Mauritania Technology Fosters Tradition (TFT)

Presentation at the Environmental Trends Analysis (ETA) workshop, organized by FRAME and USAID

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1. Presentation of TFT

- Environment
  - Semi desert and ephemeral wetlands
  - 400 mm precipitation isohyet moves south
- People
  - Maure, Haratins/Black Maure, black Africans
- Objective
  - Document and formalize trad. property rights, with local people and using GIS

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Scoping: problem areas identified

- Environmental destruction
- Increase in conflicts between farmers and pastoralists
- Weakened position of tribes
- All collective property rights abolished
- State and public sector do not realize present problems

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Stakeholders and scales

Users and beneficiaries at various scales:

Global - Donors, Law com., Sahel countries

National - Govt., Public sector

Regional - Courts, Regional adm.

Local - Farmers, Herders, Trad. leaders

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Output

- Body of trad. knowledge pertaining to natural resource management, in local languages. In print and on the Internet
- Maps of resource use patterns
- Institutional and legal reform
- Increased stakeholder involvement
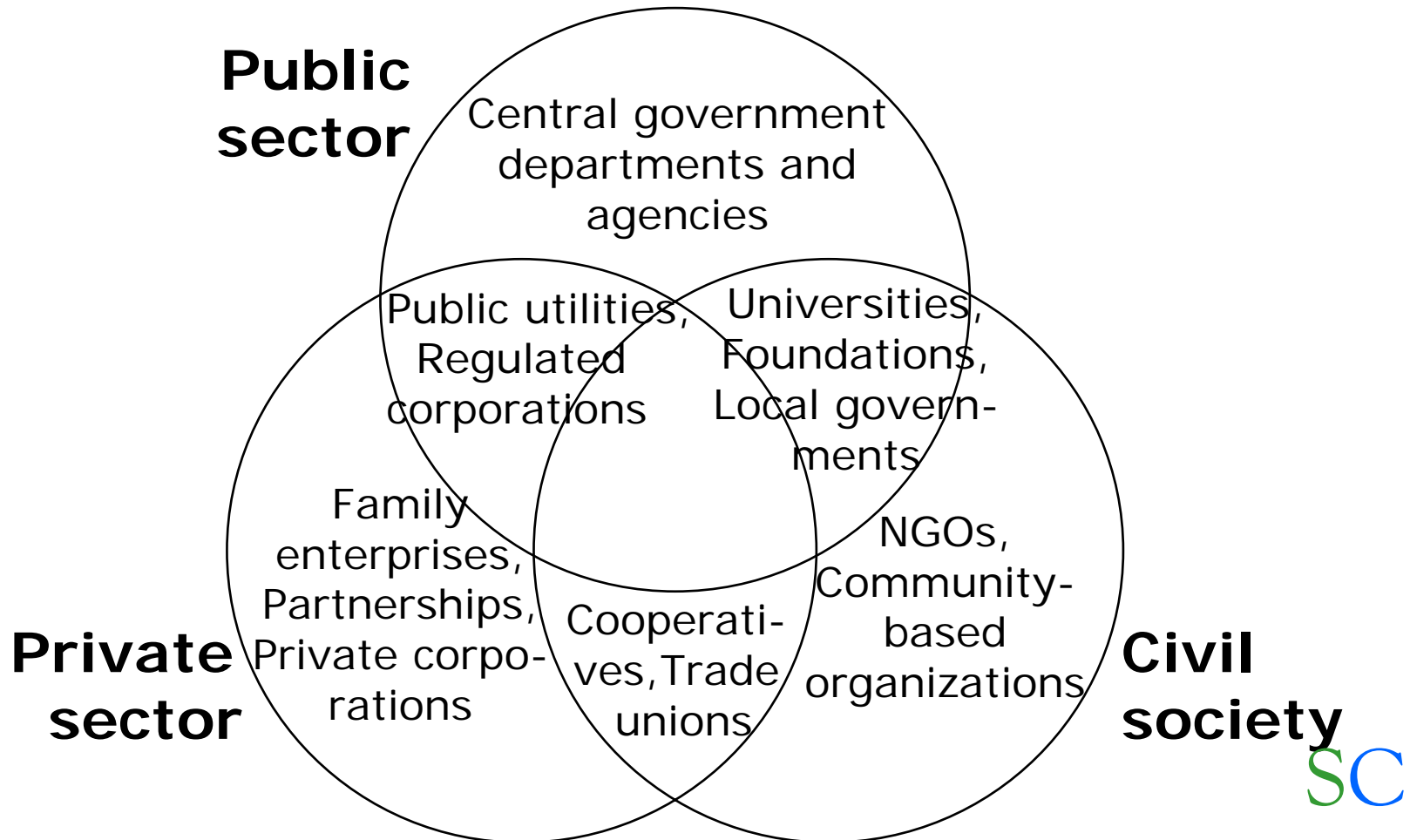- Decrease in the amount of conflicts

