigation networks by rehabilitating the networks;
- fighting against pollution;
- developing large irrigated perimeters and small and medium hydraulic systems;
- implementing water transfer projects for agricultural purposes.

Many of these orientations, directly concern the ANRH as a central body for knowledge about surface water and groundwater resources in both quantitative and qualitative terms, knowledge of major water-related risks such as drought, floods and pollution, as well as the impact of climate change on water resources.

The main strategies of the water sector are developed in:

- The National Water Plan (PNE) updated in 2010 as part of the EAU I programme and then in 2016 by the AGIRE;
- The National Sanitation Development Plan (SNDA) implemented as part of the EAU II programme in 2015;
- The National Flood Control Strategy implemented as part of the EEA II program in 2015.

The ANRH is at the crossroads of other national strategies, such as the one defined by the National Drought Control Plan, supported by the United Nations Convention to Combat Desertification (UNCCD) and to be subject to a validation workshop in June 2019. An implementation phase will follow, during which each institution concerned will put in place the means to assume the role assigned to it in the overall system.

The proposed twinning is an opportunity providing a response to the need to strengthen the ANRH in line with these national priorities.

## **3 DESCRIPTION**

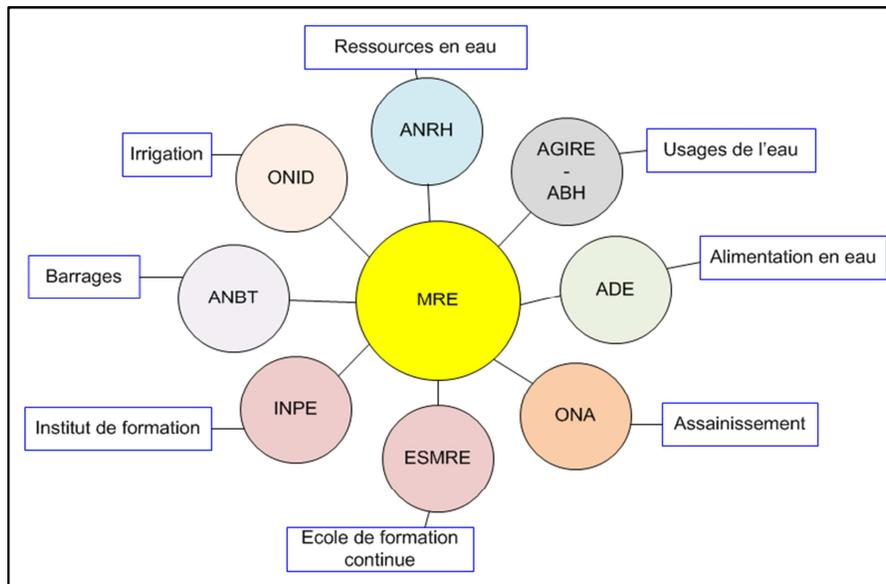
### **3.1 BACKGROUND AND RATIONALE**

#### **3.1.1 The ANRH within the Ministry of Water Resources**

The ANRH is one of the eight public bodies<sup>2</sup> under the supervision of the Ministry of Water Resources (MRE).

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<sup>2</sup> The other public bodies under supervision are the Algerian Water Authority (ADE), the National Office of Sanitation (ONA), the National Office of Irrigation and Drainage (ONID), the National Institute for the Improvement of the Equipment (INPE), the School of Water Resources Management (ESMRE), the National Agency for Integrated Water Resources Management (AGIRE) integrating the 5 Hydrographic Basin Agencies (ABH).



The ANRH and the other public bodies under the supervision of the MRE: ANRH : Water resources, AGIRE-ABH : Uses of water, ADE : Water supply, ONA : Sanitation, ESMRE : Continuous training, INPE : Training institute, ANBT : Dams, ONID : Irrigation

The MRE shares some responsibilities with the Ministries responsible for Environment, Health and Home Affairs respectively, which also have public service missions, particularly in the field of control and monitoring of water quality and the environment.

### Executing agencies

For the implementation of the water policy, the MRE has three national agencies, whose main role is to ensure the conduct of all the operations of studies and/or implementation. They have Public Administrative Body (EPA) status or Public Industrial and Commercial Institution (EPIC) status:

- The National Agency for Hydraulic Resources (ANRH), responsible for the inventory of water resources and irrigable lands, periodic monitoring of resources in terms of quantity and quality and the protection of water resources;
- The National Agency for Dams and Transfers (ANBT), in charge of two main missions: acting as Contracting Authority for study programmes and construction works for dams and water transfer infrastructures, the operation and maintenance of dams;
- The National Office of Irrigation and Drainage (ONID) is acting as Contracting Authority for study programmes and construction works of irrigation and drainage infrastructures and is responsible for operation and maintenance of large irrigation perimeters.

### Management agencies

In 2001, the MRE undertook a reorganisation of the sector, based on centralization of drinking water distribution and urban sanitation. It resulted in the creation of three national organisations with EPIC status:

- Algerian Water Company (ADE), responsible for the management of drinking water production and distribution throughout the country, delegated role of Contracting Authority, and the regulation of the activity of drinking water subsector. ADE, which has the public water services monopoly, has set up joint ventures with private companies to manage the service to large cities;

- The National Office for Sanitation (ONA) has missions equivalent to those of the ADE for urban sanitation and wastewater treatment;
- The National Agency for Integrated Water Resources Management (AGIRE) created in 2014 and responsible for carrying out at national level all actions contributing to an integrated management of water resources. The State may entrust to the AGIRE the delegated role of Contracting Authority for projects contributing to integrated water management;
- Five Hydrographic Basin Agencies (ABH) cover territories of several watersheds. Created in 1996 these five agencies are currently under the authority of the AGIRE and in principle financed by fees for water quality and water saving. They are responsible for managing the information system at the river basin level through the establishment and updating of databases and geographic information tools; contributing to the drafting, evaluation and updating of sector-based development plans at the watershed scale; collecting the fees established by the legislation and regulations in force.

#### *Training institutions*

- The National Institute for Equipment Improvement (INPE) is an EPA created in 2002 with the task of assisting, counselling and informing administrations, structures and public institutions of the water resources sector to identify their training needs and provide training, development and retraining;
- The School of Water Resources Management (ESMRE) is an EPIC created in 2010 to ensure through continuous training a public service mission contributing to the managerial and technical capacities development in the field of water resource management.

### **3.1.2 Presentation of the ANRH**

The National Agency of Hydraulic Resources (ANRH) was created by Decree No 81-167 of 25 July 1981 in the form of public administrative institution with a scientific and technical vocation (EPA).

#### *Role and missions of the ANRH*

The main mission of the ANRH is to conduct the inventory programmes of the country's water resources and irrigable soils, collecting, maintaining, processing and archiving all information relating to water resources and irrigable soils. The ANRH has a major role for the development of the water sector, being at the upstream stage of all studies and achievements. In particular, it provides basic data for structures design (dams, hollows, bridges, etc.), derived from its networks for the observation of rainfall and flows in oueds (rivers).

The missions of the ANRH are precisely defined in its creation decree.

#### *In the field of groundwater:*

- Inventory of the country's groundwater resources,
- Design, install and manage groundwater monitoring networks,
- Prepare hydrogeological maps,
- Maintain the underground resource balance and their use,
- Ensure the qualitative and quantitative conservation of groundwater resources.

