

FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES

TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Side event in the French
Water Pavilion:
Buffet lunch
17 March 2009
13h00-14h30



Renforcer
les compétences
pour mieux gérer
l'eau



FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

**Laurent STEFANINI, Ambassadeur
délégué à l'Environnement du
Ministère des Affaires Etrangères**

FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Training water professionals in the southern countries, certainly, but ...

- What is the demand? Who needs it most? What form should it take?
- Who needs it most?
- What form should it take?

FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Jean-Pierre ELONG MBASSI (Cameroun), Cités et gouvernements locaux unis d'Afrique

WATER & SANITATION FOR ALL IN DEVELOPING CITIES

A big challenge for the MDGs

- More than one out two urban people lives in a developing country
- 15 out the 20 biggest cities in the world are located in the developing countries
- The medium-sized cities in the developing countries have the highest population growth rate



WATER & SANITATION FOR ALL IN DEVELOPING CITIES

Some evolutions of the water utilities governance:

- Planning the drinking water and sanitation services in accordance with the city's global development plan
- Decentralizing to give more autonomy to the water utilities of each city



WATER & SANITATION FOR ALL IN DEVELOPING CITIES

For the “medium-sized” cities in developing or transitional countries, a key point: the management skills

- To extend access to these services to all
- To improve the technical, social, economic and financial sustainability of the services
- To adapt the services to the social context, by innovative management and operation



FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Yacouba KONATE (Burkina Faso), pour Projection, réseau de professionnels juniors

Le renforcement des capacités locales : Qu'est-ce que c'est selon les intéressés ?

Les constats :

Renforcement des capacités locales : une notion mal comprise sur le terrain, aux contours vagues et parfois fourre-tout.

Quand on leur demande, les acteurs de terrain hésitent ... puis évoquent surtout les formations, puis l'accompagnement

Dans la pratique : le plus souvent il s'agit de formations thématiques ponctuelles

Mais qu'en pensent les principaux intéressés ?

Projection

Réseau de
Professionnels juniors

Services essentiels
En milieu urbain
Pays en
développement

Quelles formes
pour le
renforcement
des capacités?



Les constats et enjeux relevés sur le terrain concernant les formations ...

