

UNDESERT

Understanding and combating desertification
to mitigate its impact on ecosystem services

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Aarhus University*



UNDESERT objectives

- To improve understanding of effects of desertification and degradation in West Africa
- To develop decision support tools and introduce them to natural resource managers
- To make restoration through tree planting and certification for CO₂ marketing
- To manage ecosystems in close collaboration between scientists and local communities
- To educate a new generation of African experts in desertification and degradation issues

UNDESERT includes
~ 50 West African and
European scientists,
incl. 19 PhD students

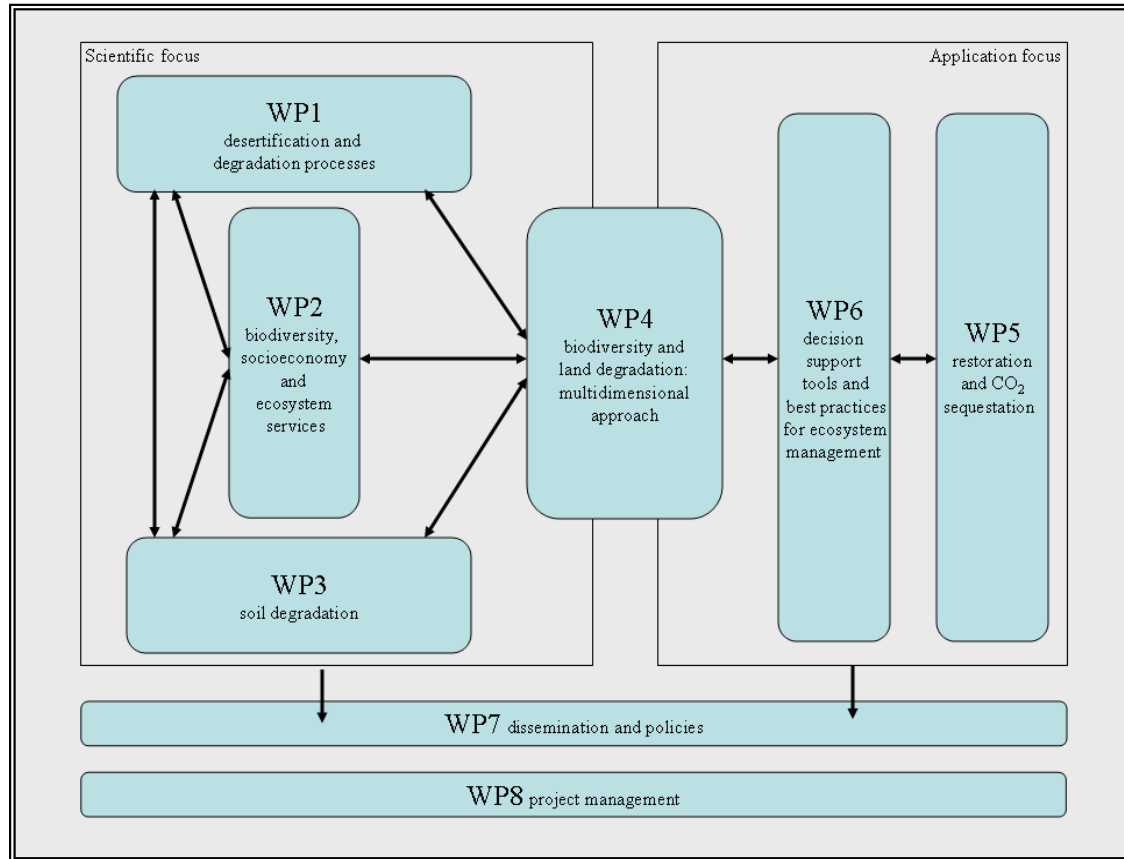
*Financed by the
European Union (FP7)
1/6 2010-31/5 2015.*