#### *In the field of surface waters:*

- Design, install and manage a hydro-climatological network for the development of the national water balance,
- Process, format and disseminate hydro-climatological data,
- Conduct general methodological studies of hydro-climatic regimes for the purpose of the inventory of surface waters,
- Conduct hydrological studies related to surface water resource mobilization developments,
- Study hydrological phenomena on experimental basins, such as erosion, runoff, infiltration, evapotranspiration,
- Establish and manage a flood-forecasting network.

*In the field of irrigation and drainage:*

- Conduct an inventory of soil resources to be developed through irrigation and drainage,
- Determine and map the hydrodynamic characteristics of irrigable soils,
- Study the cropping aptitude of irrigated soils,
- Study the crop water requirements as well as the irrigation and drainage parameters for the development of irrigation and drainage projects;
- Study the evolution of soil and surface water salinity in irrigated perimeters and provide information on their protection and safeguarding.

*In the field of water, laboratories are responsible for:*

- Meet the needs of chemical, biological and bacteriological analysis,
- Promote a program of study and control of pollution,
- Participate in the development of the technical data needed to define drinking water standards,
- Participate in the development of the technical data necessary for the establishment of water treatment and purification projects.

### *Technical means of the ANRH*

To carry out its missions the ANRH develops and manages several observation networks:

- for quantitative monitoring of surface water resources, the ANRH has a national network of hydro-climatological measures consisting of 800 rain gauge stations, 200 bucket rain stations and 220 hydrometric stations. This network, largely composed of conventional equipment, is in the process of modernisation with the recent acquisition of 100 automatic hydrometric stations.
- for the qualitative monitoring, allowing if necessary to fight against the water pollution, the ANRH also has 7 laboratories across the country (Algiers, Constantine, Oran, Blida, Ouargla, Adrar and Djelfa) with an annual capacity of 40,000 water samples. These units make it possible to respond to the various requests for chemical, bacteriological and hydro-biological analyses, in particular the implementation of a superficial and underground water quality-monitoring programme for 13 watersheds out of the 17 existing ones.
- for the monitoring of surface waters (oueds and dams), the ANRH has 109 quality monitoring stations covering all dams and main oueds.

The ANRH operates a national groundwater quality-monitoring network with 550 monitoring points. These are sampled once every 3 months for physic-chemical analysis, including conductivity and nitrogen elements, and twice a year for heavy metals.

The ANRH laboratories are also responsible for responding the needs of chemical, physical and thermal analyses of soils, as part of its statutory missions or at the request of clients such as the

National Office for Rural Development Studies (BNEDER) attached to the Ministry of Agriculture.

### **3.1.3 Issues and challenges**

#### *Organisational, managerial and commercial capacity building*

The government (transition from EPA to EPIC status, see 3.2 On-going reforms) has decided the statutory reorganisation of the ANRH. Such an evolution represents a major change for the ANRH, its managers and its staff. The ANRH, while remaining under the supervision of the MRE, will have to adopt a mode of operation and management identical to those of a company, including a commercial dimension to integrate; the Agency will have to satisfy not only the “users” of a public service but also the customers having the possibility to address competing consultancies. It is likely that this change will generate internal resistance, for example because the civil servants will lose the benefits of the existing status.

The organisation of the ANRH will have to evolve and integrate functions that do not exist today such as marketing, sales, communication or audit and management control. The ANRH will have to move from a personnel management to a real human resources management, taking more into account the notion of skills to revitalise its operational departments and put in place strong supporting functions at their service.

#### *Technical capacity building*

The needs for technical capacity building are important and they are the subject of numerous requests from various central departments and regional offices. In addition to a general need for refurbishment and modernisation of equipment, the ANRH's expertise in its core business, in the networks for hydro-climatological, hydrogeological and water quality monitoring and in soil knowledge must be upgraded.

The ANRH needs to be strengthened in the use of modern tools and methods of analysis, such as groundwater table models, models for the determination of flood flows of oueds or software for the calculation of depth of runoff (rain-flow modelling). The use of remote sensing must be developed in hydrogeology to support the establishing of groundwater inventory maps and in pedology for soil maps and agricultural hydraulics. Increased competencies in these tools are crucial namely for phreatic tables, such as the one of Mitidja, which supplies Centre-North of Algeria and which is overexploited and polluted by industrial waste.

Reinforcement needs exist on targeted technical subjects:

- hydrogeology: well logging methods,
- hydrology: measurement of solid transport,
- pedology: diagnosis and rehabilitation of degraded soils, land use, sizing of irrigation and drainage networks, building skills in modelling the evolution of soil salinization.

The water and soil laboratories also express needs for the maintenance of their equipment and training in the use of modern methods and equipment to improve productivity and quality, leading to ISO 9001 certification and ISO/IEC 17025.

#### *Integration of climate change effects*

In a context where extreme weather events are becoming more frequent and violent, it is important to have reliable and timely information on the impact of climate change on water resources, particularly in order to protect people and property (reminder of the tragic events of Bab El Oued in 2001, Ghardaïa in 2008...).

In the fight against floods, the ANRH is the main actor in the improvement of risk knowledge, the basis of the entire strategy through the acquisition and analysis of data and information, development of hydrological, hydraulic and solid transport studies, and flood risk mapping. The ANRH is responsible for the development of flood risk prevention plans (PPRI) for the 689 sites identified as flood risk areas as part of the flood control strategy, essential for the reduction of vulnerability. The setting up of a flood early warning system (EWS), in relation with other actors such as the ONM within the framework of the organisation set up by the National Delegation for Major Risks, is an initiative, which is totally part of the ANRH's missions. In the current situation, however, the ANRH is having difficulties to meet the requirements resulting from the setting up of flood warning devices. Nevertheless, this is an opportunity for the agency, as this type of mission is subject to public service constraints and justifies a subsidy. As the organisation in charge of the flood warning is not currently designated, the focal point remains the MRE. In addition to a clear definition of its role in flood protection, the ANRH needs technical support to initiate optimal actions in setting up and managing flood-monitoring systems: for instance, Mekerra Oued, in the wilaya of Sidi Bel Abbes, which is currently under a rehabilitation project against domestic waste, through elimination of sewage rejection points. This pollution involves water stagnation, which increase flood risks in case of river swelling.

The same requirements exist for drought. The implementation of the drought risk management strategy involves the implementation of a "drought EWS" in which the ANRH must play a role. This role is devoted to ANRH, because of its data and expertise but its competences must be upgraded through new methodologies (indicators) and through a better distribution of roles between stakeholders (Ministry of Agriculture ...) and with the necessary means.

## **3.2 ONGOING REFORMS**

### *Regulatory framework and developments*

Several laws related to water and environmental sectors, or other sectors, are directly relevant to the ANRH's activities. These laws are sometimes rather old, but the legal text to apply the laws (decrees ...) are often quite recent or even in development.

**Law No. 05-12 of 4 August 2005** on water, amended and supplemented by Law No. 08-03 of 23 January 2008, aims to establish principles and rules applicable to the use, management and sustainable development of water resources in water management (as a resource) and in flooding. From this law arise several executive decrees<sup>3</sup> such as:

- Executive Decree No. 10-01 of 4 January 2010 on the Master Plan for Water Resources Management and the National Water Plan;
- Executive Decree No. 09-399 of 29 November 2009, defining flood forecasting instruments,
- Executive Decree No. 08-326 of 19 October 2008, laying down the procedures for the organisation and operation of the integrated water information management system

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<sup>3</sup> To date 47 implementing texts have been published

- Executive Decree No. 07-399 of 23 December 2007, on perimeters for the qualitative protection of water resources.