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2. Analytical framework

Key elements:
- Stakeholders and power
- Law and legal paradigms
- Cultures and knowledge systems
- Knowledge and knowledge management

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Societal sectors and stakeholders

Public sector

Central government departments and agencies

Public utilities, Regulated corporations

Universities, Foundations, Local govern-ments

Family enterprises, Partnerships, Private corpo-rations

Cooperati-ves,Trade unions

NGOs, Community-based organizations

Private sector

Civil society

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Power and empowerment

How to address power – and achieve empowerment – follows from the methodological approaches chosen:

- Ethics - knowledge be used by whom and for what?
- Consensus-building, Consultation, Governance, Involvement, Participation, Transparency, etc.
- Trad. knowledge as means and goal
- Scaling of knowledge, bottoms-up approach

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Institutions and institutional analysis

- Understood both as organizations and in the sense of institutional economics

- Facilitates and constrains the flow of knowledge and data between scales

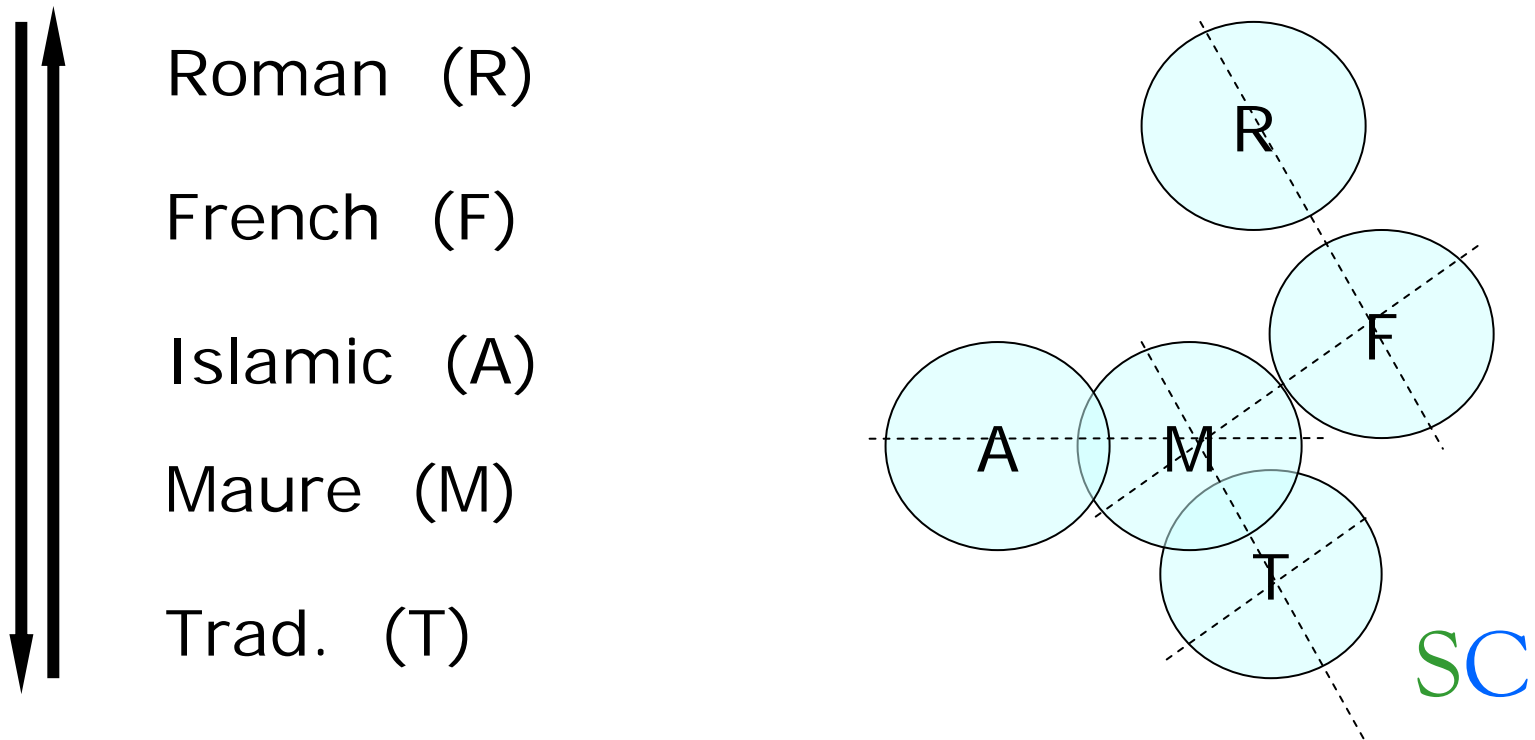- Important for understanding and assessing power and empowerment