3.5 mill Euro

www.undesert.neri.dk



Project overview



UNDESERT partners

Aarhus University, Denmark

University Abdou Moumouni ,
Niger

Université Cheikh Anta Diop,
Senegal

J. Wolfgang Goethe-University,
Germany

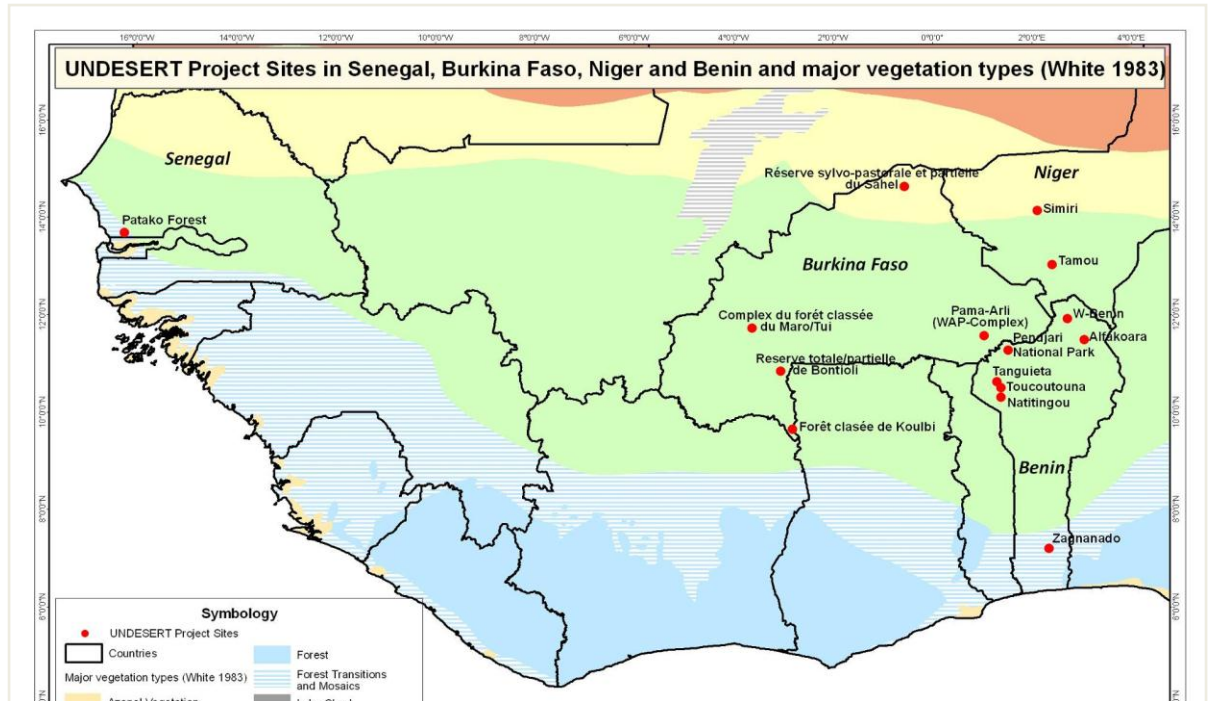
Senckenberg Forschungs-inst.,
Germany

University of Ouagadougou,
Burkina Faso

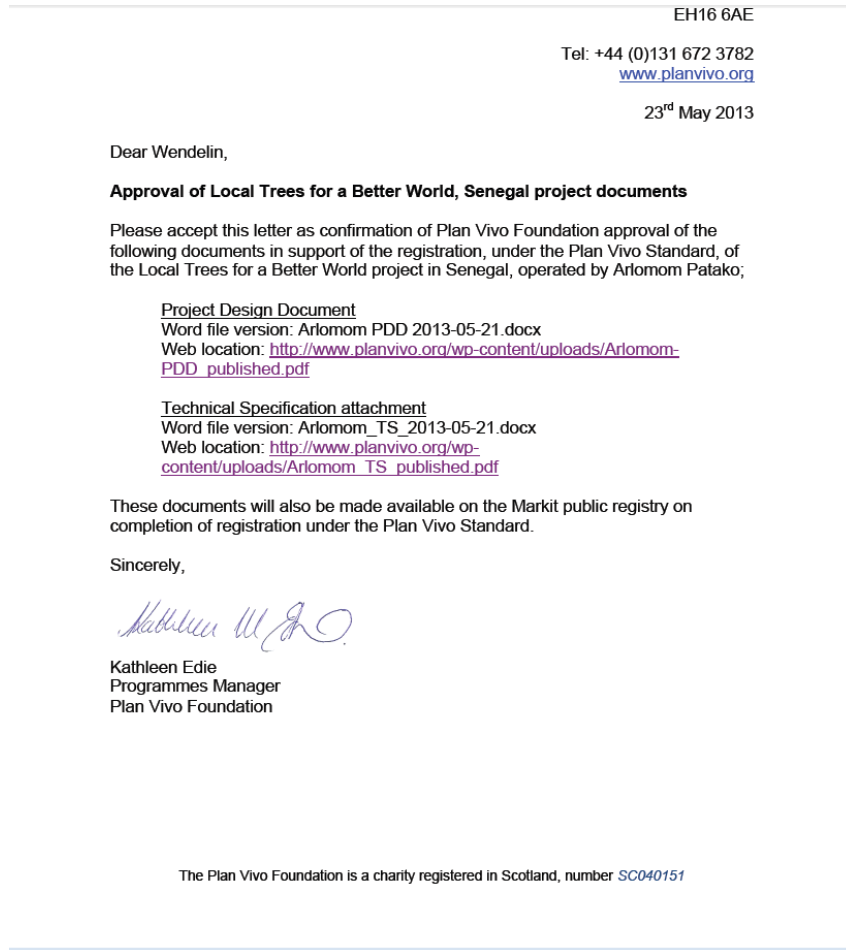
University of Bobo
Dioulasso, Burkina Faso

University of Abomey-Calavi, Benin
BioClimate Research Develop., UK

Study sites



Plan Vivo approval of tree planting project



- Apparently first project in West African savanna
- Stake holders/beneficials:
 - People in 9 villages around Patako Forrest
- Stake holders:
 - Private companies who will buy the CO₂ quota

West African database

WEST AFRICAN VEGETATION
a vegetation data network for West Africa

Search & Download

WEST AFRICAN VEGETATION - A VEGETATION DATA NETWORK FOR WEST AFRICA

This is a database for vegetation data from West Africa, i.e. phytosociological and dendrometric relevés as well as floristic inventories.

You need to create a free account to access the full functionality of the database. However, guests may search for data and view public datasets.

Registered users are provided with a private working environment to manage their vegetation data. They can enter or upload datasets, edit their data online as well as use the data clipboard to search for and download vegetation data in different formats. Datasets uploaded or entered to a user account can be kept private, selectively made available to other registered users or they can be made public. Only public datasets will be visible to all users of this site and are at the same time made available to GBIF.

However, each data search will show a gross summary of all datasets, accessible and currently inaccessible to you, and will hence help to identify potentially available data for your research project. You may subsequently send an email enquiry for data sharing to the data owner.

