## Joining hands to reclaim a barren hillside – and the younger generation taking irrigation distribution into their own hands:

## two potentially important community initiatives from Morocco

SCI-SLM is all about uncovering spontaneous community initiatives in sustainable land management. Earlier this year we held our second annual steering committee meeting in Morocco. An intensive day's fieldwork in the Ouneine valley of the High Atlas range took us to two fascinating examples of such innovative solutions. Both of them show what can be achieved by groups thinking through problems – and coming up with their own productive ideas. Let's have a quick look at each in turn.

## Lamhalt: turning wasteland into productive terraces

Three related families have joined hands in the village of Lamhalt to reclaim a hillside that is currently stony and degraded. They are turning this, by degrees, into productive irrigated terraces. Their private project has received financial input from family members working in Casablanca. There is a very visible gradation to be seen as one walks upslope - from stony slopes populated by sparse Ziziphus bushes, to cross-slope lines of stone between which rainfed cereals are grown, to emerging terraces with almond trees along the stone lines, on to rudimentary terraces with some irrigation, and finally to fully developed and irrigated benches. Along this upslope transect it is clear that, associated with improvement of the land, crop diversification also increases. On the now-mature terraces at the top of the jointly developed farm, there are various fruit and nut trees, barley, maize, *faba* beans, rosemary, prickly pear (Opuntia sp) as well as vegetables (eg courgettes), spices (eg coriander) and medicinal plants. Irrigation is sourced from groundwater, through the use of a diesel pump. They are allowed to use underground water freely, because it is located under their legally owned land. This community initiative was begun some eight years ago, and around 6-7 of the 20 hectares in total is now fully developed. The initiative in this case is partially social (the idea of a small group of families joining hands to develop land and share certain inputs) and partially technical (diversification into a wide variety of cash crops). Certainly this is a community - although a small social entity - and land is

without doubt being developed and managed sustainably. The only questions regard, first, the replicability of the enterprise in terms of capital requirement to buy land and install irrigation infrastructure; second, to what extent groundwater sources are adequate to support expanded farmland; and third, whether market saturation with agricultural products will become a problem in this isolated mountain valley. All these are aspects that will be studied under SCI-SLM. The next stage will be to bring farmers to learn from this group of young and enthusiastic land developers.



Land reclamation: the SCI-SLM international team learning about group innovation in Morocco"

## Young irrigators improving an ancient tradition at Afourigh

Irrigated agriculture is a key feature of the Ouneine valley economy. Surface irrigation, from hillside springs, distributed by channels into furrows or basins is the dominant form. However these springs are basically fully utilised, and water for irrigation has become a constraint. The group from Lamhalt (described above) has answered the problem by tapping into groundwater. But those whose only source is springs emanating from the hillsides have to look for ways to make limited water go further. The case of the five family lineages that comprise the Afourigh community is a fascinating development in this regard. Although generation-old water use rights have officially determined the daily scheduling of the water, the young active farmers within the group have decided to adjust the cycle to make the system more efficient. The traditional rotation within this community was to allow each family half a day's water several times within an eleven and a half day overall cycle. The young farmers have taken the initiative of "consolidating" water rights into periods of three continuous days per family. The implication of this is greater water-use efficiency, because farmers can plan their

workload better. but also because their crops can receive ample water at each irrigation application - which can make all the difference in dry years. There are two other aspects of importance here: first a reservoir has been built to hold water when flow is low; and second it is notable that the farmers have been able not only to improve production, but to diversify their cropping base also. They have introduced sorghum for cattle feed, for example, into their rotations. Here is a genuine community and commoninterest group, bound by ancient ties, that has developed an initiative to manage the land more sustainably. There are important lessons to be learn and SCI-SLM's task is to make sure these lessons reach other communities, close and further away, who could also benefit from building on ancient traditions.



"Irrigation scheduling: farmers now benefit from the initiative of young men within a community"