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Law and legal paradigms

Legal paradigms
- – Traditional (tribal) law
- – Islamic law
- – French law

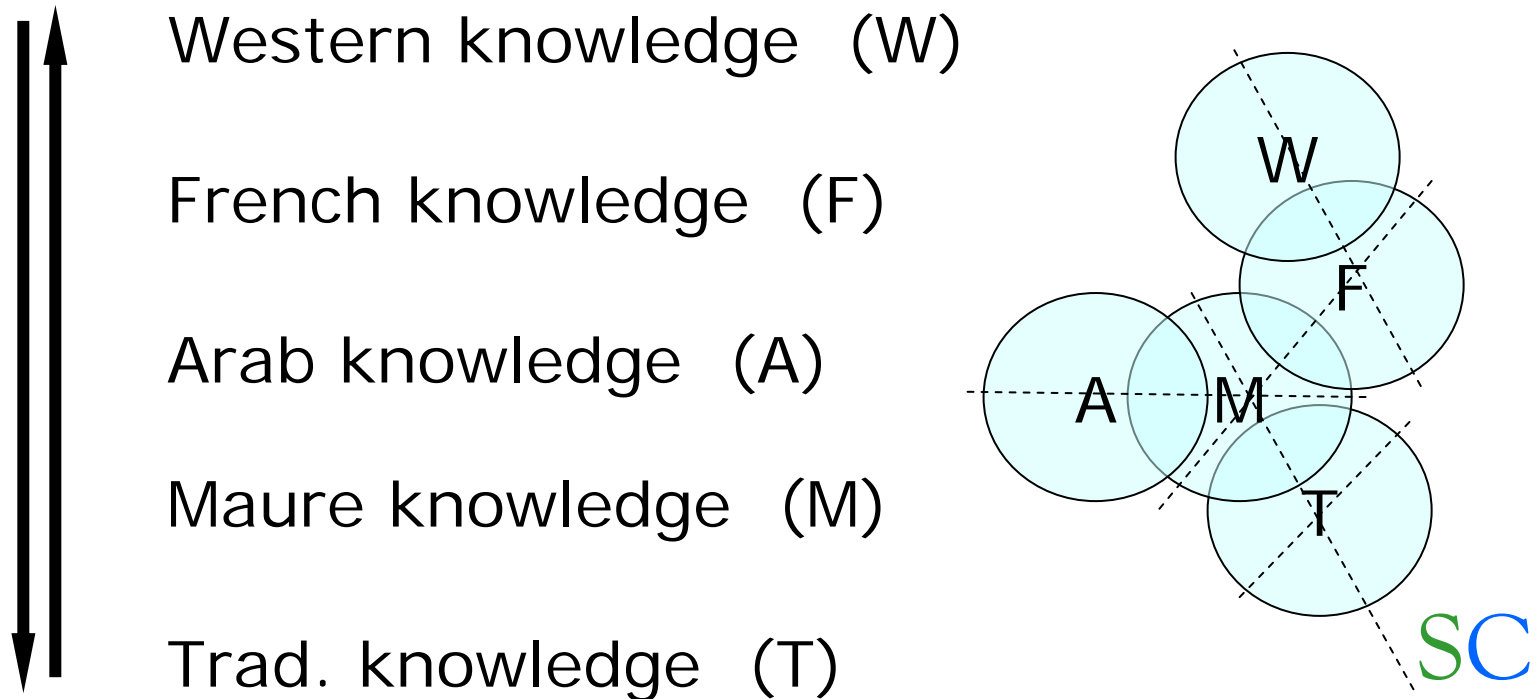- • Legal pluralism

- • Problems of application and coexistence

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Legal paradigms in Mauritania