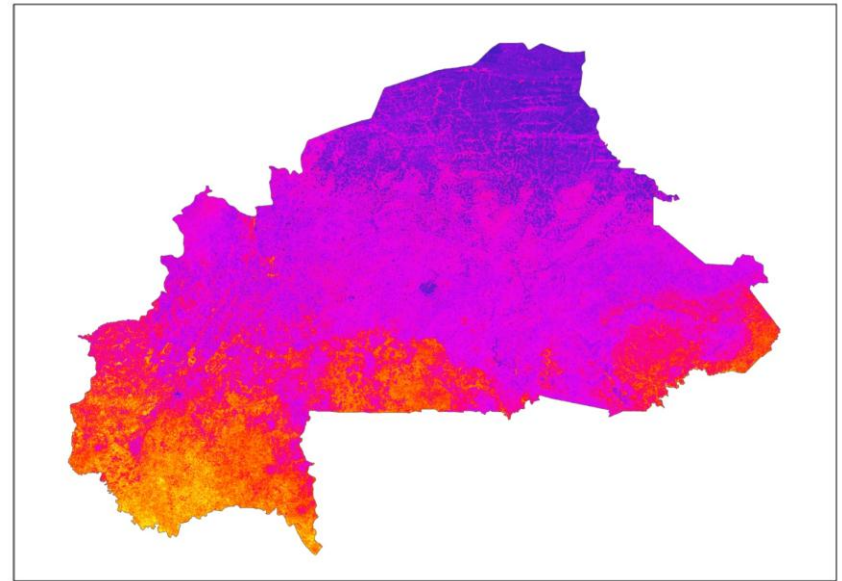
Please cite this site as follows:

Schmidt, M.; Janssen, T.; Dressler, S.; Hahn-Hadjali, K.; Hien, M.; Konaté, S.; Lykke, A. M.; Mahamane, A.; Sambou, B.; Sinsin, B.; Thiombiano, A.; Wittig, R.; Zizka, G. 2010. West African Vegetation Database.
URL: www.westafricanvegetation.org

- West African Vegetation database launched
- Available for managers of natural resources in West Africa
- Used to analyse vegetative degradation parameters

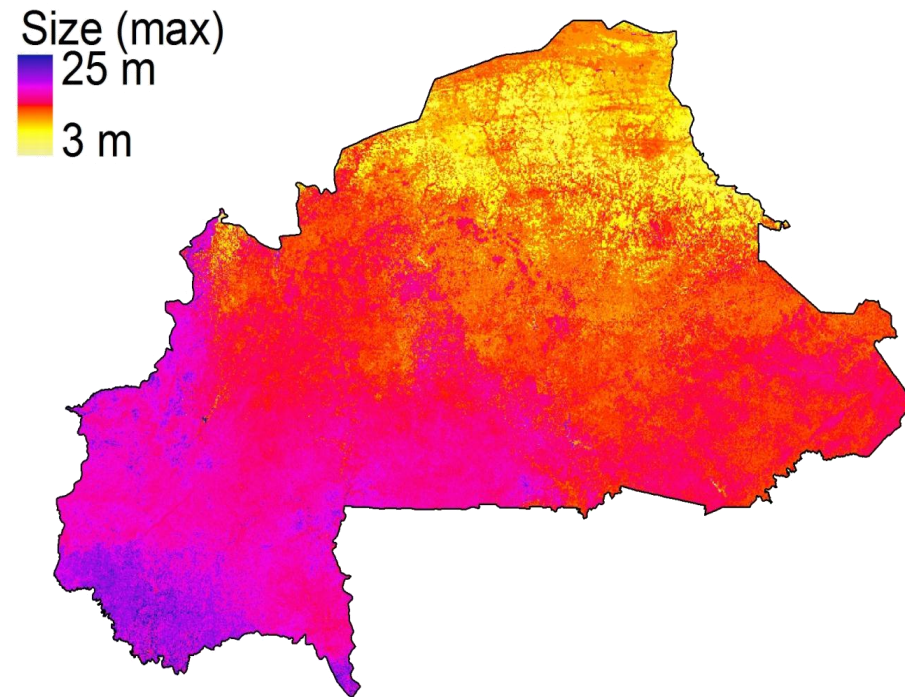
Vegetative degradation parameters 1

- Share of annual grasses
 - Known to vary with latitude
 - Sensitive to rainfall and grazing pressure
 - Short term response to environmental change