In the field of flood prevention and management: **Law No. 04-20 of 25 December 2004** on the prevention of major risks and disaster management in the context of sustainable development. In addition, one of its application decrees: executive decree No. 11-194 of 22 May 2011 on the organisation and operation of the National Major Risks Delegation allowed framing the actions with regard to this major theme.

**Law No. 90-30 of 1 December 1990**, amended and supplemented by Law No. 08-14 of 20 July 2008 related to the estate law, defines the composition of the national domain as well as the rules of its constitution, management and control of its use. It is important in this analysis because it contains some rules that influence the policy on flooding and protecting water resources. Some regulatory provisions deriving from this law have a direct impact on the prevention and management of floods; in particular, it concerns Executive Decree No. 12-427 of 16 December 2012 which purpose is to lay down the conditions and procedures for the administration and management of the public and private property of the State. Article 16 states that riverbeds and vegetation within their boundaries, which are integral parts of the natural hydraulic domain, must be delimited in accordance with the conditions, forms and procedures defined by this decree. The minister in charge of the management of the natural hydraulic public domain, in consultation with the local authorities competent in the matter, draws up an inventory of the dependencies of the natural hydraulic public domain of each wilaya and establishes an annual programme of delineation of these dependencies according to the priorities. Article 16 stipulates that the limits of the watercourses be fixed by decree of the territorially competent “Wali”

#### *Change in status of the ANRH*

The decree reorganizing the status of the ANRH of 29 April 2019 was published in the official journal of 8 May 2019. The purpose of this decree is to establish the Agency as a public industrial and commercial institution (EPIC). The public service tasks of the Agency are fully retained; as such, the draft decree provides that ANRH receives from the State, for each financial year, a subsidy in return for the public service obligations imposed.

The objective of the change is to provide the agency with greater management autonomy and greater flexibility to cover a substantial part of its costs through the marketing of services. This change in status also aims to make the ANRH's mode of operation more flexible and allow it to have access to the means necessary to carry out its missions, in particular to replenish its skill base, making the institution more attractive.

### **3.3 RELATED ACTIVITIES**

#### *EU support*

EU support to the water and environment sectors is of direct interest to the ANRH.

EU regional programme Clima-Med ([www.climamed.eu](http://www.climamed.eu)) launched in 2018 sustains transition of eight EU South Neighbourhood partner countries, out of which Algeria, towards sustainable, low carbon and climate-resilient development. With a total budget of € 6.9 million, fully provided by the European Union (ENP), Clima-Med aims at reinforcing climate change governance, by supporting sustainable climate and energetic policies, promoting sustainable energy access,

facilitating climate investments. The focal point Algeria is the Ministry of Environment, while the Ministry for Water Resources is part of the National Coordination Group of Clima-Med.

The Water Resources Sector Support Program (EAU I and EAU II) contributed to the development of national strategies. Most of these works are of direct concern to the ANRH; we can mention in particular:

- Update of the National Water Plan (PNE) in 2010
- Guide for the implementation of the Decree of 23 December 2007, concerning perimeters for the qualitative protection of water resources
- National Sanitation Development Plan (SNDA) carried out in the framework of the EAU II programme in 2015
- National Flood Control Strategy carried out under the EAU II programme in 2015.

The present Twining Project will take care in following-up activities of these programmes namely through the implementation of PPQ (Qualitative Protection Perimeter).

The Support Programme to Environmental Sector Policy (PAPSE, 2014-2017), conducted with the Ministry of Water Resources and the Environment, focused on common themes with the water sector: flood prevention, ecosystem protection, adaptation to climate change. The ANRH was particularly involved in Part 3 regarding integrated management at the level of watersheds of the Algiers coastal region: strengthening the state of conservation of biodiversity; improvement of integrated waste management, reduction of industrial pollution and extension of cleaner technologies; taking into account climate change in coastal development.

Two twinning projects were implemented for the organisation of the water and sanitation sector within the framework of the Support Programme for the Implementation of the Association Agreement between Algeria and the EU (P3A):

- Support to ADE to improve water quality control, lasting 18 months (2011-2012), between ADE and the Walloon Water Company (SWDE) of Belgium. In particular, this twinning enabled ADE to benefit from training of the central laboratory and the regional laboratories staff in the latest analytical techniques, to develop and deploy a computer program for the management of samples and implement new procedures for water quality management and production and distribution crisis management. It also resulted in the validation and publication of a quality policy and the premises of an accreditation to ISO /IEC 17025 currently underway for the Algiers Central Laboratory,
- Governance and integrated management of water resources in Algeria for 24 months (2017-2019), between the AGIRE and a group of Belgian companies: Public Service of Wallonia (SPW), Walloon Water Company (SWDE) and Public Company of Water Management (SPGE).

It is worth mentioning a twinning in the preparation phase: “Institutional Support for the Strengthening of Technical Capacity of the National Office of Meteorology (ONM)”. Scheduled to last 24 months (2020-2022), this project has the specific objective of strengthening the technical, commercial, managerial and institutional capacities of the ONM to contribute to the improvement of weather and climate information, as well as to expand the services in offer to interested parties. This twinning is likely to concern the ANRH at the level of the component

integrating support for strengthening institutional cooperation on the theme of early warning system (EWS).

The Sustainable Water Integrated Management (SWIM) programme, amounting to 22 million euros, is implemented at the regional level with partner countries: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, occupied Palestinian territories, Syria and Tunisia. Algeria receives funding from the WADIS-MAR Regional Demonstration Project, “Water harvesting and Agricultural techniques in Dry lands: an Integrated and Sustainable model in Maghreb Regions”, with a budget of 2.7 million euros. Conducted in coordination with the University of Cagliari (Italy), with the participation of the ANRH, the OSS and the Arid Regions Institute (Tunisia), this project focuses on the artificial recharge of groundwater tables, with the Algerian region of Biskra as a pilot area. The overall objective is to improve the standard of living of the rural population in the arid and semi-arid areas of the Maghreb, where scarcity of water contributes to the process of desertification.

The ANRH Twining Project will contribute to the sustainability of the results achieved in previous programmes implemented through EU funding (EAU I, EAU II, SWIM, AGIRE twinning and ADE).

#### *Other international cooperation programmes for the benefit of the ANRH*

The water sector has also benefited from the support of other international donors or bilateral cooperation. Among the various contributions, can be quoted:

The UNDP / RAB 89/003 Regional Project: Current Water Resources Management Technologies in the Maghreb and Mashreq Countries (1996);

Improving the performance of the ANRH (GTZ, 1997): this project included the introduction of modern technologies of investigation and management as well as modern management methods to the ANRH.