Legal paradigms and relations:

Roman (R)

French (F)

Islamic (A)

Maure (M)

Trad. (T)

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Knowledge systems in Mauritania

Knowledge systems and relations:

Western knowledge (W)

French knowledge (F)

Arab knowledge (A)

Maure knowledge (M)

Trad. knowledge (T)
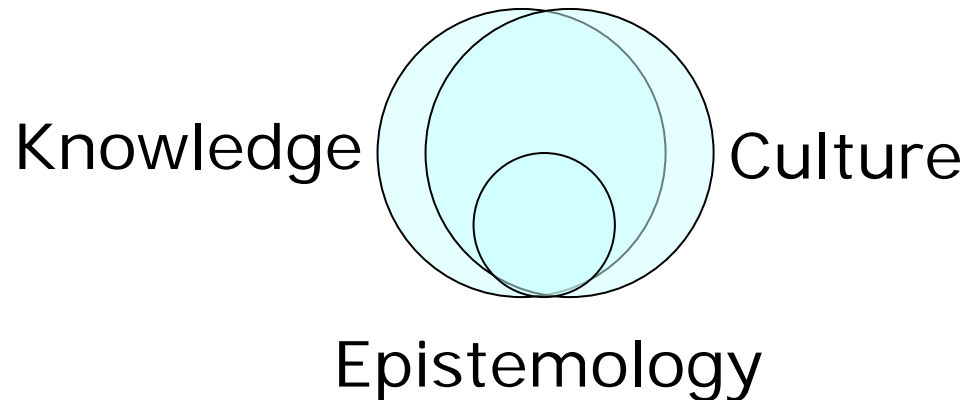
W

F

A M

T

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What is knowledge, 1?

- Sum total of a culture's accumulated experience, including transfer, views on itself, the environment, and relationships with the environment
- Knowledge and culture
  - Knowledge is part and parcel of culture

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What is knowledge, 2?

Relations between knowledge, culture and epistemology:

