

# Part II: Case studies

## 2.1 SLM case studies

- Cropping management (8 case studies)
- Water management (8 case studies)
- Cross-slope barriers (7 case studies)
- Grazing land management (2 case studies)
- Forest management (5 case studies)
- SLM approaches (8 case studies)

**Water harvesting from concentrated runoff for irrigation purposes**

Water harvesting from concentrated runoff is a highly effective and low-cost water harvesting technique. It involves the collection of runoff from a catchment area into a storage structure, which is then used for irrigation. This technique is particularly suitable for semi-arid and arid regions where rainfall is low and concentrated in short bursts.

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**DESIRE methodology flowchart**

The flowchart illustrates the DESIRE methodology, which is a systematic approach to land management. It starts with an assessment of the current land use and the potential for improvement. This is followed by the design of a land management plan, which is then implemented and monitored. The methodology is based on the principles of sustainability and the need to balance the interests of different stakeholders.

## 2.2 Mapping case studies

- Spain – Portugal – Italy – Greece – Turkey – Morocco – Tunisia – Russia – China – Botswana – Mexico – Chile – Cape Verde

**Spain - Torrealvilla**

Land use types: Agricultural land, Forest, Urban, etc.

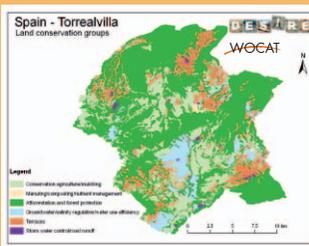
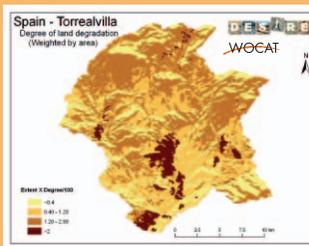
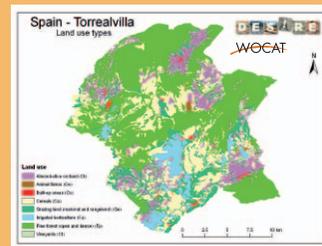
Degree of land degradation (Weighted by area): 0-4, 5-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, 46-50.

**DESIRE methodology flowchart for Spain - Torrealvilla**

The flowchart shows the implementation of the DESIRE methodology in the Torrealvilla region. It details the assessment of the current land use, the design of a land management plan, and the implementation and monitoring of the plan. The methodology is based on the principles of sustainability and the need to balance the interests of different stakeholders.

## 2.3 DESIRE methodology examples

- Eskişehir (Turkey)
- Yan River Basin (China)



# Desire for Greener Land

Options for Sustainable Land Management in Drylands



Order information → [www.desire-project.eu](http://www.desire-project.eu)  
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**Desire for Greener Land** compiles options for Sustainable Land Management (SLM) in drylands. It is a result of the integrated research project DESIRE (Desertification Mitigation and Remediation of Land - A Global Approach for Local Solutions). Lasting five years (2007–2012) and funded within the EU's Sixth Framework Programme, DESIRE brought together the expertise of 26 international research institutes and non-governmental organisations. The DESIRE project aimed to establish promising alternative land use and management strategies in 17 degradation and deserti-

fication sites around the world, relying on close collaboration between scientists and local stakeholder groups. The study sites provided a global laboratory in which researchers could apply, test, and identify new and innovative approaches to combatting desertification. The resulting SLM strategies are local- to regional-scale interventions designed to increase productivity, preserve natural resource bases, and improve people's livelihoods. These were documented and mapped using the internationally recognised WOCAT (World Overview of Conservation Approaches and Technologies) method-

ological framework, which formed an integral part of the DESIRE project.

