### Vetiver activities in North Africa and the Mediterranean

March, April, May 2007 Criss Juliard, Rabat

### 1. Action

#### 1.1Morocco:

Established for an olive grove, half-ring vetiver hedges around trees to demonstrate water retention and erosion control capacity of VS. Plants will be irrigated during dry season;
Installed a VS urban solid waste trial site in Oujda, one of Morocco's 9 district capital city. Initial trial led for request to protect the entire 8 ha site with VS. Prepared and submitted cost proposal for the proposed extension.

- In conjunction with a UNDP project in the South of Morocco (Errichidia), established a three pronged pilot project using vetiver for: oasis agriculture (delimiting plots, increase production, control water usage, pest control); dunes stabilization (in conjunction with other forms of protection); brackish soil and saline water tolerance to prepare soils for agriculture and grazing. Also assist in establishing small nurseries:





Planting vetiver in various plants salt pond and salt spring

(April). Plants survived and produced tiller. Up-dated photos will follow. This is zone where Research and Ministries have tried various species, unsuccessfully to absorb and rehabilitate a zone where highly brackish water surfaces up hill from a productive oasis

Plants transported to SE of Morocco, waiting to be transferred to small vegetable farmers



- Received visit of Jean-Francois Marviel (France) and provided on-site training VS training for nursery establishment and waste water application. Requested for Certificate of competency 2<sup>rd</sup> degree for Jean Francois, who is establishing a vetiver production entity in France and in Senegal.

### 1.2 Algeria

- shipped plants, instructions and Skype follow-through for waste water treatment site in oasis in Central Algeria. Project implemented by International Water Gardens. Substantial problems if getting plants approved for importation into Algeria. Plant Protection agency required to test vetiver for 20 days to insure it was not a vector of highly contagious date palm disease. (photos follow)

# 2. Follow up from previous period

## 2.1 Morocco

- Visited VS application to a watershed basin in Central Morocco (Oued Melhia), established in Nov 2006. It was funded by Forestry's Center for Research. Growth and ability to retain soil and water were, development was evident. (photos follow)

# 3. Contacts to follow-up

### 3.1 Morocco

 Prepared and submitted funding request for two community level vetiver installations
 Prepared and submitted a proposal for application of The Vetiver System to proposed "banquette" protection of a large (160,000 ha) olive tree planting program, funded by the Millennium Challenge Corporation. Also held talks, made presentation and made proposal to include Vetiver application in the agriculture research component of the MCC program
 Visited and recorded lecheate discharge from Rabat's municipal waste site for phytoremediation of entire site



Solid waste disposal site



Leaking leachate



Foul odor leachate stream runs downhill



Leachate reaches arm of main Bouregreg river



Demonstration vetiver patch at the National Institute for Medicinal and Aromatic Plants (INPMA) -Morocco



Gift plant for host when invited for dinner. Includes little explanation of plants and use.



Preparing furrows for contour planting, solid Disposal site (Oujda)



Watering young slips for 1<sup>st</sup> 3 months (Oujda)



Initial planting bare root slips (Oujda)



Watershed protection using mature plants in polybasic (Oued Melliah)



Vetiver planted on the down slope from an olive tree (Marocco)