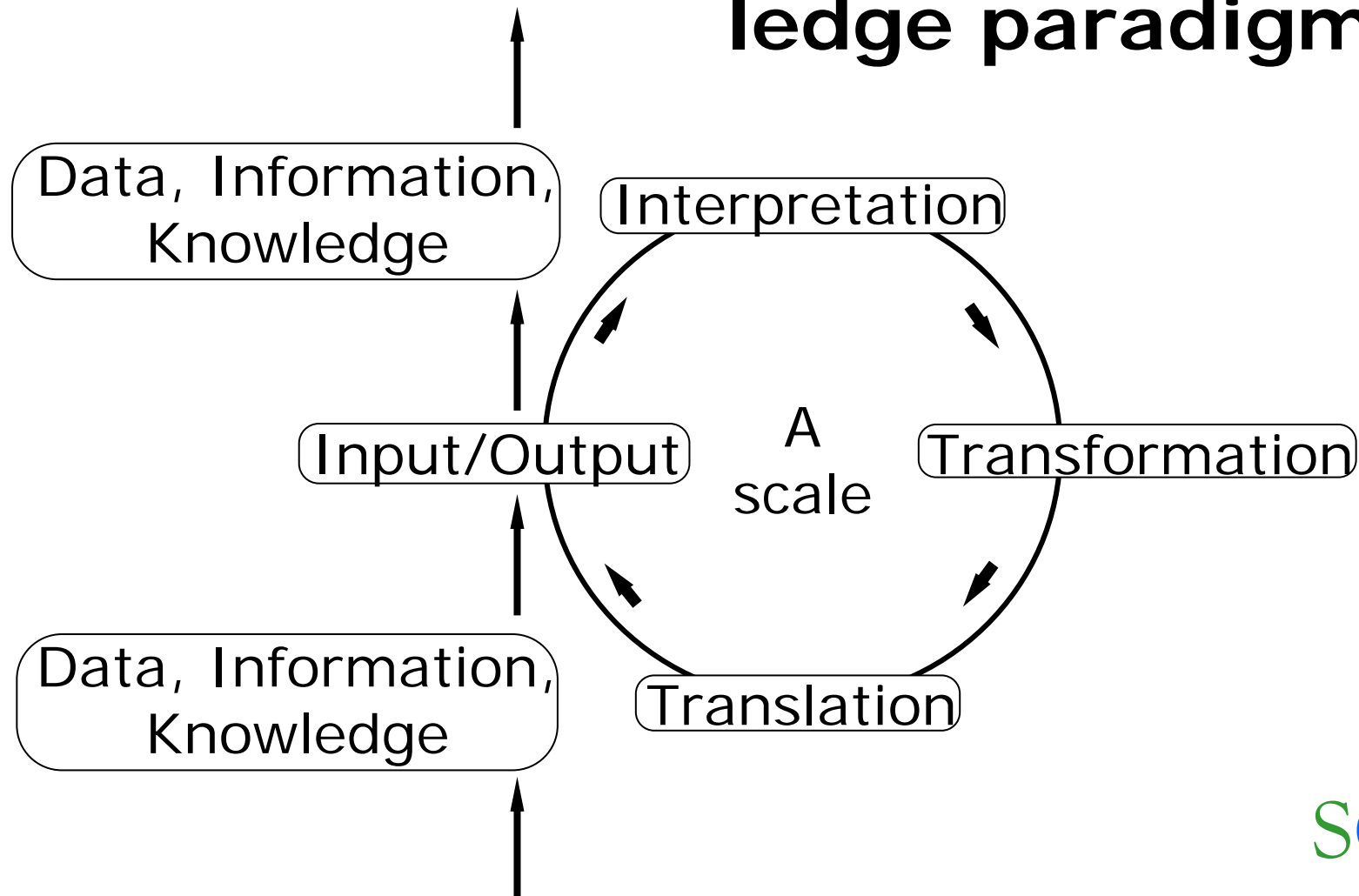Knowledge | Culture

Epistemology

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Knowledge management

Aspects of managing knowledge within and between scales:

- Dimensions
  - With whom to share, What to share, How to share

- Tasks
  - Collection, Evaluation, Categorization, Storage, Retrieval, Dissemination, Production of new knowledge

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Scaling legal and know-ledge paradigms

Data, Information, Knowledge

Interpretation

Input/Output

A scale

Transformation

Data, Information, Knowledge

Translation

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3. Drivers and trends

- Drivers and trends interact, and operate within and between the interacting natural and social systems, at several levels
- Causalities between the trends are very complex
- The drivers are:
  - Population increase
  - Desertification

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Trends, I

The trends are:

- Ecological system under stress
- Deforestation
- Decentralization and role of the State
- Diminishing role of traditional law
- Privatization
  - Land (fencing)
  - Water (dams, access to wells)
- Changes in production systems

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Trends, II

- Absentee pastoralism/agriculture
- Sedentarization
- Increase in <u>valuation</u> of land
- Infrastructure developments
- Increase in conflicts
- Increased focus on biodiversity
  - RAMSAR

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4. Property and use rights

The property rights system to be understood through the role of pastoralism in history:

- Reciprocal adaptation between pastoralism and environment

- Immigration, wars and rulers

- The French colonial legacy

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Characteristics

- A system well adapted to the specific characteristic of the local ecosystems

- Emphasis on making resources available to those that need it

- A non-equilibrium system
  - Availability of water – when, where, how long, and how much determine the operation and productivity of the system

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Systemic changes

- The trad. property rights system was a common property system for the original users

- Lack of a fit between the trad. system and today's situation is growing

- Today's situation can be characterized as open access

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5. Methodology

- Participatory Research Mapping (PRM)
  - Local people help identify research issues and collect data