Vegetative degradation parameters 2

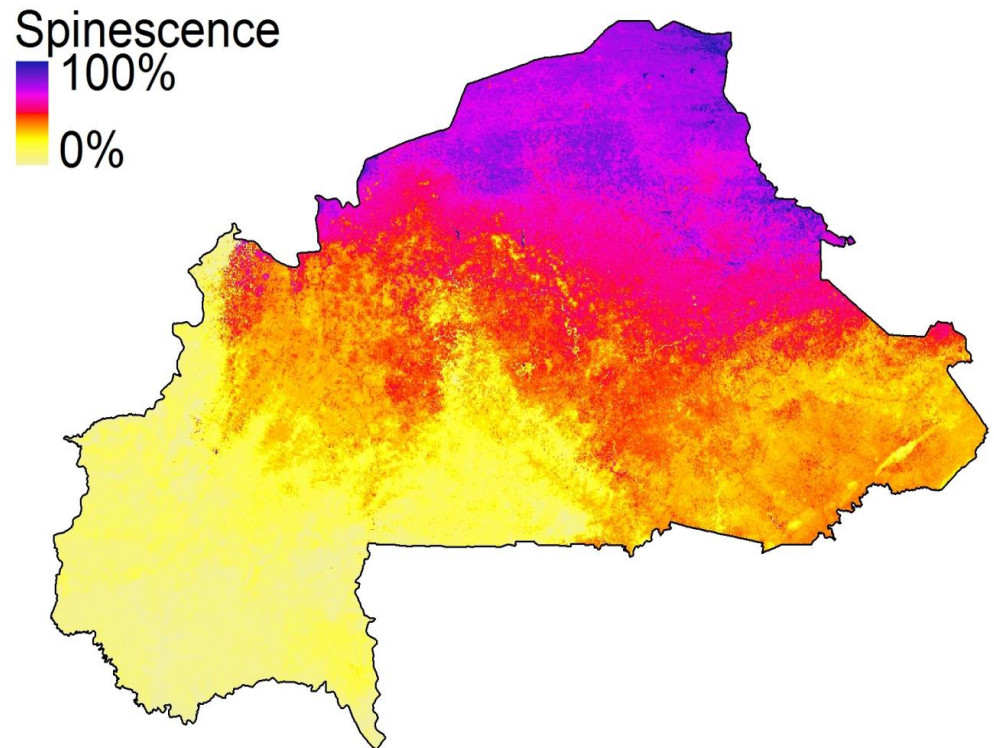
- Size of trees
 - Known to vary with latitude
 - Sensitive to rainfall,
 - Long term response to environmental change



