



United Nations Department of Social and Economic Affairs in partnership with the Government of Morocco

National Workshop for Building National Capacities for Water Scarcity and Drought Management

Rabat, Morocco 21-22 October 2014

Workshop Report

Background

The Department of Economic and Social Affairs of the United-Nations (UN-DESA), in partnership with the Economic and Social Commission for West-Asia (ESCWA), and with the effective support of several UN departements, implemented in 5 pilot countries of the MENA region (Morocco, Tunisia, Jordan, Palestine and Yemen) a project aiming at building national capacities for drought and water scarcity management. This project is coordinated in Morocco by the Ministry of Agriculture and Maritime Fisheries (MAPM) and in the last 6 months, two meetings were organized in its framework:

- The first meeting took place on April 16th during the UN Project Coordinator's visit to Morocco and represents the official launching of the project. It gathered representatives of all the institutions involved in drought management at national but also local levels and saw the participation of UN agencies representatives in Morocco.
- The second meeting took place on July 16th. It was restricted to representatives of the main institutions and ministerial departments involved in drought management. It was the occasion for the national consultant to inform these stakeholders of the outcomes of the TOT workshop held in Zaragoza from May 5-10, 2014. The objectives and tentative agenda of a forthcoming national workshop, to be organized in the fall, were also discussed during this second meeting.

Thus, the present report describes the objectives, program and outcomes of the first national workshop that were organized in partnership between the Government of Morocco and the UN-DESA, in Rabat, during October 21-22, 2014. The workshop lasted two days:

- A day of presentations and discussions at the Farah Golden Tulip Hotel
- > A day of field visits

I. Workshop Objectives

The general objective of the current workshop is to bring together all national stakeholders to discuss the strengths and weaknesses of drought management in the country. The emphasis was made on the necessity to invite participants from local administrations and representatives of farmers to gather the perceptions of people that are really affected by drought and especially how it impacts their livelihood and what they think from the actions undertaken by the government.

Therefore, the specific objectives are to:

- 1. Understand drought, its impacts, and areas of vulnerability in Morocco
- 2. Assess the current drought management activities and critical gaps in Morocco
- 3. Present examples of international best practices in drought management
- 4. Strengthen coordination and information-sharing among stakeholders
- 5. Discuss the involvement of all stakeholders in planning for drought management activities and mitigation plans
- 6. Present the project workplan and next steps

II. Workshop Program

The detailed agenda of the workshop is presented in Annex I.

The morning of the first day of the meeting (October 21st) was devoted to presentations from the main institutions and ministerial departments, as well as testimonies from farmers. The presentations and testimonies were organized around three sessions (i) Opening and Project Overview (ii) Sectorial Strategies: Water and Agriculture, (iii) National and International Experiences, and include:

- Project overview and work plan by the project coordinator
- Management and mitigation of hydrological drought in Morocco, by the Division of Water Resources Planning and Management (Ministry of Water)
- Agricultural drought management in Morocco, current situation and challenges (Ministry of Agriculture)
- An assessment of drought management gaps in Morocco by the IAV team
- An overview of the study implemented by the Ministry of Water in order to develop drought management plans at the river basin scale.
- The conception of a parametric drought insurance system, developed by the Ministry of Agriculture, the National Center for Agricultural Research and the National Direction of Meteorology.
- The use of remote sensing to manage natural hazards, by the Royal Centre for Remote Sensing
- The fight against forest fires: a successful example of multi-institutional coordination, by the High Commissariat for Forests, Water and Fight Against Desertification.
- International best practices: the examples of the NDMC drought management planning in 10 steps and the MEDROPLAN guidelines by the IAV team (scheduled but not presented due to a lack of time).
- Stakeholder's involvement and international best practices, outcomes of the other pilot countries workshops by the project general consultant.
- Project next steps by the coordinator of the project
- Testimonies of representatives of farmers associations: herders from the Northeastern part of the country (Oriental), rainfed farmers practicing the direct sowing (no till), water user associations (irrigated perimeter of Doukakla).

During the afternoon of the first day, discussions were oriented towards coordination, information sharing between institutions and stakeholder involvement issues.



During the second day of the workshop, participants were taken to the region of Chaouia-Ouardigha, an important cereal growing area that faces recurrent drought periods and increasing water scarcity.