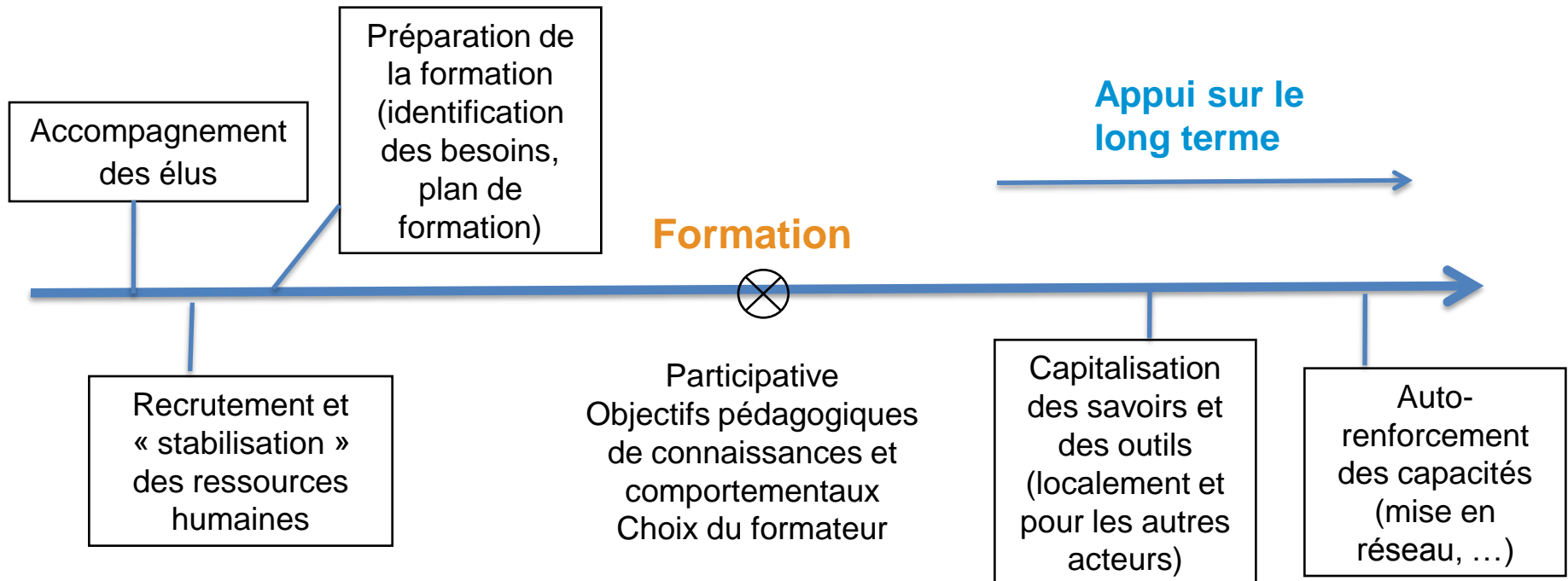


- **Standardisation** : ne correspondent pas toujours aux besoins locaux, sans application pratique et sans suivi
- **Multiplication des formations** : la quantité plus que la qualité ?
- **Savoir/ Savoir-faire** : des formations pour savoir mais pas toujours pour savoir faire ...
- « **Course à la formation** » : entretenue par la manne financière des parents, recherchée par les acteurs locaux (formateurs et apprenants) et par le besoin d'en faire des bailleurs de fonds (ligne budgétaire)
- **Logique de projet /de service public**

Des enjeux plus larges : fuite des cerveaux, aspect « soft », etc.

Des pistes d'amélioration

Pour être efficace et avoir un impact durable, la formation ne doit pas être pensée ponctuelle mais doit s'intégrer dans une dynamique avec une phase amont préparatoire et une phase aval de suivi



Local capacity building : what does it mean for the local stakeholders ?

Facts:

Local capacity building is a vague concept, misunderstood on the field.

When asked, field actors first hesitate... and then associate it mostly with punctual training and long-term support.

In practice : local capacity building is reduced to short training sessions, covering one specific theme.

Projection

Network of young professionals

Water, sanitation and waste management in urban areas of developing countries

What do the municipal technical services think about this concept ?

Quelles formes
pour le
renforcement
des capacités?



