

WATER MANAGEMENT,
LIVESTOCK
AND THE OPIUM ECONOMY
Annotated Bibliography



AREU

This bibliography was compiled during the first stage of AREU's three-year study "Applied Thematic Research into Water Management, Livestock and the Opium Economy".



Funding for this research
was provided by the
European Commission (EC)

September 2006

About the Afghanistan Research and Evaluation Unit

The Afghanistan Research and Evaluation Unit (AREU) is an independent research organisation that conducts and facilitates action-oriented research and learning that informs and influences policy and practice. AREU also actively promotes a culture of research and learning by strengthening analytical capacity in Afghanistan and by creating opportunities for analysis and debate. Fundamental to AREU's vision is that its work should improve Afghan lives.

AREU was established by the assistance community working in Afghanistan and has a board of directors with representation from donors, UN and multilateral organisations and non-governmental organisations (NGOs).

Current funding for AREU is provided by the European Commission (EC), the United Nations Assistance Mission in Afghanistan (UNAMA), the United Nations High Commissioner for Refugees (UNHCR), Stichting Vluchteling and the governments of the United Kingdom, Canada, Denmark (DANIDA), Norway, Switzerland and Sweden. Funding for this study was provided by the EC.

Contents

1. Introduction	5
1.1 Historical background to development of the literature	6
2. Natural resources and environment	6
2.1 Summary of literature	7
2.2 Literature review	8
3. Water	18
3.1 Summary of literature	18
3.2 Literature review	20
4. Livestock	35
4.1 Summary of literature	35
4.2 Literature review	38
5. Opium	52
5.1 Summary of literature	52
5.2 Literature review	55
6. Land Tenure, Common Property Management	72
6.1 Literature review	72
7. Rural Livelihoods	89
7.1 Literature review	89

1. Introduction

This bibliography is being developed around the themes of natural resources management and agricultural livelihoods which are central to the EC funded project “Applied thematic research into Water Management, Livestock and the Opium Economy” (WOL). Specific focus in the bibliography has been given to the key thematic research areas of Water, Livestock, Opium, Land and Rural livelihoods. Although considerable overlap exists between these themes (and several documents are relevant to multiple themes), arbitrary categorizations have been made to avoid unnecessary duplication. Readers interested in a particular thematic area should proceed through the entire bibliography in order to ensure that they have noted all the related references.

The bibliography is not exhaustive but selective, with emphasis given to documents with a particular relevance to the WOL project. Given the rapid social, political and environmental change that has characterized Afghanistan during the last decade, the majority of referenced documents are drawn from the Post-Taliban period, spanning 2000-2006 (with a few earlier documents of special historical significance). While the majority of referenced documents pertain directly to Afghanistan, some documents which make important theoretical or comparative contributions to our understanding of the thematic areas of research have also been included.

The majority of documents cited are available either from the AREU library in hardcopy, or from the institutions which produced them. In some cases documents are available online and for these, electronic links have been provided. All 95 documents cited in the AREU livelihoods bibliography are available in hardcopy in the AREU library. All bibliographic references have been briefly annotated with an overview of content, major findings and conclusions, to assist readers to select those of interest to them. Each thematic section of the bibliography is prefaced with a brief summary and discussion of the state of the literature with attention drawn to obvious weaknesses, gaps and further research needs. The ongoing compilation of this bibliography is intended to serve two general purposes:

- The compilation of relevant documentation has assisted the WOL project research team to establish a general state of thematic knowledge; identify previous research initiatives, their findings, approaches and conclusions and identify the overall gaps in knowledge that remain. This activity has been important to plan and structure the WOL research so that it best complements these previous research actions. Additionally, researchers are drawing heavily upon secondary data described in these documents to complement, corroborate and contextualize WOL research findings.
- The bibliography is being compiled with the objective of providing a useful informational resource for researchers, practitioners and policy-makers working in the field of natural resources or agricultural systems development in Afghanistan. By organizing documentary material in this way, the WOL team has set out to assist stakeholders to easily identify documents with content relevant to their information needs, as well as help provide an overview of some of the current limitations of the existing information. It is hoped the bibliography will prove a valuable resource to others as it has to the WOL team.

This online bibliography is a ‘live’ document, and documentary references and citations will continue to be added throughout the three years of the WOL project.

1.1 Historical background to development of the literature

Given the primary role of the agricultural sector in the Afghan economy, the management of natural resources and conditions of the natural environment has long been recognized as an important factor underlying socio-economic development. To understand the current patch-work of documentary materials available to researchers and reasons for existing gaps in knowledge, it is important to appreciate the historical evolution of the natural resources literature in Afghanistan.

The development of natural resources had been identified as crucial to national development in the 1970's, when Afghanistan's 'front line' status in the cold war drew considerable technical support and interventions from both sides of the ideological divide. Much basic data (which influences planning even today), was collected during this period. With the collapse of the Najibullah regime and prospects for greater stability in the country, international organizations and researchers returned to Afghanistan in the mid 1990's to assess the impact of a decade of conflict and re-evaluate resource conditions. Several important international missions were conducted during this period. However, this process did not move far beyond the collection of new preliminary datasets before renewed conflict disrupted work. Apart from very limited programmes conducted under the Taliban government, there was little data collected until the Taliban were overthrown in 2001.

In the first couple of years following 2001 there was a massive international effort to address the 'crisis' conditions which were the legacy of 20 years of conflict. Much of this effort initially came through NGO's (which could respond more rapidly to local needs and problems than larger international institutions). The focus of this work was addressing emergency needs and identifying relief interventions. The studies upon which these interventions were based tended to be uncoordinated and localized.

Major institutions at this time were engaged in supporting the development of a more integrated approach to resources assessment. While early studies were primarily directed at providing assessments for prioritizing relief interventions, some work was also undertaken to provide national overviews of post-conflict resource conditions and status. While it facilitated medium and long term planning, this information was also necessary to develop strategies for institutional reform and to the support emergence of the Afghan government line-ministries as key actors in the management of natural resources.

However, the progress from relief to development was delayed by the severe drought of 1998-2003. Nevertheless, since 2003 a growing body of documentary material has been aimed at developing an integrated policy and institutional frame-work for natural resources management, which places the Afghanistan Government centre-stage.