- Mix of qual and quant
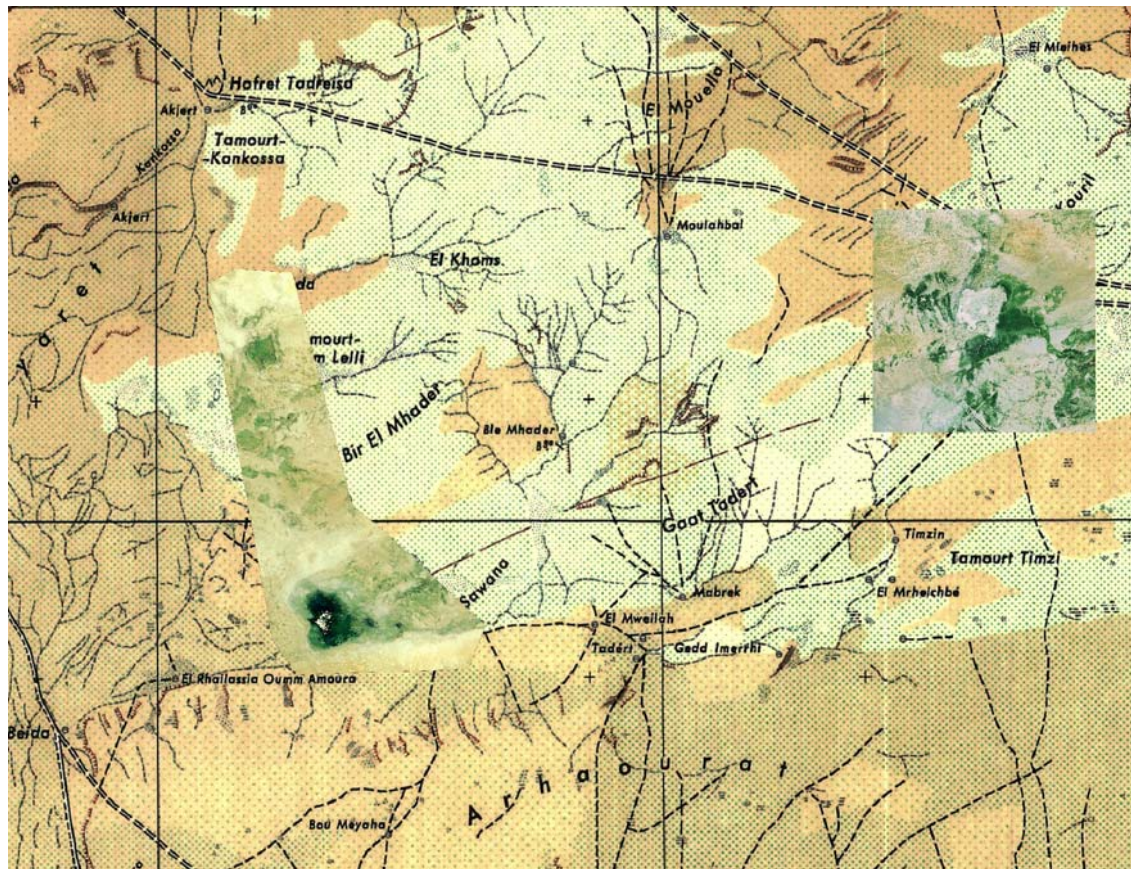 - Focus groups, Interviews, Surveys, GIS/GPS, Satellite imagery