The study of pollution phenomena in the “Mitidja” basin and the Geographical Information System on water and soil resources in the HABRA / SIG region, under French cooperation (BRGM, 1997);

The integrated water resources management plan - Algiers coastal basin. GIRE Programme Algiers 02A for the benefit of the MRE (Belgian Technical Cooperation, 2009-2013);

Support for monitoring the implementation of the water-related SDGs, ongoing (UN / MRE);

The SASS Projects, dealing with the “Northern Sahara Aquifer System”: SASS I (2001), SASS II (2006) and SASS III (2014), aiming at the establishment of a common information system and a permanent consultation mechanism between the three countries concerned by the terminal continental aquifer. The ANRH was the focal point of the projects:

The CREM Project “Regional Cooperation for the Sustainable Management of Water Resources in the Maghreb”, a regional cooperation project conducted in partnership with the OSS, GIZ and the Federal Institute of Geosciences and Natural Resources (BGR) and the ANRH as focal point of the project (2018).

The SIDA Program, a project to implement the 2030 Program for Water Efficiency / Productivity and Water Sustainability, which is part of the Water Scarcity Initiative in the MENA region countries (FAO funding). The expected result is the empowerment of MENA region countries at the technical, institutional and policy levels to implement their water sustainability, food security, renewable energy and climate resilience programme, and to achieve the SDGs related to water (in progress);

The study of water valuation through a participatory and integrated approach in small and medium hydraulics (FAO financing, in progress);

The project to set up a Geographic Information System for the benefit of the National Agency for Hydraulic Resources (ANRH, in progress), financed by a grant from the African Development Bank (AfDB). It aims at the following main objectives:

- Structuring all data relating to water resources in a single repository allowing information exchange;
- Adapting the ANRH current organisation to ensure the proper functioning of the information base;
- Implementing a geographic information system (GIS) to facilitate actions and interventions for decision-makers and managers of water resources,
- Launching and implementation of the GIS.

The improvement of executives' capacities in the preparation of the conjuncture note, in progress, on French Agency of Development (AFD) financing, and associating the National Institute of Improvement of the Equipment (INPE). The objective is the improvement of executives' capacities in the preparation of the conjuncture note, emitted each semester by the Directorate of Planning and Economic Affairs (DPAE) and concerning the relevant data of the Ministry of the Water Resources to use it as an analysis and planning tool for the Algerian authorities.

### **3.4 LISTS OF THE PROVISIONS OF THE EU ACQUIS / APPLICABLE STANDARDS**

Algerian regulations on water quality are currently based on the old French system from 1970s. In recent decades, the water quality assessment system has evolved considerably in Europe. In particular, the European Water Framework Directive (WFD) (2000/60/EC) establishing a framework for a Community water policy introduced the concept of water body. According to this European directive, the general expression of the state of a surface water body is determined by the worst value of its chemical and ecological status. In its missions to conserve water resources, the ANRH could benefit from the knowledge of the European Union. The WFD establishes a framework for a Community water policy. The objective of this directive is to recover the good chemical and ecological status of surface water (rivers, lakes, transitional waters, coastal waters) and the good quantitative and chemical status of groundwater by 2015. In accordance with the requirements of the WFD, Member States must have networks for monitoring the chemical, biological and hydro-morphological status of groundwater bodies, coastal bodies and watercourses.

The ANRH is expected to play an important role in the National Flood Control Strategy under the flood warning and flood risk knowledge. Concerning the knowledge of flood risks, the European Directive 2007/60/EC on the assessment and management of flood risks presents a flood risk approach that can be applied to the Algerian context:

- preliminary flood risk assessment for the identification of areas of high potential risk;
- development of flood hazard maps (probability, flow and extent of potential floods) and flood risk maps (adding potential impacts to the above);
- development of flood risk management plans (including measures to reduce the likelihood or impact of floods);
- update flood risk management plans every 6 years.

Finally, the public sector holds significant amounts of data: geographic, meteorological, hydrological, educational, economic and social data, etc. The reuse of public sector information stimulates economic growth and is an asset for the development of new technologies. European legislation on public data policy (INSPIRE Directive 2007/2/EC, PSI Directive 2003/98/EC and revision 2013/37/EU) aims to develop data access, reuse and interoperability, but do not seek to harmonize the access systems which fall within the national competence of the Member States. This is an example of good practice to be transposed to the ANRH and which seems appropriate to be integrated into the twinning.

### **3.5 RESULTS BY COMPONENT**

The project includes three (03) mandatory results:

#### **3.5.1 Result 1: the ANRH has a strategic plan, an organisation and a management system adapted to statutory evolution, and its managerial and business development capacities are strengthened both at central and regional level**

##### *Objective*

The objective of this component is to support the ANRH in its change of status, which constitutes an important evolution in terms of organisation, operations, management and culture to acquire in order to develop its activity on a business level. The twinning will seek to develop, through this component, the managerial skills of the agency's managers, particularly those called to take up positions of responsibility, by training them in management methods and by implementing, in a collaborative manner, a strategic planning approach involving central and regional executives. Field knowledge within the regional branches will bring a valuable contribution for the formulation of modernisation needs (equipment, staffing) and business development objectives.

The twinning will contribute to the repositioning of the ANRH on a revitalisation and development trajectory aligned with the strategy of the MRE. The ANRH, like its supervising ministry, needs a multi-year visibility on the resources that can be generated by its commercial services, and on the support to be brought by the State. A financial support will remain necessary both to ensure a proper functioning of the agency and to carry out its modernisation: for upgrading of the technical means, (measuring networks and laboratories whose condition has declined, but also information and telecommunication systems, transport means and buildings) and preventing staff turnover.

The ANRH must develop a marketing and communication strategy to convince customers to use its services in a competitive market, particularly in the field of water and soil analysis. The support brought by the twinning in the marketing and commercial field will allow defining a reasonable objective of commercial revenues, with a breakdown by region.

The ANRH needs to adapt its organisation, its operation scheme and its workforce to its new status and its strategic priorities, seeking to improve its operational efficiency and customer satisfaction. The agency must have a management and steering system adapted to a greater management autonomy at global and regional level. The twinning will support the development of more competency-based human resource management.

Finally, the ANRH needs to improve its image and promote its service offering by developing its external communication, and its internal communication as a support to change management.

##### *Targeted intermediate outcomes (among others)*

- The ANRH has visibility of its 5 years trajectory,
- The organisational scheme of the ANRH is harmonised with its status and missions,
- The regulatory framework regarding the missions, organisation and financing of the ANRH is adapted in collaboration with the services of the ANRH,
- The modernisation of the management and control system is framed,
- The implementation of a true skill-based HR management is initiated,
- The ANRH internal and external communication is improved,
- The managerial and commercial capacities of the ANRH's executives are strengthened.

### **3.5.2 Result 2: Upgrading requirements for ANRH data acquisition, processing, archiving and provisioning systems are defined; implementation is planned and started.**

#### *Objective*

The networks of hydro-climatological, piezometric, superficial, and underground water quality observations have lost much of their coverage and reliability, mainly because of the non-replacement of official or contractual observers leaving and the non-payment of contractual observers, which has led to numerous spatial and temporal gaps in the surveys. Thus, in the western region, less than 25% of the hydrometric station park is still operational and the high water gauging was not carried out in recent years, making the determination of the flow rates obtained from the water heights rather random. Regarding the monitoring of groundwater tables, the current piezometric network remains very limited compared to the number of aquifers to follow and even so, only a part of the piezometers is still monitored.

The inventory of groundwater tables was done regularly every 5 years, but these measures have not been done since 2005 because of the lack of human and material resources. This inventory allowed obtaining a precise location of the sampling points, exploited groundwater levels, mean water flows and physicochemical characteristics of the water, also allowing the identification of chemical facies variations that could reveal overexploitation.