Given the post-2001 focus upon emergency relief rather than development planning, very few long term or systematic studies have yet been completed to explore natural resources condition, utilization or management. In reviewing the contemporary literature and planning documents, some raw data from the 1970's is still cited. Clearly, given the tremendous political, social, demographic and environmental upheavals which have occurred in the country since the 1970's, any data from that period must be regarded with caution. Apart from validity, another problem with 1970's datasets is that much was actually lost in the destruction of libraries and Ministry buildings during the years of conflict, so these resources (where they exist) are at best patchy with limited utility.

In many respects, with so much pre-conflict data lost or invalidated, the research history of Afghanistan started in 2001 and with the focus on response to crisis, comparatively little in the way of systematic in-depth research has been undertaken or published since then. The current literature available to researchers is a composite of material from different periods, prepared to different standards and covering diverse geographic areas and thematic content.

However, with policy frameworks being established and growing capacity in Afghan institutions, some in-depth studies are now underway and these are expected to make important contributions to levels of knowledge about natural resources and agriculture.

2. Natural resources and environment

2.1 Summary of literature

At its most simplistic, the literature on natural resources and environment constitutes basic descriptions of status and condition. These outputs may describe soil conditions, land cover, water resources, biodiversity and land use practices. Assessment studies and evaluations have typically been undertaken to provide a basis for natural resource management planning after periods of conflict (e.g. Berding 1996, ICIMOD 1995). Not all of these studies draw exclusively from primary data and in some cases secondary data is quite old. However they establish (with varying degrees of accuracy) baselines for condition and identify potential threatening processes. Later assessments have been more comprehensive in scope, but again largely undertaken without a systematic basis to data collection (Saba 2001, ADB 2002, UNEP 2003). Post 2001, with an elected government and prospect for the development of mature government institutions, greater attention has been given to reform in the policy and institutional aspects of natural resources management.

In addition to conflict, many studies have specifically addressed the environmental impact of the recent drought on the agricultural sector and rural livelihoods (GoA and UN 2004, MIWRE 2004, Bhattacharyya et al 2004, UNAMA 2004). Most evaluations of drought impacts lay at least partial blame for degradation of resources and falling productivity on environmental mis-management and a lack of effective management institutions (Saba 2001, UNEP 2003 GoA and UN 2004, MIWRE 2004). In some cases studies draw a further link between mismanagement and the socially and politically disruptive effects of conflict. UNEP (2003) reports that severe environmental degradation is closely related to the collapse of local and national governance during the years of conflict. Some studies posit that post-Taliban Afghanistan is facing an 'environmental crisis' (Saba 2001) that requires massive reform of natural resources management systems at all levels (UNEP 2003) if disaster is to be averted.

In response to this growing understanding of natural resource management challenges in Afghanistan, a considerable corpus of material has been generated setting out strategies for improved resources management and rehabilitation (ADB 2004a). Given the scope of the problem, approaches are being developed to address weakness in natural resource management practice, institutions and the regulatory framework at all levels. At the higher institutional levels, planning now emphasizes institutional reform for NRM policy development and implementation. These approaches envisage a growing capacity for central government to coordinate NRM nationally, and adoption of Integrated Catchment Management through new River Basin Authority institutions. NRM development planning and implementation should therefore be integrated at all levels through a single framework (ADB 2004a).

Recognition of the damage done by conflict to local level NRM institutions has prompted a raft of new project documents, which significantly have been developed within the new national NRM framework (e.g. O'Brien et al 2004). These aim to address community capacity building, governance and livelihoods issues as much as technical ones, and look up to the line ministries (through the River Basin Authorities) for overall coordination. The complex principles and approaches underlying Community Based Natural Resource Management planning within the new framework generate a need for a more sophisticated appreciation of natural resources management practice and agricultural livelihoods than have hitherto been delivered through rapid assessments. Integrated and community based

approaches throw up the need for understanding of complex issues of land tenure, resource access, social relationships, gender, and the construction of multi-resource livelihoods.

The primary line-ministry charged with natural resources and agricultural development planning is the MAAH. In 2005 MAAH circulated its Master Plan for implementation, and this document attempts to codify the relationship between the respective Line ministries and their responsibilities towards NRM and agricultural development. Not only does the document draw together the most recent and comprehensive overview of natural and agricultural resource conditions, but it is also consistent with (and indicative of) the new centrally coordinated approach to natural resources development, building upon the River Basin Authorities approach, and promoting community based resources management (MAAH 2005).

A further and encouraging strand in the literature comes from assessments of how early NRM projects have actually fared upon implementation, drawing strengths, weaknesses and lessons from those important experiences (e.g. Gohar, 2003 and Lety et al 2006). These demonstrate a reflective and adaptive approach on the part of project implementers.

Despite a clear evolution in the state of knowledge within the natural resources sector there remain some discernable problems. The experience of Afghanistan has been quite unlike those of other developing countries, where diverse national and international bodies and institutions have contributed to a slowly accumulating body of relevant knowledge over thirty or forty years. By contrast, most literature and data from prior to the period of conflict in Afghanistan has been lost, destroyed or is no longer valid. Since 2001 studies have largely been responses to specific programming needs and problems. Consequently most have looked at NRM issues through the lens of these problems, rather than through a more general framework. Furthermore, restricted by time and resources (and often undertaken by transitory consultants), studies have been heavily reliant on secondary data or the collection of superficial data using survey or other methods at a limited number of locations. There is an almost total lack of systematically collected data which severely constrains our current understanding of complex NRM systems and the likely impact of planned interventions or reforms at a environmental, economic and community levels.

This lack of in-depth understanding during the development of strategic NRM policy (MAAH 2005) should be cause for concern, and a catalyst for the establishment of high quality systematic research to inform future policy making.

2.2 Literature review

Asian Development Bank 2004

Natural Resources in Recovery Manila, ADB (pp75)

<http://www.adb.org/Documents/Papers/Securing-AFG-Future/Natural-Resources-Recovery/default.asp>

This paper sets out a strategic vision for the development of sustainable natural resources management in Afghanistan as part of an integrated approach to rural and agricultural development. The strategy sees the role of overseeing and coordinating NRM activities switching from the NGO community and international organizations to the MEW, MAAH and MRRD. An important element in this transfer will be the building of capacity in these institutions.

The vision encapsulates institutional and organizational reform, together with improvements in productivity and sustainability with the ultimate goals of improved livelihoods through sub sector development (e.g. water, agriculture, forestry, rangeland). The document sets out priority actions for implementation along with investment priorities and identifies the financial requirements of the assistance package. The report provides:

- Brief overviews of the current status of main thematic areas, (agriculture, water, land tenure, forests and rangelands, environment and institutional arrangements)
- Outline of proposed sub programmes in these fields
- Discussion of strategic vision goals and priorities to be addressed through this mechanism

With ADB heavily committed to supporting aspects of natural resources management development such as Integrated Catchment Management and land reform, this document provides a valuable insight into the direction of NRM reform in Afghanistan, both at institutional and local levels. The proposed strategy encapsulates the ongoing transition between uncoordinated NGO actions to support NRM at the local level, to a strategically planned and coordinated plan of development centrally driven by the government. The document also provides some recent data on current resource condition and productivity.