Training sessions in practice : facts and challenges

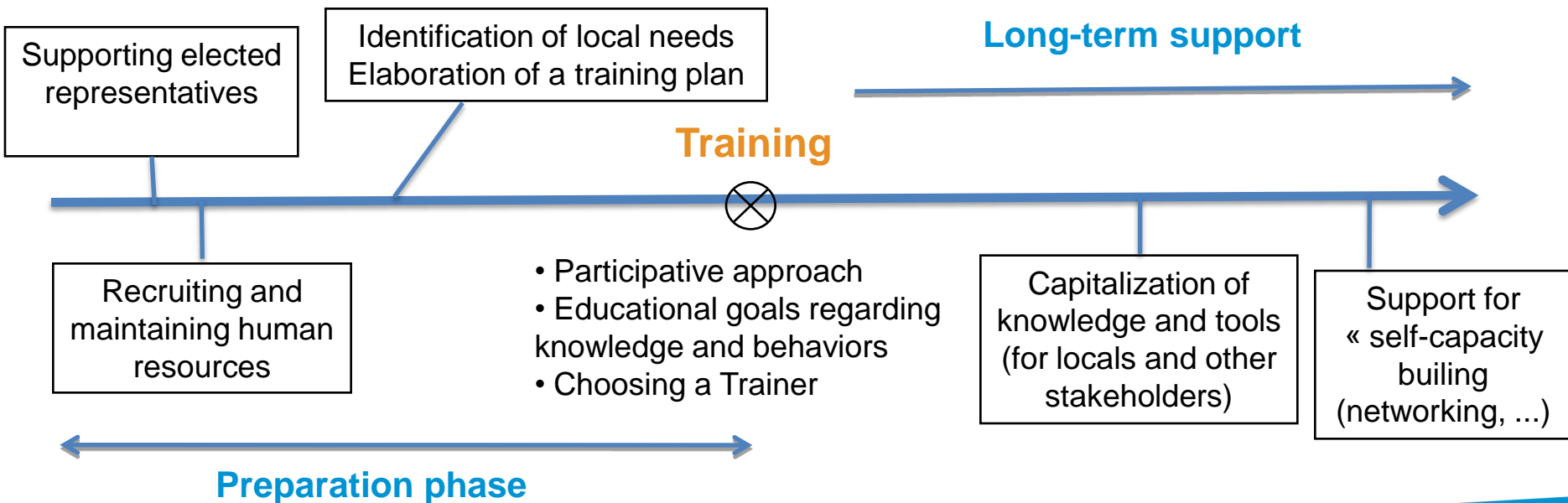


- **Standardized training sessions** : training sessions are not properly adapted to local needs. There is a lack of practical application and there is no monitoring.
- **Knowledge transfer** : Training sessions proposed are rarely a skills transfer (know-how) but mostly a knowledge transfer (know).
- **Number of trainings vs. quality** : takeholders are often more concerned about the number of training sessions rather than about their quality.
- **A race for trainings ?** : Are training sessions given / received for wrong reasons ? (need to spend a budget line / trainees looking for per diems)
- **Program approach vs. public service approach**

Broader challenges : avoid brain drain, etc.

Some proposals to improve efficiency

To be efficient in the long term, training should not be seen as punctual and must be part of a dynamic process with a preparation phase and a post training support and monitoring



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Samir BENSALD (Maroc), pour le Réseau International des Centres de Formation aux métiers de l'Eau



ENGAGÉS
POUR L'EAU
DU MONDE.

Diagnosing needs, sharing experiences and finding solutions: The benefits of a training centre network

The facts:

Many water treatment plants and sewer networks in emerging countries do not work well (e.g. bad design, badly run, inefficient usage, rapid degradation due to lack of maintenance)

To ensure that these infrastructures last and guarantee quality services, it is vital that a competent level of management, running and maintenance be developed at every level.



ENGAGÉS
POUR L'EAU
DU MONDE.

Diagnosing needs, sharing experiences and finding solutions: The benefits of a training centre network

The facts:

- All over the world, thousands of operators, technicians and managers need to be trained each year to run collective water services
- Local training skills need to be created or reinforced in the countries where they are needed.



ENGAGÉS
POUR L'EAU
DU MONDE.

An International Training Center Network with a shared commitment

Initiated by the International Office for Water (IOWater) and backed by the French Ministry for Foreign Affairs and the French Development Agency, the Constitutive Assembly of the new International Network of Water Training Centres – INWTC – was held in Paris on 19 & 20 November 2008



Founding members:

Algeria, Benin, Burkina Faso, France, Kenya, Laos, Lebanon, Mali, Mexico, Morocco, Poland, Togo, Tunisia, Uzbekistan, Vietnam



ENGAGÉS
POUR L'EAU
DU MONDE.



Shared objectives



What we want:

- To develop relationships and the exchange of experience and expertise,
- To reinforce awareness of the importance of training in the water sector,
- To strengthen relationships with the main funding bodies
- To promote training and innovating solutions
- To facilitate the creation of shared tools and teaching materials
- To support the setting-up of new training centres in the world,
- And more.

An International Training Center Network with a shared commitment

Join us!

www.ricfme.org
www.inwtc.org

For more information on the
network, its objectives and charter,
and planned projects.

contact@ricfme.org



FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

What's new in professional
training tools?

What financing?

FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Michel GUINAUDEAU, Master OPT de
Paris Tech de la chaire Eau pour tous

International Executive Master

OpT Eau pour Tous Water for All

A new, one-year programme of ParisTech
for the management of drinking water and sanitation services

Focusing on the medium-sized cities in
developing or transitional countries
Up to one million inhabitants

Addressing all future managers:
* public services or private companies
* operators, regulators, owners

Opened worldwide:
Taught in French (2009-10)
and English (2010-11)



International Executive Master

OpT Eau pour Tous Water for All

The programme helps developing the skills required
from managers of urban drinking and sanitation services:

- To understand the social and environmental setting of the services and to adapt methods and organization to better fit needs
- To secure the sustainability and the quality of the services and to manage crisis
- To master human resources management and communication techniques





International Executive Master

OpT Eau pour Tous
Water for All



For each trainee, a commitment about an individual mission ...



... from the employer:

To select and send a trainee

To appoint him for an individual mission



... from the trainee: to carry out the individual mission, generally the analysis of a water supply or sanitation service in his country



... from the educational team: To strengthen the trainee's management skills and to support him in his individual mission



International Executive Master

OpT Eau pour Tous Water for All

A programme based on two pillars:

Education: courses, case studies, etc
Most of the lecturers are field professionals

On-the-job tasks, with 3 work placements
(6 months out of 12):

- * 2 in the home country for the individual mission
- * 1 in a leading service

Each trainee is coached by a senior professional





International Executive Master

OpT Eau pour Tous
Water for All



A three-step programme which follows the phases
of the individual mission on a water or sanitation service

Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept
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Diagnostic

Strategic plan

Action plan

Work placements 





International Executive Master

OpT Eau pour Tous Water for All

 Location: ENGREF, intern post-graduate institute of AgroParisTech, at Montpellier in France 

 Deadline to apply:
15th of May 2009 for French 2009-10 session 
15th of May 2010 for English 2010-11 session

 Costs for the whole one-year programme:
Tuition fees: 15.000 euros
Travel, accommodation: around 16.000 euros 
Total cost : around 31.000 euros per trainee

International Executive Master

OpT Eau pour Tous Water for All

For more information and to send an application,
please contact :

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FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Annie COULANGE,
Société des Eaux de Marseille

EXAMPLES OF COMPETENCY TRANSFERS:

By Annie COULANGE, Human Resources & Training of Société des Eaux de Marseille

SOMMAIRE

-  Exporting a professional trade : leak detection 
-  Support towards the implementation of new technological tools 
-  Customized training program for the city of Oujda Authority (RADEEO) 
-  Immersion : on-the-job training with the operator 
-  Global performance improvement: water and sanitation management in Constantine 



Société des Eaux de Marseille: A Group specialized in environmental issues



60 years of experience supplying services to public and private contractors

2 500 employees, Turnover 2007 : 430 M €

Present in more than 80 communities in France (from which Marseille, 1 M Inhab.)

17 subsidiaries working on water, environment and specialized services, from which, 3 agencies abroad (Morocco, Tunisia, Algeria)



International activity: sharing our know-how

More than 25 years of experience in Latin America and the Mediterranean Region

An offer of turn-key services which stems from diagnosis, technical assistance, engineering, management contracts to competency transfer

An expertise recognized by the main international funding agencies: WB, IDB, AFD, EIB, KFW...



Competencies transfer and training:

L'Ecole des Métiers, the training center of the Group, registered as a training institution from 1992, ISO 9001 certified, a network of 80 internal trainers,

1.800 attendees, 80% professional trainings, 75% on-site trainings

EXPORTING A PROFESSIONAL TRADE: leak detection

A competency acquired and developed in Marseille

Expertise and know how

Quick repair of leaks: 2 leaks reported, localized and repaired each day

An adapted renewal policy: 20 km of networks renewed each year.