III. Stakeholders Participation

Drought is a trans-sectorial phenomenon that has environmental, economic and social impacts. All of them must be taken into account in planning and responding to drought conditions. Therefore, the variety of stakeholders involved in the drought management process is broad and they all must be included in order to share their experiences, learn from each other and express their point of view regarding coordination issues and the appointment of a drought task force.

As shown in Table 1, nearly 30 key ministerial departments, universities and research institutes, local representations of UN organizations, farmers associations, bank and insurance companies and the media were invited to the workshop. The attendance list is presented in Annex II. 35 participants attended the workshop on Day 1 and 13 of these participants attended the field tour on Day 2. Several people from the hosting institutions (River Basin Agency Bouregreg-Chaouia, Waste Water Treatment Station and Dryland Farming Center of the National Institute for Agricultural Research) joined the field tour (Annex III).

Table 1: List of the institutions, ministerial departments and stakeholders invited to the National workshop and their attendance

Invited Institution / Organisation	Attendance	
I. Ministry of Agriculture and Maritime Fisheries (MAPM):		
Direction of Irrigation and territorial planning	X	
Financial Direction (FD)	X	
Direction des filières de Production (DDFP)	X	
Direction of Strategy and Statistics (DSS)		
Regional Direction of Agriculture (DRA) (Agriculture/livestock	X	
Pastures)	Λ	
Regional Offices for Agricultural Development (ORMVAs)		

Agency for Agricultural Development (ADA)	
II. State Secretary in charge of Water and Environment (SEEE):	
Department of Water:	
Direction of Research and Water Planning (DRPE)	X
River Basin Agencies (ABH)	X
Department of Environment:	
National Direction of Meteorology (DMN)	X
National Office for Drinking Water and Electricity (ONEE)	X
III. Royal Center for Remote-Sensing (CRTS)	X
IV. High Commissariat for Water, Forests and Fight Against	v
Desertification (HCEFLCD)	X
V. Haut-Commissariat au Plan (HCP)	X
VI. Ministry of Interior / Direction of Rural affairs	
VI. Research and Education:	
Institut Agronomique et Vétérinaire Hassan II (IAV Hassan II)	X
Institut National de la Recherche Agronomique (INRA)	X
Ecole nationale D'agriculture de Meknès	1
VIII. United-Nations Representatives	
FAO	
UNECA	
PNUD	
Association Nationale des Améliorations Foncières, de l'Irrigation,	
du Drainage et de l'Environnement (ANAFIDE)	
Confédération Marocaine de l'Agriculture et du Développement	
Rural (COMADER)	
Association d'éleveurs d'ovins de l'Oriental	\mathbf{X}
Water User Associations	X
Insured Farmers	X
Mutuelle Agricole Marocaine d'Assurances (MAMDA)	
Crédit Agricole Maroc (CAM)	
Media	X

IV. Workshop Presentations

Morning Session

The workshop was opened by the national coordinator of the Project, Mr Belghiti Mohamed. He first addressed his thanks to UN-DESA for launching a study with such a relevant theme. He emphasized the need to share the several visions and understanding of drought and to contribute to establishing the main steps of drought management. He also insisted on the expected valuable participation of all the attendees in order to highlight the gaps and try together to suggest a drought management plan.



From his side, Mr. Sami Areikat, the project coordinator, gave an overview of the project objectives and welcomed the ideas given by the national coordinator. He added the necessity to implement a national capacity building in this framework. He also insisted on the involvement necessity of all the decision-makers in gathering their effort and knowledge to build a successful national drought management plan.



The first presentation was given by Mr. Belghiti. It covered the characterization and the monitoring of agricultural drought in Morocco as well as the implemented mitigation and adaptation strategies. The main elements emerging from his intervention are:

- ➤ The need to mitigate drought both in rainfall and irrigated areas.
- ➤ The main actions taken by the government and more specifically by the Ministry of Agriculture.
- ➤ The strategic place of water resources management under the plan "Plan Maroc Vert".

The following presentation was given by the representative of Water Ministry and focused on the management and mitigation of Hydrological Drought in Morocco.



The key following points were highlighted as response to recent drought episodes:

- ➤ The implementation of vigilance committees during drought periods
- ➤ The priority setting (Drinking Water First)
- ➤ The monitoring changes in dam reservoirs.