The book describes the DESIRE approach and WOCAT methodology for a range of audiences, from local agricultural advisors to scientists and policymakers. Links are provided to manuals and online materials, enabling application of the various tools and methods in similar projects. The book also includes an analysis of the current context of degradation and SLM in the study sites, in addition to analysis of the SLM technologies and approaches trialled in the DESIRE project. Thirty SLM

technologies, eight SLM approaches, and several degradation and SLM maps from all the DESIRE study sites are compiled in a concise and well-illustrated format, following the style of this volume's forerunner *where the land is greener* (WOCAT 2007). Finally, conclusions and policy points are presented for decision makers, the private sector, civil society, donors, and the research community. These are intended to support people's efforts to invest wisely in the sustainable management of land – enabling greener drylands to become a reality, not just a desire.



Morocco, Gudrun Schwilch

### Policy recommendations:

- Strengthen collaboration of scientists with stakeholders;
- Link local knowledge with the latest technologies emerging from the scientific community, using a structured participatory process involving all stakeholders;
- Include stakeholder-defined criteria for selecting SLM options;
- Perform standardised assessments using WOCAT tools; and
- Acknowledge that SLM has benefits with respect to many global concerns, including water scarcity, resource use efficiency, energy supply, food security, poverty alleviation, climate change, and biodiversity conservation.

This book aims to help decision makers and donors in their efforts to invest wisely in sustainable management of land.

## Part I: Methodology, analysis and synthesis

- 1.1 The process of identifying and trialling options for SLM
- 1.2 Analysis of degradation and SLM maps
- 1.3 Analysis of assessed SLM technologies and approaches across DESIRE sites
- 1.4 Conclusions and policy points



**Table 1: DESIRE Study Sites**  
17 study sites in total (two study sites located in Portugal).

Nr.	Country	Site	Site (km²)	Land use	Degradation
1	Spain	Gadaleites (Bambú de Jerez)	250	Arable (in-row-in); forest; orchards	Erosion, salinisation
2	Portugal	Al Maçãs (Il Góis)	400	Moistly forest; some agriculture	Wildfires, erosion
3	Italy	Medina	410	Mainly arable (dry cereals); Olives; forest	Erosion, mass movements, sedimentation
4	Greece	Crete	1000	Widespread olive, shrub and livestock pasture	Soil erosion, soil and water salinisation, water stress
5	Greece	Haidos	50	Irrigated agriculture, marshes	Salinisation
6	Turkey	Kangirlar	120	Irrigated agriculture	Salinisation; groundwater level
7	Turkey	Ekiseler	90	Dryland (in agriculture, pasture)	Soil erosion, salinisation, droughts
8	Morocco	Mamma'sshouh	400	Decreasing cork oak, increasing agriculture and grazing	Erosion, biological degradation
9	Tanzania	Zenoo-Koutre	900	Kangarid, agriculture	Biological degradation, erosion by wind and water, drought
10	Russia	Djirnyek	12370	Grassland, Artificial forest belts	Vegetation degradation, salinisation, erosion by wind and water
11	Russia	Izvy-Sentov	29000	Irrigated agriculture	Salinisation, waterlogging
12	China	Loess plateau	7000	Arable farming, cash crops, grass planting and agroforestry	Water erosion
13	Bolivia	Itiriti	30000	Mixed land use: grassland savannah	Vegetation degradation, wind erosion
14	Mexico	Cuicatlan	650	Cropland, forest, grassland	Soil erosion by water
15	Chile	Secano Interior	9100	Cereals, forest plantations	Soil erosion by water
16	Capo Verde	Ribeira Seca	70	Mainly rainfed agriculture	Soil erosion by water drought

For more detailed information about DESIRE study sites, see the compilation and synthesis of DESIRE study site descriptions!

**Methodology**

Select study sites

The selection of study sites will be dependent on a particular project's aims and objectives.

Within the DESIRE project, it was always the strategy to work with study sites in which research had been on-going for several years prior to the project, so that the work of the project could build on previous experience and benefits from existing datasets. However, this was just one of many criteria that resulted in DESIRE selecting 17 study sites distributed across the world from southern Europe, southern America and Africa