Asian Development Bank 2002

Natural Resources and Agricultural Sector Comprehensive Needs Assessment: Final Kabul ADB (pp244)

http://www.export.gov/afghanistan/pdf/natural_resources_and_agriculture-sector_needs_assessment.pdf

This document describes the results of a series of missions undertaken to Afghanistan during 2002. These missions had two general objectives; to plan projects for quick impact interventions, and to develop a medium term strategy for institutional development of the NRM and agricultural sector. The report contends:

- Natural Resources Management: Traditional natural resources management mechanisms have broken down during recent conflict. These need to be rebuilt using a community development approach. There is a need for strengthened legislation and technical capacity and at time of writing Afghanistan did not have an agency responsible for protection of natural resources
- Water Resources Management: Water is a high value resource prone to scarcity and drought in Afghanistan. The Government needs to develop a longer term strategy for water management, including improved water harvesting and watershed management, more effective control of groundwater use, improved information on water availability and improved irrigation structures
- Community Development: There needs to be corresponding improvement of basic services to rural communities
- Crop Production: There is potential for improving productivity through both introduction of improved varieties and micro scale watershed management. Current irrigation efficiencies of 25% estimated.
- Livestock: A range of problems identified including land access, tenure, disease, feeds and sustainability
- Off farm employment: support needs to be given to off farm income generation given the relatively small size of farm holdings. Efforts need to be made to support small scale rural enterprise.

The report concludes that there is a clear need for institutional development, regulatory and legislative policy reform in the medium term, encompassing all sub-sectors of natural

resources management. The document is of primarily historical interest in that it indicates the range of problems identified immediately after the fall of the Taliban and the approaches (including institutional reform) identified to deal with these. It shows some of the origins of current NRM policy and institutional reform directions. The report includes several useful appendices covering individual natural resource and agricultural sub-sectors.

Berding, F. 1996

'Afghanistan: Promotion of Agricultural rehabilitation and Development Programmes: Land Management' Islamabad, FAO (pp 48)

This report was compiled as part of the Afghanistan Agricultural Strategy Initiative. It constitutes a highly valuable reference resource on Afghan Natural Resources, drawing together a large body of material pertaining to natural resource conditions and use in Afghanistan and reflecting the state of this knowledge in 1996. The report:

- Draws upon available literature to identify and characterize diverse bio-geographic and ecological zones. Considerable depth of data on 11 described zones
- Land cover and land use data for whole country
- Provides information on soils and their distribution and cites literature where more detailed information may be found. Discussion of agricultural soil fertility, yields and fertilizer recommended use for different provinces/crops. Overview of fertiliser use nationally.
- Information on cropping densities is provided, with reference to declining yields and problems of salinity
- Cultivation processes including ploughing efficiency by draught animals
- Discussion of rainfed agriculture and the problems inhibiting this; also grazing and threats to use of rangelands
- Discussion of forestry, nature conservation and land tenure issues

The information in this report is extremely valuable in describing the natural resource characteristics of the country as a whole. Throughout it provides citations and references for more detailed information, and primary sources. However, in addition to be rather dated, the data is largely focused at a country level and thus has only limited utility for local level application

Government of Afghanistan and United Nations 2004

The Decline Towards Crisis: Afghanistan's Deteriorating Drought Situation (pp 24)

This document constitutes the basis of a request for assistance in drought relief and in doing so presents an overview of drought conditions throughout the country. The document state that Afghanistan had undergone six years of drought by 2004, exacerbating water shortages and food shortages. The report highlights at least 17 localised (provincial) pockets of drought.

- Drought compounded by poor harvest, crop failures, Normalised Difference Vegetation Index low, falling water table, riverbank erosion and desertification. Refugee return (3 million) compounds population pressure on resources.
- Nangarhar, Herat, Ghazni, Badakhshan and Uruzgan least able to meet their food needs.
- In the last 12 months, food insecure population has grown by 18.5%
- Coping strategies of vulnerable dependent upon harvest, diversity of incomes and any previous savings

- Natural drought intensified by human intervention, especially sinking bore wells for irrigation, or upstream diversion of water sometimes by armed military commanders against whom villagers are powerless
- Pressures have triggered increase in food price, decrease in labour prices and decrease in livestock prices
- MRRD appointed to take coordinating role in drought relief: Specific sectoral response plans are detailed for Water, Food, Agriculture, Family Shelter and Multiple

This document sets out the prevailing drought conditions in the country and indicates the steps planned by government to mitigate drought conditions.

Ministry of Agriculture, Animal Husbandry and Food 2005 *Master Plan* MAAHF (pp 379)

The Master Plan lays out the Ministerial strategy for Agricultural and Natural Resources development and the priorities and actions of the MAAHF for the five year period and represents an investment totalling \$1,384 million. The goals of the plan include a 6% overall growth rate in the agricultural sector, leading to a doubling of farm incomes within 12 years. Because of multiplier effects it is anticipated rural incomes as a whole will also double.

The Master Plan succeeds the 2004 Policy and Strategy Framework. It identifies several key goals;

- Ensuring food security
- Earning foreign exchange
- Poverty reduction
- Improved income and status of women
- Alternative livelihoods to Poppies
- Building the private sector

The Masterplan identifies commodity priorities for investment (those with the greatest potential for growth); these include horticulture and livestock. Major chapters of the report provide situational analyses and causal analyses on different thematic areas and then set out objectives and strategies for development. These successive chapters cover; horticulture, livestock, cereals and food security, natural resources, research and extension, financial systems, community and farmer organizations, gender, policy and monitoring and evaluation, private sector, quality control, human resources and domestic markets.

The Masterplan represents the definitive strategy for agriculture in Afghanistan. The document also collates much of what is currently known about the status, condition, needs and challenges facing the agricultural and natural resources sectors and thus constitutes an extremely important resource.

O'Brien and M. Box, A. 2004

***Feasibility study for upstream water catchments protection and forest regeneration project in Northern Afghanistan* Unpublished project document, Kabul EC (pp127)**

This study begins with the contention that in the post-conflict environment, rural social and community institutions have been weakened and external support is desirable to build local capacity for the sustainable management of natural resources. The approach looks not only to build community capacity, but also to provide government with CBNRM experience.