The third presentation was by Dr. Ouiam Lahlou, from Agronomy and Veterinary Hassan II Institute. She analyzed the Moroccan GAP in terms of drought management and highlighted the lack of cooperation between institutions. She insisted on developing an early warning system for drought and a vulnerability assessment. She then recommended the implementation of an inter-ministerial platform to monitor drought and to establish and follow up with a national drought management plan. She illustrated her presentation with the NDO (National Drought Observatory) and attributed its failure to those elements of gap.

From CRTS (Royal Center for Remote Sensing), Mr Bijaber presented on remote sensing as a tool for drought monitoring. He described the outcomes of this technology and the valuable information it brings to set up drought indicators.

A second presentation was delivered by the Ministry of Water, which focused on the use of SPI as a drought indicator and the implementation of a pilot plan, based on this indicator in the Oum Er-Rbiâ river basin.

Dr. Riad Balaghi, from INRA, presented a successful multi-institutional project (CGMS-Maroc) based on the use meteorology, remote sensing and yield forecasting to implement a parametric drought insurance. He described the outcome of this study and highlighted the accomplished results in this first year. The model is tailored for rainfed agriculture in Morocco.

Mr Alaoui, from HCEFLCD (High Commissariat for Water and Forests and Fight Against Desertification) delivered a presentation on sectorial drought management strategies. He explained that forest fires are expected to be more frequent and more intensive given the

increasing frequency of drought. He described the main actions undertaken by his institution including public awareness, the development of forecasting tools and the capacity building.

Afternoon Session

The afternoon session was opened by Dr. Loay Frookh, UN-DESA water consultant. During his lecture, he presented MEDROPLAN guidelines and Nebraska Guidelines as useful tools which can help the countries in developing their own drought management plans. He also gave the example of Iran who used the nearest guidelines to develop its own drought management plan. He added that no Arab country has its own national drought management plan; only sectorial plans exist in some institutions according to their respective specialties and concerns. He then recommended gathering all those plans in a single national integrated one, once indicators have been established and agreed upon.

Following the different presentations given and the initiated debate at the end of the morning session, an interactive discussion took place. Attendees carried out a dialogue. It was initiated by a farmer from the Oriental Region. He first argued that the national drought strategies are too focused on water by promoting and subsidizing drip irrigation, he added that herders deserve greater attention and help from government because their work is also a way to value agriculture and the water unit. For him, sustainable development has to include all the agricultural sectors.



A second farmer, from a Doukkala association insisted on the early warning and noticed that during drought periods, assistance from government often occurs too late. He insisted on the role that civil society has to play in raising awareness and early warning. The third key element provided by this stakeholder was the lack of farmers' outreach and awareness. Mr. Areikat supported the remark about the involvement of all the stakeholders including civil society.

The Oriental farmer suggested that cooperatives and agricultural associations may play the role of civil society, and added that the Ministry of Interior has to be fully involved in drought

management. Another representative from "No Till Association", after having presented the benefits of no tillage, added that farmers are not trained in this practice nor in agricultural rotation. For this farmer, all of these techniques are considered to be drought adaptation practices and should be well mastered by farmers.

An engineer from DRA-Doukkala recommended that other operations, direct and efficient as the agricultural insurances, should be implemented. He then insisted on the need to hasten the assistance when drought is declared.

The representative of DPA-Settat underlined the need to develop non-conventional water supplies at larger scales.

Dr. Riad Balaghi informed the audience of a new project, financed by the Word Bank, dealing with natural disasters and of which drought is one component (Drought as a component: To be confirmed).

Pr. Mohamed Sinan, from Al Hassania School of Engineers, has been the national consultant for the recent study launched by the Moroccan Economic and Social Forum. He informed the participants that the constitution of an inter-ministerial committee, in charge of water management, is among the study recommendations. Mr Sinan added that it is being discussed in the Parliament and suggested that this inter-ministerial committee may be also used a drought management platform.

Dr. Benaouda from INRA closed the discussed session underlining that all stakeholders must realize that drought has become the norm and a wet year is the exception.

V. Workshop Outcomes

The current workshop was designed to set up a brainstorming for several stakeholders involved in water governance, water use and water management. Certain stakeholders were specifically invited due to their experiences dealing with water scarcity and drought.