According to the ANRH, the monitoring network for the quality of surface water is insufficient to monitor the quality of watercourses. It should be noted that the ANRH monitors the quality of the dams on behalf of the ANBT, but they are not all monitored.

Finally, the Pedology Division and its decentralized services at regional level have produced a lot of information on soils (structural and physicochemical data) but the lack of resources currently available means that these prospecting activities have stopped. All the data are supposed to be archived in the databases set up by the BRGM in 1998; the GIS ANRH project integrates the migration functions of these databases into the new database.

The initial objective, following a diagnosis of the observation networks, is to put the main stations back into service: thus operating them regularly and obtaining a level of data production meeting the reliability criteria of international standards by identifying and quantifying the needs for upgrading the hydrometric, climatological, piezometric and water quality sampling station fleets (equipment, interconnection) and specifying the conditions for sustainable operation (recruitment of observers, maintenance teams).

Regarding the archiving of data, the ANRH GIS project should meet the need for an integrated database, but it will be necessary to evaluate if the functionalities of the system to be implemented meet all the needs of a database of this scale. The data processing tools will either be integrated in the ANRH GIS or developed in external modules. An audit of the future data archiving system is necessary to foresee the addition of supplementary necessary modules and to identify applications to be developed for the dissemination of the data.

In addition, the ANRH laboratories must be upgraded, targeting in the mid-term an accreditation, given that some competing laboratories have already reached this level (SEAAL) or are in the process of being accredited (ADE-ONA). The ANRH is probably still a long way from being able to apply for accreditation, but it must be prepared by training in the quality approach, defining the steps to be taken to achieve accreditation according to the ISO 17025 standard.

*Targeted intermediate outcomes (among others)*

- The need to upgrade the observation networks are defined and translated into cost action plans,
- The needs for upgrading water and soil analysis laboratories are defined and translated into cost action plans,
- The ANRH integrated database functionally meets the needs of internal and external user data access conditions are defined and formalised with the main institutional partners,
- The ANRH executives and laboratory staff are trained in the quality approach and prepared to start an accreditation process.

**3.5.3 Result 3: The technical and scientific capacities of the ANRH are strengthened to better meet the expectations of the institutions using the ANRH services and to widen the range of services**

*Objective*

The aim is to return to a level of excellence as a scientific and technical institution of reference in the field of water resources and soils, knowing on the one hand that for many years few engineers and technicians have benefited training, on the other hand that the level of expertise of the agency has deteriorated somewhat due to the non-replacement of voluntary departures or retirement. An upgrading of scientific and technical skills is a corollary of the status change, to expand the range of products and compete with engineering firms and other laboratories in the field of water. The ANRH must position itself beyond the role of a data provider, by adopting a logic of value-added service providing. The twinning will bring a wealth of experience and practical know-how from a twin institution in some areas where the ANRH teams have expressed a need for capacity building, such as the development of model methodologies for hydrology, pedology, flood zones or warning.

*Targeted intermediate outcomes (among others)*

- The modelling skills of hydrology and hydrogeology teams are strengthened and tested.
- The ANRH is able to fully assume its role as a Contracting Authority for the development of PPRIs,
- The ANRH affirms its role in the implementation of PPQs,
- The conditions for deploying a flood EWS are specified and tested,
- The methodology and the role of the ANRH in a drought EWS are specified and tested,
- Scientific and technical skills of ANRH are upgraded on specific topics.

### **3.6 MEANS/INPUT FROM THE EU MEMBER STATE (MS) ADMINISTRATION(S)**

#### **3.6.1 Profile and tasks of the PL**

The Project Leader (PL) from the EU Member State (MS) should be a high-ranking responsible state employee, or an employee from a mandated body, able to conduct a dialogue at a political level. His level of responsibility will enable him to mobilize among the Member State administrations, or stakeholder institutions, the Short Time Experts (STEs) with the appropriate profile to carry out the efficient implementation of the Twinning and to provide the required solutions to solve any difficulties encountered during the execution of the project.

Profile of the PL:

- high level university degree or equivalent professional experience for at least 8 years,
- a minimum 3 years professional experience in a field connected to water resources.

The PL:

- will collaborate with his Algerian counterpart to guarantee the steering and coordination of the whole project,
- will spend at least 3 days per month on the project, with a field visit to co-chair with his counterpart within the beneficiary institution the quarterly steering committees,
- is in charge, in relationship with the BC PL, of the good delivery to the PAO of the quarterly reports and the final report of the project (and to submit a copy of these documents to the EU Delegation in Algeria),
- is an essential actor in establishing sustainable links between the beneficiary institution and similar institutions within UE.

#### **3.6.2 Tasks and responsibilities of the Resident Twinning Advisor (RTA)**

The RTA is a civil servant (in activity or retired for less than 2 years) or the employee of a mandated body.

The RTA must have:

- university degree or equivalent professional experience for at least 8 years,
- at least a 3 years specific experience in a field connected to water resources management or in a neighbouring subject,
- significant prior experience in project management,
- proven ability in communication and interpersonal skills.

Excellent skills in spoken and written French would be an asset. The RTA must be a manager, previously in charge of responsibilities within a similar organisation, and having preferably taken part to a project of administrative reform. A previous experience in steering international or EU funded projects would be an asset.

The RTA is in charge of the daily implementation of the twinning project. In particular, in relationship with the MS PL, the BC PL and his/her counterpart, the RTA:

- ensures the achievement of the work plan and project activities, respecting targeted results, budget and calendar as they were established.
- coordinates and mobilises the STE, verifies the good quality of their work

- provides the necessary information for the preparation of the administrative documents as described in the Twinning Manual (side letters, contract amendments if any, payment requests and the project budget tracking)
- prepares or contributes to the inception, quarterly and final reports;
- organises the initial, mid-term and closing conferences of the project; prepares the media materials following UE rules.
- organises or co-organizes the steering committees, in close collaboration with the MS PL and the BC PL as well as with his counterpart.

The RTA actively contributes to the implementation of the twinning; the RTA will involve himself especially in the twinning activities relative to the statutory evolution of the ANRH (component 1) and will provide to the general management any useful advices and assistance to impulse and steer cultural and operational adaptations of the ANRH, which the twinning wishes to establish as a reference institution in the water supply sector.

### **3.6.3 Profile and tasks of Component Leaders**

For each of the three results, a Component Leader (CL) will be designated. This key expert will be in charge to guarantee the coordination and the good execution of the component activity concerning him, in close collaboration with the RTA.

The CLs are involved in short duration missions during the implementation phase; they contribute to the construction, the implementation and the actualisation of the work plan, as well as to the coordination of the STE team mobilised on the subject concerning them. They provide the RTA the information needed for reporting. If needed, they can take part to the PSC (Project Steering Committee)

For component 1, the CL will have:

- an engineer degree or an equivalent diploma; or a 8 years equivalent professional experience
- at least a 3 years specific experience in public management

For component 2, the CL will have:

- an engineer degree or an equivalent diploma; or a 8 years equivalent professional experience
- at least a 3 years specific experience in the sector of observation networks (ground or surface waters)

For component 3, the CL will have:

- an engineer degree or an equivalent diploma; or a 8 years equivalent professional experience
- at least a 3 years specific experience in the sector of water resources studies

### **3.6.4 Profile and tasks of the main short time expert**

MS will mobilise a team of Short Time Experts (STEs), as needed by the good implementation of the Project.