The project which is the basis for the study has emerged from UNEP recommendations to nurture community based approaches to NRM. These recommendations arise both to

ensure 'soft enforcement' of locally determined approaches to land management, but also to increase the likelihood of sustainability, given the current weakness of government institutions. The focus of the study on denuded upper catchment forest areas is also drawn from UNEP studies (See UNEP 2003, this bibliography), but located to engage with the activities of the Kunduz River Basin Project RBA. The report provides:

- A general description of the geomorphological, hydraulic and ecological characteristics of upper catchments in Afghanistan, their economic productive potential and ecologic functions with a focus on threatened Pistachio forests
- A review of the experiences of other upper catchment and forest management projects in Afghanistan: notably those of Madera and DACAAR.
- A review of the institutional framework for NRM in Afghanistan , including an overview of the roles of the line ministries and the cross-ministerial themes driven by them. Specific attention is given to the process of institutional reform and shifting focus to community empowerment for NRM. Included in this planned devolution is the commitment for River Basin development through the establishment of autonomous Authorities.
- A review of forestry legislation and policy and growing orientation toward community forestry
- An economic justification (although with no real data) for improvement of management in upper catchments, with an evaluation of the commercial potential for Pistachio production and export.
- A review of the overall context of the upper Kunduz River basin, notably the lack of effective governance and state, the wide distribution of poppy and illicit cultivation with associated risks, evidence for the current over-utilization of forage and pastures (stated as ratios for different parts of the river basin)
- Consideration of social, gender and ethnic issues which impact on land use and resource management, notably the marginalization of nomadic communities in current programming and the current institutional and human resource context of the study area.
- The latter part of the document sets out the tools, principles and approaches to be adopted by the planned reforestation project, including an overview of the technical aspects and anticipated economics of the intervention and the expected role of communities and government partners

This document describes the principles and assumptions underlying the development of a community based Natural Resources Management project, capturing much of the new thinking about community empowerment and restored governance in environmental management which is now beginning to shape official natural resources policy in Afghanistan. The more interesting elements of the study relate to the institutional and governance issues which are identified as key to successful reforestation.

ICIMOD 1995

'A Biodiversity profile of Afghanistan' in *Biodiversity issues in the HKH*. (pp9)

<http://www.icimod.org.np/focus/biodiversity/afgbio.htm>

This paper describes the biodiversity of Afghanistan. Provides an overview of land forms and ecological zones (and their extent) together with the species which inhabit them. Of special interest are sections on Agro and Livestock biodiversity. Indications are also given as to the extent and conservation status of all species. The report concludes with some observations on conservation management requirements in Afghanistan. Information is presented on:

- Desert and steppic vegetation, forests types
- Wildlife, including birds, reptiles and fish
- Wetland habitats and their species

- Agro and Livestock biodiversity

The paper contains a wealth of background information describing the Afghan natural landscape and the extent of the threats to it. It further provides important insights into the threats to the sustainability of Afghanistan's primary production based economies and livelihoods.

Gohar, A. 2003

Forest and forestry in Jaji and Alingar; The Impact of the IAD programme on the sustainability of natural resources. Kabul, DACAAR (pp26)

This report considers the impact of a natural resource management programme aimed at sustainably managing and rehabilitating forests in two districts of Paktia and Laghman. Forests are scarce in Afghanistan, occupying only about 2% of total area, but even so there have been considerable losses owing to conflict and the breakdown of management systems during recent periods of warfare. The study examines the causes of deforestation, effectiveness of programme interventions on forest conservation and sets out new options for improved and sustainable forest management.

The study concludes that forests have suffered directly from the impact of war, and secondarily from the breakdown of traditional management systems and rise of inter-community conflict. Furthermore, the social and economic disaster following the war has created strong economic incentives for forest users to use forest resources unsustainably: the growth of urban demand for fuel wood has created new markets and opportunities. DACAAR's approach to deal with these losses has been to:

- Strengthen local livelihoods to lessen dependency on forest products
- Provide for technical programmes to facilitate sustainable management through raising plantations and other methods

The study concludes that although the programmes are still in their early stages they should perhaps adopt a greater diversity of assistance strategies for different categories of beneficiaries (according to need). There was also a need to link NRM programmes to the initiatives of other service providers and a need for local capacity building (of both staff and community).

Ministry of Irrigation, Water Resources and Environment 2004

Emergency Drought Assessments in twelve Vulnerable Southern Provinces (pp19)

An analysis and assessment report prepared by government study groups dispatched to vulnerable provinces. It identifies impacts and negative effects on the lives of inhabitants especially in rural areas. Data collected summer 2004 from Zabul, Ghor, Uruzgan, Kandahar, Helmand, Farah, Nimroz, Herat, Ghazni, Paktia, and Khost.

- Drought not purely environmental but impacts on rural livelihoods, generally worsening conditions
- Springs and *karizes* up to 90% dry. Ground water level has dropped between 8-10 metres during 6 years of drought. Technical, managerial problems in irrigation infrastructure and growing population pressures accentuate problems.
- Damage to dams (Sarda, Zanakhan and Sultan in Ghazni) has led to sedimentation in reservoirs and canals, reducing delivery of irrigation water. *Kariz* are also in need of cleaning
- It was reported that only 25% of agricultural land was actually under cultivation owing to water scarcity... Uncultivated lands become desertified and arid. About 10% of land canal irrigated and 5% irrigated by *kariz* and wheel buckets.
- Forest and pastures in some places decreased by 80% and communal grazing lands almost eliminated

- Aridification of agricultural areas has prompted population migrations,
- While foodstuffs have remained accessible in market centres, at a village level they have been scarce or sometimes absent.
- In the provinces, public land and other resources have in some instances been appropriated by elites or the powerful
- Rural unemployment has been high, and this has been accentuated by in-migration of returning refugees. In some areas, rural populations have abandoned their holdings and moved to urban areas...forced by poor water supplies and lack of employment
- There has been a decrease in livestock populations due to scarcity of forage

The mission provides specific threat/condition reviews and recommendations for each of the 12 provinces. The document is useful in providing a province by province overview of the impact of drought by mid 2004, and in outlining government strategy to deal with this. However, no specific data is provided at the individual province level.