Setting up of preventive means



Pedagogical quality

Dedicated Training Centers

Practical training process in the field

Advanced classes on new tools

Trainer's training



International experience transfers

Since 1976 in Latin America and North Africa (Maghreb countries)

Algeria 2001-2006: 2000 leaks detected and training of technicians

Morocco: 15 years of services and training of performing local teams



EXPORTING A PROFESSIONAL TRADE: leak detection

A certified activity in Morocco exported towards other countries

Services and Technical Assistance to potable water network operators

(ONEP, Régies (Moroccan Water Boards) and private operators

Setting up of leak detection services

Organization of the department

Training on the use of the equipment

Training in the leak detection activity



Leak detection in other countries

Mauritania,

Algeria,

Gabon



Support towards the implementation of new technological management tools:

Information technologies and customer relationship management:

Deployment of the WAT-erp software

Awareness raising on the CUSTOMER concept

Setting up of customer reception structures (commercial agencies)

Training on customer reception (physical and phone)



GIS and Mapping, Network Operation and modeling, Remote monitoring:

Deployment of tools

Training on software and modeling

Introduction to remote meter reading

Crisis management

Adapting tools to the operators' needs

Exchanges with operational users

Benefiting from the operators' experience

Knowledge on interactions and information circuits



CUSTOMIZED TRAINING PROGRAMME: Updating and improving global competencies for the RADEEO (Water Board of Oujda, Morocco)

Goals :

Improvement of the technical staff's competencies

Putting in practice in the day-to-day activity

Awareness raising on safety issues and state of the art practices

Sharing of experiences on the use of trade dedicated tools



Players :

SEM and RADEEO: Exchanges on the topics, the population and evaluation

AFD (French Development Agency)

ONEP, OFPPT: Partnerships



CUSTOMIZED TRAINING PROGRAMME: Updating and improving global competencies for the RADEEO (Water Board of Oujda, Morocco)

Organization :

10 technical subjects related to potable water and sanitation

70 participants: technicians, specialists, proximity management

Training with professionals

Interactive modular pedagogy

Diversified training tools



Evaluation :

Immediate put in practice of new competencies

Group dynamics and cohesion

Positive attitude towards change

Transfer of practical experience



IMMERSION : On-the-job training with the operator

Understanding of the organization and the activity of an operator

Players :

Operations managers and decision makers

Partners: training organisms (OIEau, Universities...)

Organization :

Global approach : the whole operational and cross-functional departments of the organization

On-the-job real situations

Exchange of experience between water professionals

Integration inside operational teams

Demonstration of technical means in real context

Évaluation :

Strengthen relationships between professionals

Share practical issues

Mutual benefits and feedback

Enrichissement mutuel et retour d'expériences



GLOBAL IMPROVEMENT OF PERFORMANCES

Water and sanitation management in the Wilaya of Constantine

Main goal :

move towards the operator's independence having earned the capabilities and state of mind of a performing company

Contract in figures :

Duration : 5 years and 6 month (from 04/10/2008),

1,2 millions inhabitants, 3rd city of Algeria,

1200 employees appointed by ADE, ONA and the urban communities,

Network: 2000 km of sanitation and drinking water piping, 900 km of sewage water piping, treatment plants

Performance bond



Approach :

An organization set to encourage transfers: working in pairs, tutoring

Provision of expertise and technological tools

Acquisition of technical and managerial competencies, setting up of a training centre

Change management



THANKS FOR YOUR



FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Jean-François DONZIER,
Office International de l'Eau

TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT



- In water and wastewater utilities, training needs mainly concern middle management and workers (around 80% of staff)
- Continuous education is necessary for permanent adaptation to new techniques and skills, improvement of efficiency and trend towards quality certification
- Training should be very practical, based on the use of real size equipments and adapted training kits



International
Office
for Water

Training Infrastructures OIEau



30 000 m²
Technical training platforms



TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT

Training needs are very similar in water utilities around the world, and OIEau experience has been used in :