Presentations were delivered; they described successful and unsuccessful actions in the framework of drought management; gaps were identified. Afterwards, a fruitful exchange took place and yielded to the following recommendations:

- To strengthen communication and cooperation between all the institutions and stakeholders including the civil society;
- To assess the vulnerability to drought;
- To develop early warning systems;
- To develop a set of indicators for drought management;
- To combine all sectorial drought management plans and to establish a national one;
- To apply MEDROPLAN guidelines;

- To create a central platform coordinating all the institutions and gathering all the results;
- To enhance awareness and capacity building; and
- To learn from unsuccessful experiences (Ex: National drought Observatory) and successful ones (Ex: drought insurance)

In addition, discussions oriented towards the constitution of a drought task force emphasized the need to include the main institutions and ministerial departments involved in drought management:

- The Ministry of Agriculture (MAPM)
- The Ministry of Water and Environment (SEEE):
 - o The Division of Water Resources and Planning (DRPE)
 - o The National Direction of Meteorology (DMN)
 - The Department of Environment
- The Ministry of Interior
- The High Commissariat for Water, Forests and Fight Against Desertification (HCEFLCD)
- The Royal Center for Remote Sensing (CRTS)
- Research and Education institutes (INRA, IAV Hassan II, ENA, EHTP, ...)
- The Civil Society

VI. Field Tour

During the field tour, participants were taken to the region of Chouia-Ouardigha, located in southeast Casablanca (Figure 1).





Figure 1: Location of the Visited Aarea

The visit included:

> The Al Himmer Dam and presentation of the artificial recharge of the Berrechid Aquifer:

Staff from the River Basin Agency of Bouregreg-Chaouia welcomed the participants on the site of the Al Himmer dam.

After the big floods of 2002, decisions were taken in order to prevent the industrial zone of Berrechid, the Casablanca-Settat highway and Casablanca and Mohammedia cities from such hazards and led to the construction of dams on the Al Himer, Tamedroust and Koudiat El Garn Rivers. In addition to the decrease of the flooding risk, the objective was to extend the irrigated areas and the artificial recharge of the Berrechid aquifer from dam releases. Indeed, in this area, the overexploitation of the aquifer caused a regional groundwater drawdown of about ten meters in the center of the basin, dry wells and reduced productivity of the wells.







> The Waste Water Treatment Station of Settat and the Irrigation Project:

In the area of Settat, agriculture is mainly rainfed with small spots of irrigated lands, mainly irrigated by wells. The waste water treatment station of Settat is the first and only one at the country level to use treated water for irrigation. The project aims at preserving water resources by avoiding overexploitation of groundwater resources and avoiding the use of raw waste waters by farmers. It covers 300 ha covered by olive trees, potatoes, corn, and wheat.



➤ The Dry Land Farming Center of the National Institute for Agronomic Research (INRA):

The visit of the Dryland Farming Center of the National Institute Agronomic Research of Settat included:

A presentation by Dr. El Mzouri of the objectives, research activities and main achievements of the Center. The purpose of the Morocco Dryland Research Center is to implement research activities relevant to the dryland farming systems, and natural constraints of the 250-450mm of rainfall in the region and capable of providing technologies to improve farmers' productivity.



A visit to the machinery laboratory to see the direct seeding system developed by researchers at the Center. Compared to traditional plowing and sowing, direct seeding (also known as no-tillage) allows for both increasing organic matter in the soil and making the most of the limited rainfall. In addition, direct seeding and traditional seeding result in essentially the same yield in good years. However, when drought occurs, a crop planted by direct seeding can produce remarkably higher than those sown with traditional seeding.





• A visit to the gene bank.

VII. Press Coverage

In order to ensure a large diffusion of the workshop and its outcomes, Maghareb Press realized a media coverage and reporting on the workshop and published it in El Maghareb Weekly Newspaper (October 10-20 Edition) (Annex IV).