The general profile of STE is the following:

- engineer degree or equivalent diploma, or a 8 years equivalent professional experience

- at least a 3 years professional experience in the domains listed in the following table
- pedagogical skills, allowing the transfer of knowledge and the sharing of experience

**Training, qualification and experience of STE (non-exhaustive list):**

Result	STE skills
<p><b>Result 1 :</b> <i>The ANRH has a strategic plan, an organisation and a management system adapted to its statutory evolution, and its managerial and business development capacities are strengthened both at central and regional level</i></p>	<ul style="list-style-type: none"> <li>• Strategic planning in the water supply domain</li> <li>• Marketing / commercial</li> <li>• Communication, with water supply knowledge</li> <li>• Human resource and organisation</li> <li>• Engineering of training</li> <li>• Managerial Information System</li> <li>• Management control</li> <li>• Law, in the water supply sector</li> </ul>
<p><b>Result 2 :</b> <i>Upgrading requirements for ANRH data acquisition, processing, archiving and provisioning systems are defined, implementation is planned and started</i></p>	<ul style="list-style-type: none"> <li>• Hydrology</li> <li>• Hydrogeology</li> <li>• Pedology</li> <li>• Metrology</li> <li>• Water analysis</li> <li>• Ground analysis</li> <li>• Data base administration, with global knowledge of the activity</li> <li>• Data doctrine</li> <li>• Quality norms ISO 9001 / 17025</li> </ul>
<p><b>Result 3 :</b> <i>The technical and scientific capacities of the ANRH are strengthened in order to better meet the expectations of the institutions using the ANRH services and to widen the range of services</i></p>	<ul style="list-style-type: none"> <li>• Hydrology modelling</li> <li>• Hydrogeology modelling</li> <li>• Specialist in flood risk prevention plans</li> <li>• Specialist in water resource protection scope</li> <li>• Specialist in flood prediction</li> <li>• Specialist in drought prediction</li> <li>• Specialist in climatic change effects</li> <li>• Well logging interpretation</li> <li>• Remote sensing and hydrology / hydrogeology / pedology appliances</li> <li>• Role of Contracting Authority</li> </ul>

## **4 BUDGET**

The maximum budget available for this Twinning Project is € 1.000.000.

## **5 IMPLEMENTATION ARRANGEMENTS**

### **5.1 IMPLEMENTING AGENCY RESPONSIBLE FOR TENDERING, CONTRACTING AND ACCOUNTING**

The implementing agency responsible for procurement and financial management is the Programme Management Unit of the Support Programme for the Implementation of the Association Agreement (UGP3A).

**The UGP** is located:

Palais des expositions, Pins Maritimes, Mohammadia – Algiers

Tel: 213 23.79.50.01 / +213 23.79.50.02

Fax: +213 23.79.50.03

Website: [www.p3a-algerie.org](http://www.p3a-algerie.org)

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Mr **Abderrahmane SAADI**, National Programme Director P3A

National Contact Point Twinning, TAIEX and Sigma in Algeria

E-mail: [abderrahmane.SAADI@p3a-algerie.org](mailto:abderrahmane.SAADI@p3a-algerie.org)

Any request for clarification on these terms of reference should be sent exclusively to UGP-P3A and by mail only using the mail address indicated in the publication notice.

### **5.2 INSTITUTIONAL FRAMEWORK**

#### *Beneficiary institution*

The beneficiary of the twinning project is the National Agency for Hydraulic Resources (ANRH).

The organisation of the ANRH is detailed in Annex 2, including information on staff repartition by category (executive/supervisory staff/worker), gender and site.

Besides the Central Departments, the twinning activities will mobilize representatives from each of the seven Regional Directorates and even from some sectors.

#### *Other institutions involved in the twinning*

The implementation of some twinning activities may involve other institutions, like the following ones (non-exhaustive list, to be updated when developing the working plan):

- The Ministry of Water Resources (MRE), more specifically the DEAH (Directorate of Studies and Hydraulic Developments, supervising the ANRH), the DAPE (Directorate of Sanitation and Environment Protection, in charge of the implementation of the strategy for the control of flooding) and potentially some DRE (Water Resources Directorates, representing the MRE in the 48 wilayas)

- Other institutions under the supervision of the MRE, in particular the AGIRE (National Agency for Integrated Water Resources Management), the ANBT (National Agency for Dams and Transfers), the ONA (National Office of Sanitation) and the ONID (National Office of Irrigation and Drainage)
- Possibly the ANCC (National Agency for Climate Change), under the supervision of the Ministry of Environment, if its contribution is potentially worthwhile during the implementation
- The DGF (General Directorate of Forests), the BNEDER (National Office for rural development studies) and the INSID (National Institute of Soils, Irrigation and Drainage), under the supervision of the Ministry of Agriculture
- The ONM (National Office of Meteorology), under the supervision of the Ministry of Public Works and Transport
- The Civil Protection, under the supervision of the Ministry of the Interior
- The ENSH (National Superior School of Hydraulics)

### **5.3 COUNTERPARTS IN THE BENEFICIARY ADMINISTRATION**

The ANRH will make available to the project all human and material resources necessary for the implementation and for the success of the twinning.

#### **5.3.1 Contact Person**

Name and function: **Ms Hammouche Hassina**, Director of Cooperation, MRE

Address: 03, Rue du Caire, Kouba, Alger

#### **5.3.2 PL counterpart**

Name and function : **Mr Mesrati Toufik**, General Director of ANRH

The Twinning Project Leader for the Algerian part will work in close cooperation with the MS PL to regularly monitor the progress of the Twinning activities and provide the necessary support to ensure the good conducting of the project. He will co-chair the quarterly Steering Committees of the Twinning project with the MS PL.

#### **5.3.3 RTA counterpart**

Name and function : **Mr Amrane Tahar**, Head of Operations Service, Div. Hydrogeology

The RTA counterpart will ensure the daily coordination of the Twinning activities with the RTA and the link between the staff involved in the project within the Beneficiary administration and the MS experts. He will ensure the availability of Algerian counterparts during the programming of the STE missions and keep track of the progress of the tasks to be done by the beneficiary during the implementation of the work plan.

#### **5.3.4 Other national experts**

A person from the beneficiary institution is designated to act as an interface with each MS component leader and provide the necessary support for the achievement of the related result, in close collaboration with the RTA counterpart

*Component 1: The ANRH has a strategic plan, an organisation and a management system adapted to its statutory development, and its managerial and commercial capacities are strengthened both at central and regional level*

Name and function: **Ms Khelifati Hassiba**, Director of Administration and Resources

*Component 2: Upgrading requirements for ANRH data acquisition, processing, archiving and provision systems are defined; implementation is planned and started*

Name and function: **Ms Khiati Djida**, SIG Project Leader

*Component 3: The technical and scientific capacities of the ANRH are strengthened in order to better meet the expectations of the institutions using the services of the ANRH and to widen the range of services*

Name and function: **Mr Djettou Rachid**, Head of Modelling and Cartography Service, Div. Hydrogeology

## **6 MANAGEMENT AND REPORTING**

### **6.1 LANGUAGE**

The official language of the project is the one used as the contractual language of the instrument (English/French).

All official communications regarding the project, including interim reports and the final report, will be done using the contractual language.