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6. Data and maps

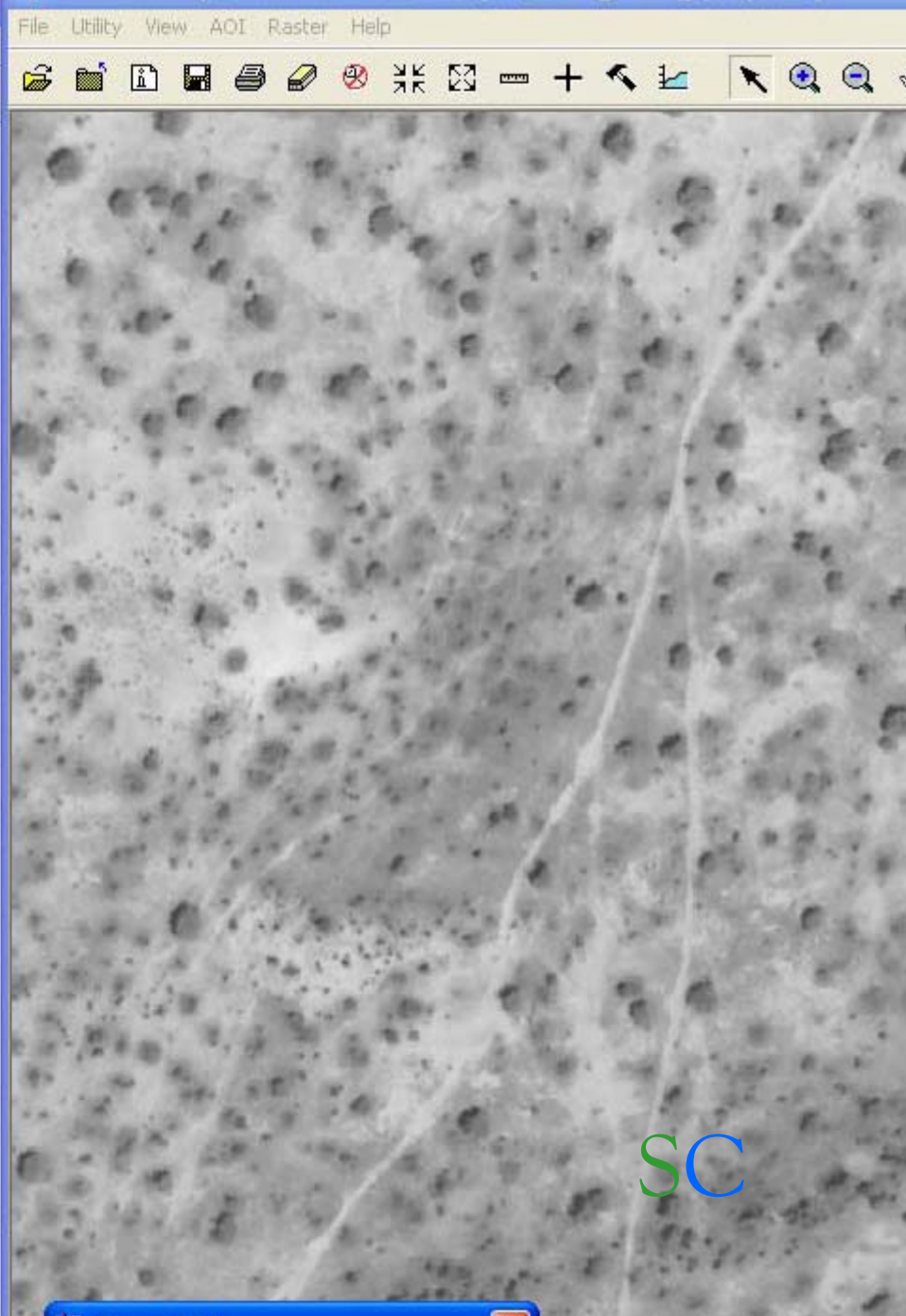Data include:

- Satellite imagery (Quickbird)
  - Digital pansharped color images, 0.6 m res.
- Survey data:
  - Socio-economics, incl. productive activities in agriculture, pastoralism, hunting and gathering
  - Toponymy
  - Resource use - What, Whom, When, Where, Why, How

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Project area overview

Catalog ID: **10100100033F4101** Acq Date: **Sep, 12 2004** Lat/Long: **16.34787° / -9.2705°**
Off Nadir Angle: **14°** Target Azimuth: **280°** Cloud Cover: **0%** Environmental Quality: **90**

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Akjert

Tamourt Kerkoura

El Ghorr

Moulahbal

Bois de chauffe

Charbon de bois mort

Get El Beida

Bois de construction

Charbon de bois mort

Grazing/fodder

Tamour Tourm Jule

Chilm

Bois de construction

Agriculture

Bois de construction

Ble Mhader

Bois de construction

Azz

Sawaha

Timzin

Gomme arabique

El Mrheichi

Agriculture

Mweilah

Tadert

Gomme arabique

Bois de construction

El Mdegga

El Rhailassia Oumm Amoura

Rhailassia El Beida

Archaoura

El Tintan

Bou Meyaha

Jamra

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7. Conclusions   Issues and concerns

- Methodological critique: capacity building, learning, reliability, validity, GPS

- Stakeholder relations

- National level: transparency, ownership priorities, and public sector situation

- Conflicts and conflict management

- Power and empowerment

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Next steps

- Data analysis
  - Quant – resource use patterns
  - Qual – conflict: causes and implications
- Prepare maps
- Build collaboration, locally and internationally
- Extend partnerships, international
- Further data collection: time series data

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