Saba, D. 2001

'Afghanistan: Environmental degradation in a fragile ecological setting' *International Journal of Sustainable Development World Ecology* 8, (p 279-289)

The majority of Afghanistan is composed of rugged and sparsely vegetated rocky hills valleys and desert. Only about 15% of its total area is suitable for cultivation. Until the middle of the twentieth century resource users were able to sustain an equilibrium between resource consumption and regeneration. However, emergent development accentuated by years of warfare has led to degradation of the environment and only 6% of cultivatable land is now productive.

- There has been a mean annual decline of 3.5% of agricultural production since 1978, equating to a loss of 30% of or agricultural land and pastures through degradation or abandonment
- Afghan pastures are generally located in the lower valleys and steppes which have been afflicted by soil erosion and land mines. The loss of these pastures has severely affected Afghan nomads, causing mass migration into Mazar and Herat
- Growing urban centres have swallowed land from surrounding fertile areas, and important wetlands have been drained for urban expansion.
- Owing to topography and arid climate over 80% of the land could be subject to soil erosion. Tectonic activity, irregular rainfall events and friable soils contribute to erosive processes
- The collection of fuel woods and over utilization of vegetation increases the risk of erosion.
- In arid areas desiccation leads to loss of humus and results in sandier soils and desertification and there is evidence for reduction in the quality of grasses.

Afghanistan is facing growing environmental pressures, the result of unsustainable resource management practices, warfare and demographic change. The paper cites the country as facing 'environmental crisis' and posits that once destroyed, fragile ecosystems will be much harder to restore.

UNAMA, 2004

Registan Pasture/Water Assessment Central Asia Development Group, Kandahar (pp126)

Report commissioned to ascertain the feasibility of encouraging return of Kuchi to Registan Desert, (Kandahar and Helmand Provinces). Extensive assessment of natural

resources and use systems of the Registan Desert is given, as well as the development of various workplans for resource rehabilitation after the drought.

- Detailed information is provided on soils and climate for the Registan area
- Detailed information provided on water quality. Irrigation 60% efficient. Discussion of types of wells and artificial water catchments in the southern desert together with the management of this infrastructure
- Pasture assessment and results of botanical survey; comment that no comprehensive flora exists for region. Analysis of pasture by constitution. Condition assessed by frequency distribution of species. Standard CC assessment made on the basis of visual range assessment, not measurement.
- Some data on livestock production in Kuchi herds (inputs/outputs) without sourcing data and socioeconomic data on migration routes and tribal area distribution

A useful document providing insights into Kuchi natural resource management and use to a level of detail not found elsewhere. However, the study was limited in value by its relatively small scope and constrained period of fieldwork, effectively just single visit data.

UNEP 2003

Afghanistan: Post Conflict Environmental Assessment UNEP Nairobi Kenya (pp176)

This report represents the findings of UNEP's Post Conflict Environmental Assessment study, which approached the questions of environment as a cross cutting issue relevant to the work of many sectoral ministries. The scope of the study includes urban pollution, water resources, waste and sanitation, deforestation, air quality desertification and biodiversity. The report also address the institutional arrangements for the management of the environment, including institutions, environmental laws and international cooperation agreements. The findings of the report were based upon field studies conducted during September 2002.

- The study found that water, essential to agricultural productivity was in many cases being mismanaged and these resources were sometimes subject to pollution. Improved water resources management was identified as a national priority.
- Major problems were identified in the urban environment, mainly related to ineffective waste disposal and sanitation, directly placing human health at risk
- The study recorded depletion of forests and pastures through mismanagement, accentuated by erosion and generally declining productivity of the land base and soils.
- Evidence was also found for threats to the wildlife of Afghanistan, including the hunting of key species such as Leopards and Marco Polo sheep, and the degradation of important habitats such as wetlands. Management of protected areas had effectively terminated.

The report concludes that the most serious forms of environmental degradation result from the collapse of local and national governance. The conclusion of the report calls for improved Ministerial cooperation and recognition of environmental issues, along with legislation and mechanisms for enforcement. The report also calls for international support and resources for support Afghanistan in these challenges, and strongly links socio-economic development and livelihoods security to achieving environmental sustainability. The report produces a range of specific recommendations to address problems identified in the study.

The report was intended to provide an rapid overview of conditions and major problems shortly after the fall of the Taliban government. Most of the observations offered are not based upon data or systematic research but rather general impressions. Data, where it is offered in the report is patchy and related to studies in specific locations. Therefore the document should be considered more a general policy document and statement of direction rather than an accurate assessment of conditions. It should further be recognized that the institutional context for environmental governance described in the report (a particularly useful section) has changed significantly since the time of writing.

Lety, D. and Pascal, P. 2006

Lessons learnt from the evolution of the needs and the relations between all stakeholders in a transitional state from relief to development, Kabul, Goup URD (pp5)

This paper presents a case study of a planned NGO intervention (flood control) to improve the productivity of agricultural lands on the Shaman Plain in Bamyan.

The paper outlines the basic process of planning the intervention and adopting a 'systems' approach defines the ecological, agricultural and sociological context of the problem. The study indicates that current mismanagement and under productivity of parts of the plain may be related to forms of tenure. The author argues that new forms of water management must be accompanied by effective social organisation to ensure its management.

The author reports that progress on the project by the flood management NGO was halted by the National Environmental Protection Agency, pending impact assessments. This is offered as evidence of the need for NGO's to engage with all stakeholders including emergent ones (such as new Afghan government institutions). The paper concludes;

- It is important for planners in Natural Resource Management Interventions to recognise complexity diversity and dynamics
- There is a clear need for effective community mobilisation to achieve NRM project goals

While not offering much new by the way of content or methodological approaches the, the paper documents an evidence of the important transition now underway in Afghan environmental management, as the emphasis and responsibility for action shifts away from international NGO's working in isolation to the fledgling Afghan government institutions.

Asian Development Bank, 2004

Agricultural Research and Technology Transfer Systems. ADB (102 pp).

The paper is the output of an ADB technical assistance project which is directed at assisting the Ministry of Agriculture to provide assistant to the MAAH to develop systems for applied on-farm research and transfer of technologies.

- The paper starts by outlining its terms of reference, objectives, and methodology for selection and analysis of programmes. The paper continues by discussing programme implementation structures, including the main areas of intervention of the MAAH, the current extent of coordination of research and technology transfer programmes,
- The next part addresses the agricultural extension development programme. It looks at the current status and perceptions of both the MAAH extension work, and also what the Ministry perception of the role of extension. The paper then proposes an alternative perception of the programme, together with specific interventions, designed to move the MAAH away from seed and fertilizer distribution towards

support for the private sector. The final act to this part is to budget the intervention and present a logframe for analysis of its success.