Annex I: Workshop Program

Mardi 21 Octol	bre 2014 Sessions plénières		
Ouverture	•		
08:30 - 09 :00	Accueil		
09:00 - 09:30	 Allocution de bienvenue M. Belghiti, Coordinateur National (MAPM) e S. Areikat / UN-DESA Présentation du projet, de ses objectifs, planning des activités S. Areikat / UN-DESA 		
Session I: Strat	égies sectorielles		
09:30 - 10:00	 Gestion de la sécheresse hydrologique au Maroc: Bilan et perspectives (DRPE, MDE) Gestion de la sécheresse agricole au Maroc: Etat des lieux et enjeux (DIAEA, MAPM) 		
	Questions-Réponses		
Session II: Exp	ériences au Maroc et à l'international		
10:00 - 10:15	Gestion de la sécheresse au Maroc et analyse des gaps (O. Lahlou, IAV Hassan II)		
10:15 - 10:30	L'observation spatiale au service de la gestion des risques naturels (N. Bijaber, CRTS)		
10:30 - 10:45	Plan de gestion des ressources en eau en situation de sécheresse: Présentation des résultats de l'étude menée par la DRPE (MDE)		
10:45 – 11:15	Pause-café		
11:15 - 11:30	Projet de l'assurance sécheresse paramétrique: Utilisation d'indicateurs météorologiques, de télédétection et de prévision des rendements (R. Balaghi, MAPM-DF/INRA/DMN)		
11:30 - 12:15	 La lutte contre les feux de forêts : un exemple réussi de coordination institutionnelle pour une gestion proactive des risques (HCEFLCD). Bonnes pratiques internationales en matière de gestion de la sècheresse: Présentation des Guides de l'Université du Nebraska et MEDROPLAN (Y. Imani, IAV Hassan II) Enseignements tirés des ateliers conduits dans les autres pays pilotes (L.Frookh/Senior Water Consultant) 		
12:15 - 12:30	Témoignages des associations et des représentants des agriculteurs sur leur perception de la sècheresse et des gaps en matière de gestion de la sècheresse		
12:30 - 13:00	Discussion générale		
13:00 - 14 : 30	Déjeuner		
	ble ronde sur les propositions d'action pour le renforcement de la		
préparation à l	a gestion de la sécheresse		
14:30 – 17 :00	Coordination, échange et partage de l'information entre institutions, besoin de mécanismes de coordination Participation et implication des parties prenantes : Quels engagements des		
	parties prenantes?		

	Composantes essentielles d'un plan de gestion de la sécheresse			
	Identification d'un comité de pilotage et d'une plateforme de travail			
17:00- 18:00	Conclusions et recommandations / Clôture de l'atelier			
Mercredi 22 Octobre 2014 Visites sur le terrain				
7:30	Départ de Rabat par car (ou RV à 9h à Settat)			
	Visite du barrage Al Himmer (province de Settat) organisée par l'agence de			
	bassin hydraulique du Bouregreg-Chaouia et présentation sur le site du			
0.20 10.20	barrage:			
9:30 - 10:30	 D'un aperçu sur la gouvernance de l'eau dans le bassin Bouregreg 			
	Chaouia			
	 système de recharge de la nappe de Berrechid 			
	Visite d'un projet de réutilisation des eaux usées (Settat) organisée par la			
12:00 - 13:00	Direction Régionale de l'Agriculture de Chaouia-Ourdigha, l'Agence de			
12:00 - 15:00	Bassin Hydraulique du Bouregreg-Chaouia et la Régie Autonome de			
	Distribution d'Eau et l'Electricité de Settat-RDEEC.			
	Visite du Centre d'aridoculture de l'INRA à Settat organisé par le centre			
	régional de la Recherche Agronomique de Settat :			
14.00 17.00	 Déjeuner au club de l'INRA Settat (14-15h) 			
14:00 – 17:00	 Présentation et visite du centre d'aridoculture et sa contribution à la 			
	gestion des risques de la sècheresse agricole (sélection génétique,			
	technique de conservation de l'eauetc)			
17:30- 19:30	Retour à Rabat			

Annex II: List of Attendance

Name	Institution	E-mail	Telephone	Day 1	Day 2
M'Hamed Belghiti	MAMP/DIAEA	belghiti1957@gmail.com	067211656 0	X	X
Ouiam Lahlou	IAV Hassan II	ouiamlahlou@gmail.com	066140413 8	X	X
Said Zerouali	НСР	zarouali2s@yahoo.fr	066010214 9	X	
Hassan Benaouda	INRA	benaouda-inra@yahoo.fr	066019948 6	X	
Abderrahman Moussa	DRA Oriental	moussaabderrahman@yahoo .fr	065783169 9	X	
Siham Laraichi	MDE/DRPE	siham.laraichi@gmail.com	067553349 5	X	
Hamid Imrane	A.Oum Er Rbia Gharbia	imran.hdc@gmail.com	066789741 5	X	
Imane El Hardouz	HCP/DP	elhardouzimane@gmail.com	066136693 5	X	X