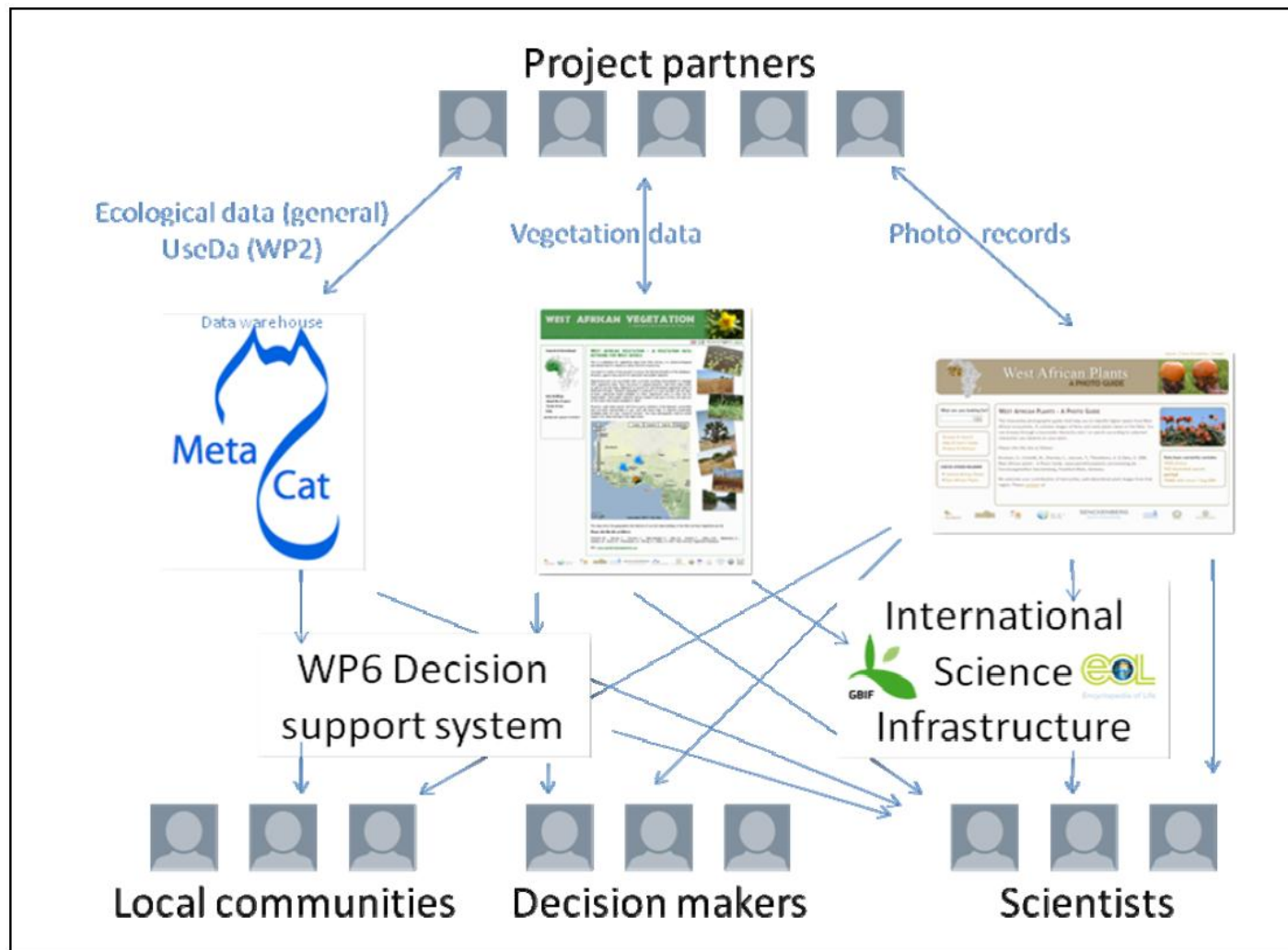
Vegetative degradation parameters 3

- **Share of spiny species among trees**

- Known to vary with latitude
- Sensitive to rainfall and browsing
- Long term response to environmental change