- The paper moves on to consider the horticultural research programme. It looks at the steps needed to improve the development of this sector, specified in terms of ensuring that the horticultural sector responds to the demands of the international market. It proposes a programme and institution whose purpose would be to ensure that this would happen. It also overviews the need for research activities in this sector. This is then costed, a logframe proposed and activities specified.
- The next programme proposed is the National Wheat Based Farming Systems Research Programme. The timing and implementation methodologies of the programme are outlined, the programme is costed and a logframe proposed.
- The paper moves on to “integrated pest and disease management systems for food security”. The programme concept is outlined, the needs in terms of facilities and training specified, timing, implementation methodologies, costs and a logframe are all elaborated upon.
- The last programme to be considered is “development of post-harvest technologies for food security and income generation”. This briefly specifies the need to develop facilities, and outlines costs and a logframe.
- A series of Annexes then outlines the MAAH core functions, workplan and schedules, suggestions for cooperation in research, involvement of media, possible restructuring of the MAAH, and a review of the current facilities for research.

This provides a useful overview of the different research programmes planned in the agricultural sector.

Bhattacharyya, K. Azizi, Shobair, S. and Mohsini M. 2004
Drought impacts and potential for their mitigation in southern and Western Afghanistan International Water Management Institute
<http://www.iwmi.org/droughtassessment/files/pdf/WP%2091.pdf>

This paper addresses the issue of the impact of drought in Afghanistan and strategies for coping with this. The work looked at the issue from the level of both farmer responses and government/NGO actions and suggests possible options to reduce future risk of drought. The study utilized single visit questionnaires implemented by University of Kabul students to a sample of households in Badghis and Ghor. The paper begins with an overview of relevant data:

- Land cover and use in Afghanistan, basic livelihood types and means of production.
- Overall, drought led to deficiency in irrigation water, in some cases water table has dropped by 5-10metres. This leads to reduction in crop yields (up to100% in some areas) and difficulty accessing potable water.
- Farmer strategies have included taking loans and mortgaging land, (which has dropped in value) and seeking off-farm or international labour (migration).
- Livestock numbers greatly reduced through herd exits but also declining fertility due to poor pastures. In Herat, Badghis and Ghor irrigated cultivated decreased 15-70%. There have also been decreases in crop diversity and expansion of illicit poppy to make good income shortfalls but also because of the crops suitability to low levels of irrigation.
- In some areas pastures decreased by 80% even while livestock numbers diminished by 50% in some areas. Market values for stock diminished by up to 30%.
- Evidence for high unemployment and labour migration to provincial centres and internationally. Increase in child labour as substitute labour in provinces and Early marriage of girls to access cash

- Shuras and mirabs ineffective in handling water issues during drought conditions. Mirabs depend on share of harvests for pay...when yields decline no incentive for work
- One approach to managing drought is large scale water diversions between drainage basins. Authors argue micro-scale water harvesting more efficient and sustainable by communities. Estimates of given on the area of harvesting per village (under different rainfall conditions) required to supply 15 litre person/day

This paper has limited value in providing new information on drought conditions. It is evident that data presented is (at best) anecdotal. Data is cited as ranges with wide deviations. Comparatively little empirical evidence is offered to support statements and conclusions. The paper gives little indication of the impact of drought on agricultural systems or livelihoods beyond generalities.

3. Water

3.1 Summary of literature

Of all natural resource sub-sectors in Afghanistan, water has been subject to the greatest attention in terms of studies, assessments and project documents. Perhaps the most obvious point of entry into this literature is those studies providing basic assessments of water resource availability and infrastructural function. These studies have often been undertaken following lulls in conflict as a basis for future water resources and development planning (e.g. Klemm 1996, Qureshi 2002, Favre 2004). However, owing to the lack of data collected since the 1970's, some of these assessments depend heavily on extrapolations from older datasets. Furthermore, while attempts have been made to develop water budgets for national water resources, even less is known about current water usage and projected demand than is known about current resource availability.

Reflecting pioneering work in the Indian sub-continent (Chambers 1988), discussion of water resource management issues in Afghanistan has become increasingly located within the context of rural livelihoods and agricultural production (see for example Walton 2005, ICARDA 2002, Sullivan 2002 , Turton 1999 and Anderson 2006). This integrated approach places water management strategies centre-stage for the planning of rural policy. In consequence of this shifting conceptual perspective, there has been a reorientation of thinking about water resources management away from solely water supply to encompass issues of community water demand (this is very clear in the work of the Western Basins and WOL projects). Taking livelihoods development and water needs as a starting point for analysis helps redefine water issues into a more user-orientated format and one perhaps better suited to effective development planning (Turton 1999). A good example of this approach are various studies which take farmer/water user needs as a starting point (ICARDA 2002, Klijjn 2002) from which to consider water supply.

Robert Chamber's work in India and Ceylon, was among the first to begin broadening the focus of attention in water resources management away from simply irrigation infrastructure to encompass the human 'software' aspects of resources management (Chambers 1988). New approaches to water management now recognize the essential role of community organizations and knowledge in the management of common property and delivery of water allocations (Merrey 1998, Uphoff *et al* 2000, Bardhan 2000 Pain 2002, Lee 2006). These community institutions are now themselves considered major resources (social capital) for the improvement of irrigation efficiency and raise a whole raft of new considerations for development planning (Turton 1999) . However, since their functionality depends upon local cooperation, trust and reciprocity (Uphoff *et al* 2000), external 'top down' programmes cannot easily 'create' these institutions. There is a growing trend in policy making and programming to try and support community water management

institutions where they already exist (ADB 2005, MIWRE 2004). However, some have argued that in Afghanistan, traditional social mechanisms of water management may have internal limitations and inequities which need closer examination prior to their adoption into water management programmes (Pain 2002, Lee 2006). Indeed, even within 'traditional' systems of management, access to water may be heavily contested (Bruns *et al* 1998, Pain 2002). Clearly, integration of 'traditional' systems of water management does not necessarily represent a 'catch-all' solution to irrigation development and researchers argue that further studies are required to better understand the strengths and weaknesses of these systems.

If we accept that social water management institutions are in principle of value in regulating and supporting the delivery of water at a community level, the question has been raised of how in practice local institutions can be accommodated within (and articulate with) broader scale institutions. This challenge may be almost irreconcilable given that the interests of planners and the development community may differ widely from those of water users at the local level (Panella 2005, Anderson 2006).