- Creation of Water Training Centres for Water in Poland, Mexico, Algeria, Saoudi Arabia
- Development of technical training halls and training of trainers
- Elaboration of training kits adapted to local context and language
- Setting up of the International Network of Training Centres for Water Professionals (RICFME)

POLAND

- ✓ Population: 38,600,000 (2002)
- ✓ Area : 312,683 Km²
- ✓ Context : Integration of Poland in European Union
- ✓ Financial support : European Programme and French Cooperation
- ✓ Feasibility Study : IOWater
- ✓ Institution : “Gdansk Water Foundation” created in 1995
- ✓ Initial Focus: Laboratory analysis, Wastewater Treatment
- ✓ Training Centre Capacity : 1 500 trainees /year
- ✓ Successful operation for 14 years



International
Office
for Water

POLAND



MEXICO

- ✓ Population: 103,400,000 (2002)
- ✓ Area : 1,972,547 Km²
- ✓ N° of Water Utilities : 970
- ✓ Water Utility in Mexico City : DGCOH (13,000 employees)
- ✓ Water Sector Staff: around 130,000
- ✓ Body in charge of water : CONAGUA
- ✓ Feasibility Study for setting-up a Training Centre : IOWater
- ✓ Architectural Project : IOWater + Mexican Architect
- ✓ Support : French Government + Mexican Authorities
- ✓ Launching of Centre in 2001, name : CEMCAS
- ✓ Training the trainers + Training materials : IOWater
- ✓ Training Centre Capacity : 3,000 – 3,500
- ✓ “Weakness”: Lack of financial mechanism for continuous education



International
Office
for Water

MEXICO



ALGERIA

- ✓ Population: 32,278,000 (2002)
- ✓ Area: 2,381,740 Km²
- ✓ Organism: Algerian Water Company (AWC)
- ✓ Staff : 26,000 (AWC) + 7,500 (ASC)
- ✓ Financial support: Belgium Government
- ✓ Feasibility Study: IOWater (2006)
- ✓ Training the trainers: IOWater
- ✓ Architectural Project: IOWater + local architect
- ✓ Training Centre capacity: 2,500 – 3,000
- ✓ Construction in progress (2008 - 2009)



*International
Office
for Water*

ALGERIA



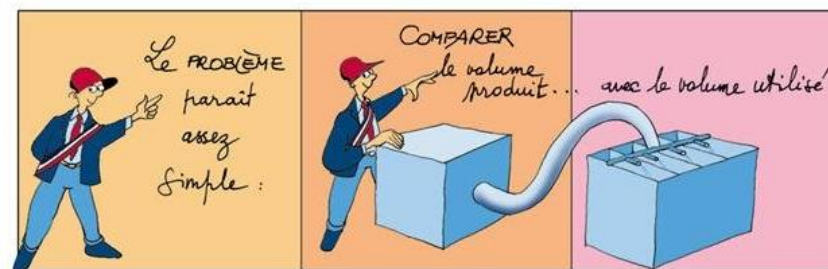
TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT



- Elaboration of training kits adapted to the context, translated in different languages (english, spanish, arabic, vietnamese..)
- “Cahiers Techniques” developed in France
- Example of Training Kits focused on professional practices developed for Jeddah Training Centre

TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT

Cahiers techniques




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TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT

Example of Training Kits focused on professional practices

TRAINEE'S MANUAL



شركة المياه الوطنية
National Water Company

Trainee's manual

**LEAKS DETECTION
TECHNOLOGIES**

REFERENCE OF KIT: F2


Version 2 of February 20th

TRAINEE'S MANUAL

شركة المياه الوطنية
National Water Company

LEAKS DETECTION TECHNOLOGIES.