Stakeholders overview



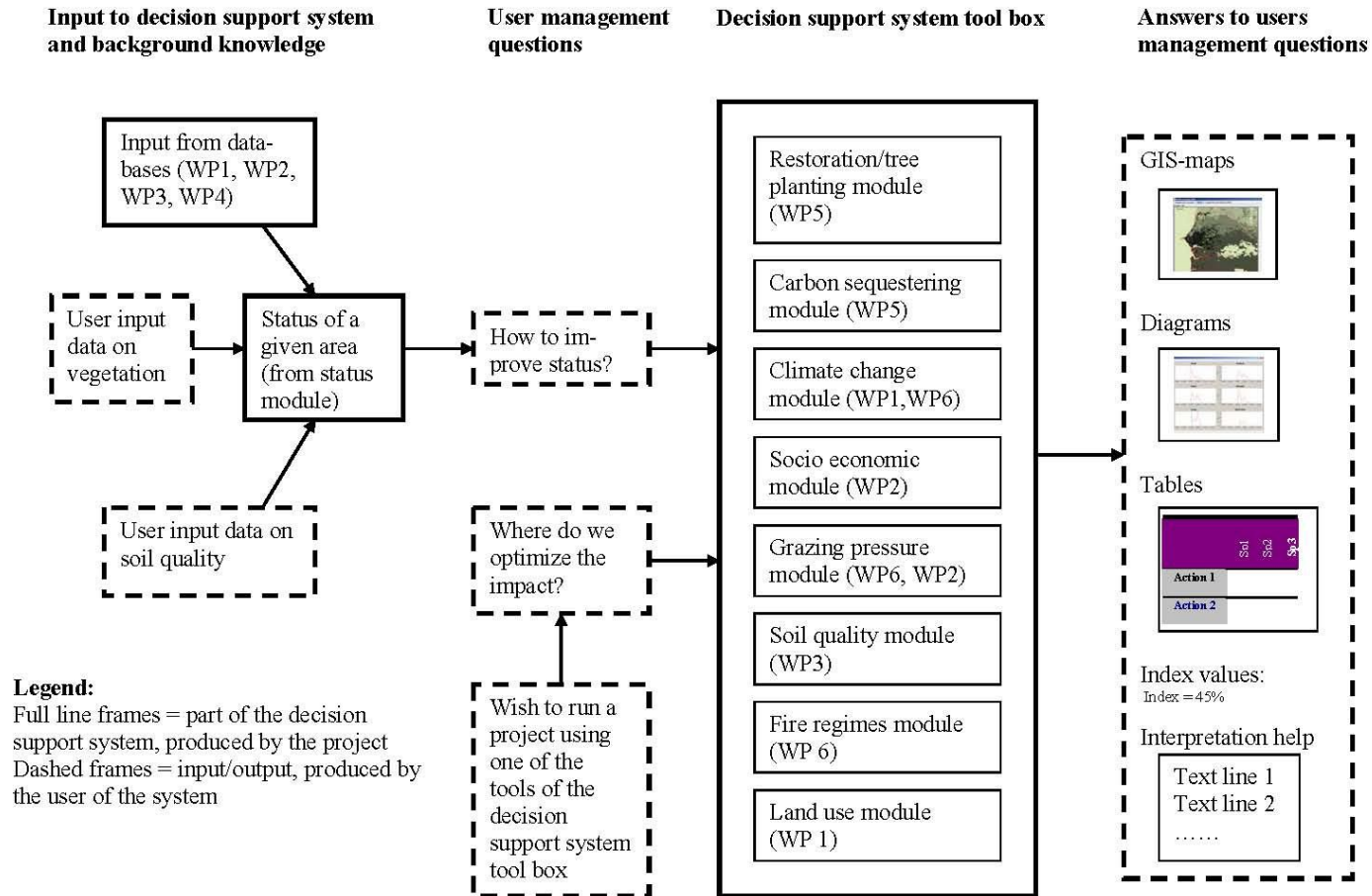
Stakeholders and dissemination

- Stakeholders
- Decision makers within natural resource management
 - Governments
 - Communes
 - National parks
 - Protected forests
- NGOs within environmental protection ?



- Dissemination
- Scientific dissemination
- Participation in a long list of governmental advisory councils in the participating African countries
- Part of UNDESERT decision support system
- United Nations Conference to Combat Desertification (UNCCD)
 - Local focal points
 - Headquarter in Bonn

Diagram of decision support system



Future research priorities in the field

- Sustainable utilisation of natural resources and job creation
 - how is it possible both to create jobs and secure sustainability at the same time
 - well in line with:
 - UN - Millenium Ecosystem Assessment
 - Intentions of Horizon 2020

Future research priorities in the field

- More emphasis on biodiversity and ecosystem services – also in Africa
- In line with:
 - UN - Millenium Ecosystem Assessment, finding 4 dealing with “the challenge of reversing the degradation of ecosystems while meeting increasing demands for their services”
 - “Rio +20” THE FUTURE WE WANT I. Our Common Vision

On behalf of the entire UNDESERT team:



Thank you for your attention