Evidence from outside Afghanistan indicates that the full devolution of management responsibilities to Water Users Associations (including legal rights, service responsibilities and management of finances) may render irrigation interventions more sustainable (Vermillion 1997). Water Users Associations and local water management organizations have accordingly been identified as key implementing partners at the canal level (ADB 2005, MIWRE 2004) and engagement of these institutions now constitutes a key dimension to institutional reform of the water sector. However, Anderson (2006) makes the challenging point that 'devolution of responsibilities' for water management in Afghanistan is nonsensical, given that it is communities rather than Government who have always built and maintained systems in the first place.

Like other sub-sectors within natural resources and agriculture, planning for water management in Afghanistan has moved from simply recommending infrastructural rehabilitation to placing emphasis on the need for institutional reform. Contemporary studies have identified a chronic lack of institutional capacity in the water sub-sector and evidence the necessity for reform (Lee 2005, Lee 2006, Anderson 2006), to strengthen water resources management. Lee (2006), has echoed the concerns of Chambers (1988) in identifying the weakness of career structures and remunerations in water regulating institutions as a significant obstacle to improved service delivery.

Water resource management interventions in the early post Taliban period were NGO driven and largely uncoordinated. However, the emerging trend in the water sector has been towards the consolidation of project activities within Government policy-led programmes, although with Government adopting a more active role in policy formulation; its capacity limitations is made ever more evident (Riviere 2005). The major future direction for water resources management in Afghanistan has now been developed utilizing a cross-ministerial integrated approach at government level and a devolved catchment-based structure through establishment of River Basin Authorities. Within this framework, the provision of local level services becomes the responsibility of mandated sub-catchment groups and water users Associations (MIWRE 2004). Integrated Basin level planning for water resources management has already been adopted by major donors (ADB 2005). However, the challenge thrown up by the devolution of planning responsibilities to the RBA's is one of overall coordination, as different donors can reach very different interpretations of national policy (Riviere 2005).

The formulation of strategies for the development of agricultural and other sectors raise questions of overall abstraction and the availability of water as a finite resource. Until current planning and development goals were established, water availability was thought to exceed demand in Afghanistan (Qureshi 2002). However, with future development to place greater pressures on water resources, there is clearly a need for consideration of

sustainability in water use. Particular attention has been drawn to problems of over-extracting ground water (NCA 2002, Anderson 2006), because regulations governing the sinking of wells are not enforced. Research suggests that private wells may constitute a special problem for regulating water extraction because their management is not subject to community or collective oversight, and lie outside of social control mechanisms (Lee 2006). At the national level, as Afghanistan draws more heavily on surface water resources, there is a recognized need to consider the downstream and international implications of this planned increase in usage (Favre 2004, MIWRE 2004). Specific attention has been given to flows along the Amu Darya, both because this catchment has been earmarked for intensive development, but also because of the multiple riparian stakeholders in central Asia (Kuzmits 2006, Fuchinoue *et al* 2002)

Our review of the literature reveals a number of important gaps in knowledge; principally, there is a general lack of information on current and future water availability. Recent studies of water availability have focused at the basin or sub catchment level, and owing to the institutional separation of responsibilities for ground and surface water, there has been no overall assessment or estimation of the overall water budget based on projected growth in demand. Until this is accomplished there seems little prospect that planning can occur with confidence that the water resources exist to support these plans.

Part of the overall weakness of the literature is the clear distinction made between surface and ground water resources, resulting from the divided institutional responsibilities (MIWRE 2004). As pointed out above, this differentiation makes it difficult (even for the Afghan government), to get a clear overall appreciation of the water sector, and therefore for sector analysis and planning to be effective.

Given the relative dearth of systematic research, Afghanistan lags considerably behind other parts of Asia for in-depth understanding of water users associations and social water management: With the recent history in the country of enormous political, social and demographic change there is a clear need for improved understanding of how these institutions now function. And as engagement with these institutions is already written into major water reform plans (MIWRE 2004), the imperative for further research is clear. Even with a stated policy emphasis on devolving water management responsibilities to communities, there is little evidence from the literature of how this will be achieved in the Afghan context (Panella 2005).

3.2 Literature review

ADB 2005

Western Basins Project: Final Technical Assistance Report, Kabul (pp182)

The Western Basins Project constitutes a collaborative effort in Natural Resources Management between the Asian Development Bank and the Government of Afghanistan. It addresses a vision for 'integrated sustainable and participatory socio-economic development' to be achieved through establishment of a River Basin Authority. The main themes covered by the project will include Water Resources Management, Irrigation Development, Agricultural and Livelihoods Support Services, Project Management and Capacity Building.

The principle findings and plans for a project intervention are presented in the main report, which is supplemented by a range of additional technical reports prepared by the consultant team during 2005. Some of these are included elsewhere in this bibliography. Specifically, the final report:

- Provides a justification for the project, in terms of national policy, the natural resource management needs of the Western Basin, the amount of land currently

under cultivation and potential for extra cultivation, its impact on poppy cultivation and sustainable livelihoods, projected demographic change in the area, social and other changes

- Provides overviews of individual project components, namely Integrated Water Resources Management, Water Resources and Irrigation Development, outlining a range of specific interventions, Agricultural and Livelihoods Support Services (including projections for the impact of interventions), Project Management and Capacity Building.

This document is of limited interest in that it exemplifies the integrated planning and resource management approach being adopted by the Afghanistan government and its international backers. While the main reports contributes little in terms of a general understanding of natural resources use and agricultural livelihoods in rural Afghanistan, it is illuminating in highlighting the development approach which has now found favour to address changing demand on Afghan natural resources. This report is further of value in demonstrating some of the institutional complexity involved in natural resources management, notably the range of institutional government stakeholders and the need to engage each of these in planning.

The accompanying technical reports are of greater overall interest.

Uphoff, N. and Wijayarathna, C. 2000

'Demonstrated Benefits from Social Capital: The Productivity of Farmer Organisations in Gal Oya', Sri Lanka *World Development*, Vol 28. no.11 (pp16)

This paper discusses the notion of social capital as a production and livelihoods asset both generally and as it relates to Irrigation management. The paper then offers a case study from Sri Lanka to exemplify the benefits of social capital in a development context.