PIPE TRACING – ELECTROMAGNETIC (1)



List of required equipment:

1. Electromagnetic generator
2. Ground/Earth
3. Electric connection to the pipe
4. Sensor with coil winding
5. Insulation

Check-list :

- Battery fully charged
- Same frequency on generator and on sensor
- Good connection from the generator to the pipe, without direct link to earth

Key points :

- Work only with metallic pipes
- Connected to the pipe not necessary using induction mode
- No need of water supply during the tracing
- Wire required if plastic pipe

TRAINEE'S MANUAL

شركة المياه الوطنية
National Water Company

LEAKS DETECTION TECHNOLOGIES

ACOUSTIC CORRELATION (2)



2. Placing correlation unit

Make sure site is secured using appropriate warning equipment



3. Placing probes

Place probe in stop-cock box

There must be a perfect contact between probe magnet and square turning head of valve

Connect probe to amplifier



4. Data required for correlation


Distance between two receptors must be measured and additionally the material and diameter of pipe must be known

Ref.: F2.25

Version 2 of February 20th

TRAINING CENTRES FOR UTILITIES MIDDLE MANAGEMENT

Example of Training Kits focused on professional practices




شركة المياه الوطنية
National Water Company

Trainer's manual

**LEAKS DETECTION
TECHNOLOGIES**

REFERENCE OF KIT: F2

Version 2 of February 2008



شركة المياه الوطنية
National Water Company

F2.20

Trainer's manual

ACOUSTIC DATA LOGGER

Comments of the slides

Principles of operation

- The detector probe is placed on the drinking water network and records the sound of leaks during the night
- The equipment is placed in position the previous day and uplifted the following day
- The programmer allows the operator to set recording times and collect the data for analysis
- This technique may only be carried out when the network is in pressure

1. Introduction to equipment :

Sound detector recorder

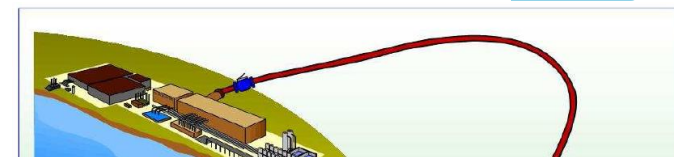
- Small metal cylinder fitted with a magnet at one end which is to be placed in direct contact with some part of the network
- A battery is fitted inside the cylinder
- The probe continuously records the sound made by the leak
- The small size of the probe allows it to be inserted into a stop-cock box
- A leash allows it to be lowered or raised
- One sector may be equipped with large numbers of probes
- the probe is sensitive to shock and must be handled with care

Programmer - results reader

- This item performs a double function :
 - It allows the programming of probes (start time and duration)
 - It also allows download and saving of information recorded by probes, particularly noise levels
- It is important that the probe battery level should be adequate before programming and downloading
- Communication between programmer and probes is made by radio link over a reasonable distance

Practical work

Introduction to sound recording equipment



FORMATION aux METIERS de l'EAU et RENFORCEMENT des COMPETENCES TRAINING and ENHANCEMENT of SKILLS in the WATER SECTOR

Martin PARENT,
Agence Française de Développement

Training and enhancement of skills: why financing?

Aside from infrastructure investment:

- Acquisition of new behaviors
- Setting up of new institutions and policies
- To ensure the sustainability of infrastructures and of quality public utilities



What to finance?

A wide range of targets:

- Vocational training facilities + soft
- Technical assistance (international + local, institutional issues + building infrastructure capacities)
- Comprehensive visits, masters
- Exchanges: WOPs, international networks (RICFME)





How to finance?



Modes of finance:

- States
- Utilities, Basin organisations, ...
- Households, trained persons
- Role of ODA (finance, sharing experiences), training in development projects, grants, loans



afcd : a committed partner

AGENCE FRANÇAISE
DE DÉVELOPPEMENT

Examples of operations

Niger – Long term Technical assistant (WSS, IWRM)

Laos – Nam Papa Vientiane

Sub-Saharan rural hydraulic

RICFME, WOPs



Setting up sustainable training process: key issues

Profitability? Necessity of internal and external advocacy

Vocational training: receipts, business plan, 3 viabilities

Link between investment and training effort

Sustainable and foreseeable