### **6.2 STEERING COMMITTEES**

A Project Steering Committee (PSC) supervises the implementation of the project. Its main tasks are to verify the progress and the achievements of the project in relation to the mandatory results and the linked objectively verifiable indicators, to ensure an effective coordination among stakeholders, to finalize interim reports and to discuss the updated work plan.

### **6.3 REPORTING**

Two types of reports are planned for the twinning: the quarterly interim reports and the final report, consisting of a descriptive part and a financial part. The descriptive part mainly reviews progress and achievements in relation to the mandatory results, formulates specific recommendations and proposes corrective measures to be considered to ensure the achievement of objectives. Quarterly interim reports are presented for discussion at each PSC meeting.

## **7 SUSTAINABILITY**

The twinning will reinforce the institutional anchoring of the ANRH by proposing texts aiming to integrate the recommendations provided by the project (organisation, missions and financing of the ANRH, measures related to early warning systems...) within the regulatory framework related to the water sector, with the support of the MRE.

The strengthening of professional capacities, in particular through training of trainers who will relay to ANRH managers and staff the know-how transmitted by the experts, as well as the EU best practices transferred to the beneficiary, will provide them with an expertise that will be used beyond the duration of the twinning project.

## **8 CROSS-CUTTING ISSUES**

### *Gender equality*

The Algerian state encourages the promotion of women to exercise responsibilities in institutions, public administrations and enterprises.

Gender equality is a fundamental principle applied within the ANRH. The breakdown of ANRH staff (see table in Annex 3) shows a strict parity in the category of managers / engineers, which is the one targeted by skills development activities to be developed within the twinning.

### *Democracy, good governance and the rule of law*

The water resources sector is directly concerned with issues related to good governance and the rule of law. The MRE and the institutions under its supervision form the institutional mechanism for the implementation of the human right to water, which consists of sufficient, physically accessible, affordable and safe water of acceptable quality for personal and domestic uses of each individual.

The ANRH is the upstream link of the supply chain of water to the populations, regardless of where they live in the territory and which community they belong to. By helping to improve the performance and quality of the ANRH services, both at central and regional levels, the project contributes to democracy, good governance and the rule of law.

The principle of equal opportunities will be integrated into all phases of the project during its implementation according to the Human Rights Based Approach.

### *Environment*

Algeria has signed on to the United Nations 2030 Agenda for Sustainable Development. The environment is the common foundation for each of the 17 sustainable development goals (SDGs) defined for this program. The water resources sector is coordinating the implementation of the SDGs linked to water, especially SDG 6 «Ensure access to water and water sanitation for all ».

A sector Monitoring and Evaluation Committee for SDGs has been set up at the Ministry of Water Resources. The ANRH is one of 14 permanent members and is heavily involved in the follow-up of SDG 6, especially the following targets:

- 6.3: improve water quality
- 6.4: substantially increase water-use efficiency
- 6.5: implement integrated water resources management
- 6.6: protect and restore water-related ecosystems (ANRH designated as lead agency)

By improving the capacities of the ANRH, this twinning contributes to environment protection through a support to the progress of SDG 6 targets.

During the implementation phase, the twinning project will ensure compliance with environmental standards, especially during the stage of drafting new legislative texts.

## **9 CONDITIONALITY AND SEQUENCING**

The drawing up of the work plan will take into account the activities planned or achieved in the framework of other EU funded initiatives, especially “Specific Actions” (light technical assistance projects specific to Algerian context) put in place before or during the twinning project.

Necessary coherence and coordination is to be ensured between this twinning project and the one to be launched to the benefit of the ONM, regarding activities dealing with early warning systems; each project aims at clarifying the role of the beneficiary institution within a multidisciplinary platform for early warning.

In addition, the result of the first component will consolidate sub-results from the other components regarding the development of the ANRH modernisation plan (action plans to upgrade observation networks and laboratories) or proposals for new regulatory texts (for example for the establishment of flood risk prevention plans).

The sequencing of activities during the implementation of the twinning will consider this conditionality.

## **10 INDICATORS FOR PERFORMANCE MEASUREMENT**

OVI 1.1: proposals for new regulatory texts developed and validated by the MRE

OVI 1.2: 5 years business plan developed and validated by the ANRH Steering Board

OVI 1.3: increase in commercial revenues to reach a level of at least 15% of the P&L

OVI 1.4: 30% of technical and support occupations formalized in a job repository

OVI 1.5: at least 40 ANRH managers trained in managerial and commercial techniques

OVI 2.1: existence and reliability of data entered in the ANRH GIS for 80% of the measuring stations fleet (hydro-climatological, piezometric and water quality networks)

OVI 2.2: at least 50 % of the automatic hydro-climatological stations fleet is in operation

OVI 3.1: methodologies for updating surface and underground water resources models developed for four types of models

OVI 3.2: recommendations from the EU Flood Directive have been adopted for the definition of flood risk prevention plans (PPRI)

OVI 3.3: a workshop bringing together the different stakeholders on the theme of perimeters of qualitative protection (PPQ) is organized by ANRH

OVI 3.4: a methodological guide for setting up a flood warning system is developed

OVI 3.5: ANRH’s role regarding early warning systems for flood and drought is clearly defined and transcribed into draft regulatory texts

OVI 3.6: at least 40 ANRH executives and engineers have been trained and apply new recommended scientific methods

## **11 FACILITIES AVAILABLE**

The beneficiary administration will provide the RTA and its assistant with a fully equipped office (workstation with basic office software, multifunction printer, and good quality internet connection) as well as offices, meeting and training rooms for STEs.

## 12 ANNEXES

### ANNEX 1: LOGICAL FRAMEWORK

Project title : Support to modernisation and capacity building of the National Agency for Hydraulic Resources (ANRH)	Reference :	Duration of the project: 24 months	Budget : Euros 1 000 000
Overall Objective	Objectively Verifiable Indicators	Sources of verification	
Support the Ministry of Water Resources for a sustainable management of water resources integrating the risks due to climate change (drought, floods).	Contribution to the progress of SDGs related to water resources (SDG 6 and its targets)	Reports from the SDG Monitoring and Evaluation Sector Committee within the MRE (of which the ANRH is a member) Website of MRE	
Specific Objective	Objectively Verifiable Indicators	Sources of verification	Hypothesis
Support the modernisation of ANRH in order to reinforce its public service missions and develop its service delivery activities related to the knowledge of water and soil resources.	Improved user satisfaction with the data and services produced by the ANRH  At least four (4) data-sharing agreements with state institutions are defined and signed	Satisfaction surveys of users of data and services produced by the ANRH (public sector institutions, private bodies, the general public with regard to water quality or major risk management) Website of MRE Documentation from the twinning project (quarterly reports, final report) data-sharing agreements	Financial and regulatory support of the MRE  Involvement of ANRH teams, particularly in regional branches  Involvement of stakeholders and institutional partners