Nabil Mouafik	A. Lahmamate Sidi Bennour		9 066626232	X	
Aziz Eliaziji	DRA Doukkala/Abda	eliaziji_aziz@yahoo.fr	065783162 2	X	
Mohamed Sinan	ЕНТР	sinan_mohamed@yahoo.fr	066140033 5	X	
Hicham Mharzi Alaoui	HCEFLCD	hicham.mharzialaoui@gmail .com	066012535 4	X	
Abdeslam Ziyad	MDE/DRPE	ziyad@water.gov.ma	053777868 6	X	
Khadija Dahmani	HCEFLCD	dahmani-khadija@yahoo.fr	067228888 7	X	
Thami Benazzouz	Maghareb Press	Benazzouz- maghareb@gmail.com	065953741 9	X	X
Meryam Elmechtali	MDE/DRPE	mariammech87@gmail.com	066054440 5	X	
Noureddine Bijaber	CRTS	bijaber@crts.gov.ma	066107826 0	X	
Hamid Moufaouid	A. Gdana Semis direct	moufaouidhamid@gmail.co m	066139940 3	X	X
Sami Areikat	UN-DESA	areikat@un.org	1 212-963- 7844	X	X
Driss Benbouhia	DRA Chaouia	riaspa@gmail.com	065783199 7	X	X
Mohammed Yessef	IAV Hassan II	y_toufik2006@yahoo.fr	066107826 0	X	
Riad Balaghi	INRA	riad.balaghi@gmail.com	066015719 6	X	
Asma Hamzaoui	MAPM/DDFP	hamzaoui_asma@yahoo.fr	065783153 1	X	
Ehssane ElMeknassi Youssfi	MAPM/DIAEA	ehssan.elmeknassi@gmail.c om	065783156 1	X	
ElBechir Lebied	A. Eleveurs de l'Oriental		067066569	X	
Amina ElAlaoui	MAPM/DF	amina.alaoui@gmail.com		X	X
Loay Frookh	UN-DESA	lfrookh@yahoo.com	777312889	X	X
Yasmina Imani	IAV Hassan II	yasmina.imani@gmail.com	066115819 9	X	X
M. Boussbaa	DPA sahel	m.boussbaa@gmail.com	067524340	X	X
Farid Jebrane	DRA Chaouia	jebrane.farid@gmail.com	066229099 4	X	X

Amina Saaidi	DMN	saa_amina@yahoo.fr	052265486 3	X	
Wafae Badi	DMN	wafae.badi@gmail.com	067229546 4	X	
Fatim-Zohra Elguelai	DMN	faty.elguelai@gmail.com	052265487 6	X	
M'Hamed Sedrati	A. GERERE	amised2001@yahoo.fr	060713599 8	X	
Imane Hamdani	MDE/DRPE/DP GE	hamdani@water.gov.ma	065588679	X	

Annex III: List of Tour Attendees during Day 2 (October 22nd)

Institution	Name
Ministers of Assistations and Maritime Fighteries	Mr. M'hamed Belghiti
Ministry of Agriculture and Maritime Fisheries	Mrs. Amina Alaoui
Haut Commissariat au Plan	Mrs. Imane Elhardouz
- LINI DECA	Mr. Sami Areikat
UN-DESA	Mr. Loay Frookh
IAV Hassan II	Mrs. Ouiam Lahlou
• IA v Hassan II	Mrs. Yasmina Imani
	Mr. Daoudi Ahmed
	Mr. Farid Jebrane
DRA Chaouia-Ouardigha	Mr. Mohammed Boussbaa
	Mr. Driss Benbouhia
	(+ 2 people)
President of a Farmers' Association	Mr. Abdelhamid Moufaoued
Wests wester treatment station	Mr. Rachid Essadiki
Waste water treatment station	Mr. Mohamed Boutayeb
River Basin Agency	6 people
	Mr. Houcine El Mzouri
	Miss Saadia Lahloui
Dry Land Farming Center	Mr. Nasrelhaq Nasrellah
	Mr. Mohamed Boutfirass
	Mr. Oussama El Gharrass
	(+ two other researchers)
Maghareb Press	Mr. Thami Benazzouz



أية التزامات للأطراف المتدخلة؟