Results	Objectively Verifiable Indicators	Sources of verification	Risks	Assumptions
<p>Result 1 : <i>The ANRH has a strategic plan, an organisation and a management system adapted to its statutory evolution, and its managerial and business development capacities are strengthened both at central and regional level</i></p>	<p>OVI 1.1 : proposals for new regulatory texts developed and validated by the MRE</p> <p>OVI 1.2 : 5 years business plan developed and validated by the ANRH Steering Board</p> <p>OVI 1.3 : increase in commercial revenues to reach a level of at least 15% of the P&amp;L</p> <p>OVI 1.4 : 30% of technical and support occupations formalized in a job repository</p> <p>OVI 1.5 : at least 40 ANRH managers trained in managerial and commercial techniques</p>	<p>Regulatory and Litigation Directorate of MRE</p> <p>Documentation from the twinning project</p> <p>Annual reports, financial statements, minutes of the ANRH Steering Board</p> <p>ANRH website and communication supports, training materials and evaluation sheet</p>	<p>Lack of political will for ANRH status evolving</p> <p>Lack of political stability</p> <p>Financing problems jeopardising ANRH modernisation</p>	<p>Resources and regulatory texts are in force and allow optimal functioning.</p> <p>Availability, attendance and stability of managers participating in the working groups and training sessions organized within the project</p>

*Twinning Project Fiche: Support to modernisation and capacity building of the ANRH*

Results	Objectively Verifiable Indicators	Sources of verification	Risks	Assumptions
Result 2: <i>Upgrading requirements for ANRH data acquisition, processing, archiving and provision systems are defined, implementation is planned and started</i>	<p>OVI 2.1 : existence and reliability of data entered in the ANRH GIS for 80% of the measuring stations fleet (hydro-climatological, piezometric and water quality networks)</p> <p>OVI 2.2 : at least 50 % of the automatic hydro-climatological stations fleet is in operation</p>	<p>Documentation from the twinning project</p> <p>Programmes, training materials and evaluation sheet</p> <p>Data base</p> <p>Ministry web site</p>	<p>Lack of financial means for recruitment and improve the management system.</p> <p>Lack of qualified staff for data collecting</p>	<p>Material and human resources exist for ground data collection.</p> <p>The ANRH GIS is operational.</p> <p>Availability, attendance and stability of managers participating in the working groups and training sessions organised within the project</p>

Results	Objectively Verifiable Indicators	Sources of verification	Risks	Assumptions
<p><i>Result 3 : The technical and scientific capacities of the ANRH are strengthened in order to better meet the expectations of the institutions using the ANRH services and to widen the range of services</i></p>	<p>OVI 3.1 : methodologies for updating surface and underground water resources models developed for 4 types of models</p> <p>OVI 3.2 : recommendations from the EU Flood Directive have been adopted for the definition of flood risk prevention plans (PPRI)</p> <p>OVI 3.3 : a workshop bringing together the different stakeholders on the theme of perimeters of qualitative protection (PPQ) is organized by ANRH</p> <p>OVI 3.4 : a methodological guide for setting up a flood warning system is developed</p> <p>OVI 3.5 : ANRH's role regarding early warning systems for flood and drought is clearly defined and transcribed into draft regulatory texts</p> <p>OVI 3.6 : at least 40 ANRH executives and engineers have been trained and apply new recommended scientific methods</p>	<p>Methodological guides developed in working groups.</p> <p>Documentation from the twinning project Presentation materials and report of conclusion of the workshops</p> <p>Programmes, training materials and evaluation sheet</p>	<p>Lack of involvement of stakeholders.</p> <p>Lack of staff availability.</p> <p>Lack of political will to implement proposed measures.</p> <p>Lack of political stability</p>	<p>Stakeholders are involved in the project.</p> <p>Authorities adopt new directives or other regulatory texts.</p> <p>Availability, attendance and stability of managers participating in the working groups and training sessions organised within the project</p>

## ANNEXE 2: ORGANISATION AND HUMAN RESOURCES OF THE ANRH

### 1/ Organisation of the ANRH

The inner organisation of the ANRH is defined by the inter-ministerial Order of August 9, 1987 (inter-ministerial decree).

The Executive Management includes 4 technical departments:

- Hydrogeology
- Hydrology
- Pedology
- Water and Ground chemistry, including the central laboratory

As well as 2 « support » Divisions:

- Means administration
- Computer and Planning
- 

The following table details the Services and Sections of each Division:

Division	Service	Section
Hydrogeology	Inventory of groundwater tables	Water source Data
		Inventory of groundwater tables
	Methodological studies and cartography	Cartography
		Methodological studies
	Groundwater exploitation	Water table protection
Works		
Hydrology	Measurement and experimentation network	Water measurement network
		Experimental measurement and maintenance
		Topography
	Hygrometry	Gauging
		Analysis
		Calibration and directory
	Climatology	Climatological network
		Climatological data management
		Climatological studies
	Hydrological studies and forecast	General studies and forecast
		Specific studies
		Hydrology of small catchment areas
	Pedology	Ground resources
Soils Inventory		
Agricultural waters		Studies and measures
		Agricultural water experimentation
Ground and water chemistry	Water chemistry	Fundamental analysis
		Sewage analysis
	Normalisation studies	Studies
		Special and hydrobiological analysis
		Instrumentation management
	Ground chemistry	Chemical analysis

Division	Service	Section
		Physical analysis

Department	Service	Section
Means administration	Law and workforce	Workforce management
		Law
	Finance and accounting	Operating and equipment budget
		General accounting
		Markets
	General means	Buy and supply
		Estate management
		Workshop and maintenance fleet
	Computer and planning	Programming and documentation
Documentation and outreach		
Data management development		Computing studies
		Support and normalisation
Operations		Operations
		Systems and maintenance

Besides the headquarters, the ANRH includes seven (7) regional Branches, managing 31 Sectors covering the national territory.

Regional Branch	Sector
Centre (Blida)	Alger
	Chlef
	Médéa
	Khemis Miliana
	Koléa
	Tizi-Ouzou
	Sour El Ghozlane .
West (Oran)	Tlemcen
	Oran
	Mascara
	Relizane
East (Constantine)	Jijel
	Batna
	Annaba
	Tébessa
	Chechar
	Constantine
	Bordj Bou Arreridj
High steppic plains (Djelfa)	Djelfa
	M'sila
	Aflou
	Laghouat
South - West (Adrar)	Béchar
	Tindouf

Regional Branch	Sector
South - East (Ouargla)	Touggourt
	Ghardaïa
	Biskra.
Chott Echergui and Chott el Gharbi (Saïda)	Tiaret
	Saïda
	El Abiodh Sidi Cheikh

## 2 – Human resources

Theoretically, ANRH's workforce is composed of:

- Civil servants : 702
- Other employees : 359
- Total : 1061

When a vacant position is not filled within the same year, ANRH loses the position. Since 2010, the ANRH can only replace the departure of a civil servant by another civil servant. Since 2015, the recruitments are blocked, except the engineer positions which can be replaced in case of retirement or death. Laboratories have lost a large proportion of their workforce since 2016.

Accordingly, the actual workforce is lowering constantly compared to the theoretical one. Nowadays, the actual workforce is composed of 697 persons, including around 400 civil servants.

Location	Executive		Supervisors		Worker		Total		
	Men	Women	Men	Women	Men	Women	Men	Women	Together
Headquarters	13	46	16	20	49	39	78	105	183
DRC	21	13	8	10	81	8	110	31	141
DRO	8	10	0	13	42	9	50	32	82
DRE	24	11	6	7	79	6	109	24	133
Djelfa	6	2	6	0	25	4	37	6	43
Ouargla	8	3	5	4	17	2	30	9	39
Adrar	10	6	5	2	17	5	32	13	45
Saïda	6	2	3	0	17	3	26	5	31
Total	96	93	49	56	327	76	472	225	697
	189		105		403		697		

Workforce detailed by location and by category