- Social capital is like other forms of productive capital, but usually supplies goods which are collectively (in addition to individually) beneficial.
- Social capital comprises encompasses 'structural' and 'cognitive' forms. Structural social capital includes roles, rules, procedures, social institutions and networks. Cognitive social capital includes norms, values and beliefs that predispose people to cooperate. In practice these two forms are inextricably linked.
- Management of irrigation requires four functions: (i) decision making, (ii) resource mobilization and management, (iii) communication and coordination and (v) conflict resolution. Each of these functions is supported through the presence of social capital.
- Examples are given from Sri Lanka of how social capital structures were harnessed to facilitate improved channel and system management, such as cooperation over allocations and volunteer labour on canal maintenance.
- Experience from Sri Lanka demonstrated that participatory water management requires considerable 'cognitive' social capital; upstream farmers need to adjust their own allocations to ensure water reaches tail-enders during shortages; an act of minor self-sacrifice for the collective good. This was also manifest in increased community labour inputs.
- Participatory management led to clearly improved efficiency in production, especially during the 1997 dry season, when acute water shortages occurred.
- It is argued that all cultures have latent social capital but structures and shared values can be disinvested by neglect or abuse. Social capital cannot be created by outsiders, only by communities themselves. Strong social networks are based on reciprocity and trust.

This paper is of value to current research in Afghanistan owing to its analysis of the characteristics and constitution of social capital and the role that this can productively

play in irrigation management. The theoretical framework is directly relevant to Afghan irrigation systems

Bardhan, P. 2001

Water Community: An Empirical Analysis of Cooperation in Irrigation in South India
Berkeley University (pp22)

<http://globetrotter.berkeley.edu/macarthur/inequality/papers/BardhanWater.pdf>

This paper examines the factors affecting cooperation in irrigation communities, based on a survey conducted in the state of Tamil Nadu in India. Cooperative behaviour in an irrigation community is negatively related to inequality of landholding, urban or market connections, and positively related to duration of access to water, monitoring by guards, social homogeneity, small group size, proportional cost-sharing rule, and collective adversarial relation with other villages over water. The impact of the involvement of the Public Works Department, government and village elite in water allocation and maintenance is discussed.

This paper is useful in drawing attention to some of the factors which determine the functionality of social water management institutions. Although the study findings may not be directly applicable to the Afghan context, the paper has value methodologically in identifying approaches to gauging social water management and may also have comparative value.

Bruns, B. and Dick, R. 1998

'Negotiating Water Rights in Contexts of Legal Pluralism: Priorities for Research and Action' (pp16) <http://home.vol.com/-bryanbruns/contexts.html>

This paper identifies the inadequacies of current approaches to determining water allocations in irrigation development. It argues that there exists great complexity and heterogeneity across space and time in claims for water allocation, and so in many respects 'formalizing' allocations (as occurs in some irrigation projects), may be counterproductive. The author instead argues that it is more useful to investigate mechanisms for ongoing negotiation of water allocations. It is argued that:

- Utilising negotiation enhances participation and empowerment (as opposed to top down allocations)
- Water allocation is rooted in local institutions rather than formal regulations and laws and should therefore be negotiable
- Reforms will be more effective if they build on social capital of local institutions
- There is a plurality of claims (often heavily contested) to water.
- There is a plurality of mechanisms to support/advance water claims and disputants may go 'forum shopping' to find the most appropriate for their claim

This paper essentially lays out a framework for research in the field of social water management, arguing the complexity of local level mechanisms for water allocation but also their validity and utility for resolving water issues. The paper argues that there needs to be a better understanding of these mechanisms so that they can be utilized and built upon in development efforts.

Favre, R, and Kamal, G. 2004

Water Shed Atlas of Afghanistan Kabul FAO (pp183)

This document constitutes a synthesis of the state of knowledge (at time of writing) about the hydrological and biophysical conditions of Afghanistan's major river Basin. The clear objective of the project was to provide clear information to support planning for institutions active in implementing the newly adopted 'integrated catchment

management' approach to Natural Resources Management. The document is structured with:

- A general natural resources background to Afghanistan
- A detailed description of five individual river basins and their watersheds
- Extensive annex's presenting raw data

This report should be considered one of the closest attempts to appraise the overall condition of surface water resources in Afghanistan. One of the strongest features of the publication is its extensive bibliography, drawing together much of what is currently known about surface water in Afghanistan. Since the time of writing there have been limited institutional developments.

Chambers, R. 1988

Managing Canal Irrigation: Practical Analysis from South Asia Cambridge, CUP (279 pp)

This book presents a critique of prevailing approaches to irrigation management which in many cases are portrayed as ineffective or irrelevant. Arguments are made drawing on a range of examples and cases from India and Sri-Lanka, placing irrigation in its social and economic context. The arguments are organised into four parts:

- A discussion of the linkages between irrigation systems and rural poverty; who gains and loses from canal irrigation, the shortcomings of current performance and potential for improvement. An overall discussion of canal irrigation systems theory is offered
- Review of how knowledge about canals has been gained and applied through the processes of research, professionalism and policy development. The arguments consider how each of these elements have shaped our understanding and misunderstanding of irrigation
- Identification of where knowledge and a capacity is often lacking in irrigation management: main system management and communications, irrigation during the night, the activities of farmers above outlets, and incentives and motivation to improve canal management performance
- Approaches for diagnostic analysis of problems and weakness in irrigation management: practical action at policy programme and project levels that can be undertaken to enhance irrigation performance

'Managing Canal Irrigation' offers a very comprehensive assessment of issues and factors related to our understanding of irrigation system performance, ranging from the career structures of government extension and project officers to our understanding of stakeholder group dynamics. The arguments were very relevant for the late 1980's, highlighting the overemphasis of research and management effort of the hardware aspects of irrigation to the detriment of the software and consensual aspects. While approaches have now changed through much of the developing world, the arguments retain currency in Afghanistan where there is pressure for quick fix interventions and solutions.

Ellert, R. 2005

Water and Sanitation Bergen: Chr. Michelsen Institute (CMI Report R 2005: 15) (129 pp)
<http://www.cmi.no/publications/publication.cfm?pubid=2125>

This paper presents a thematic overview of the water and sanitation sector in Afghanistan.

- It starts with an overview of the "baseline figures": some the key features regarding access to water in Afghanistan and the domination of DACAAR (the lead organization), UNICEF and SCA. It also considers the activities in terms of

installation of water points and latrines, per province, by DACAAR. The paper also overviews the involvement of donors in water and sanitation, and the basic output levels of the organizations (according to data accrued from the organisations' own M&E records).

- The paper goes on to give observations about the policies and implementation strategies (including both software and hardware components of the projects), based on a case study area (Nangarhar). It covers the relative numbers of wells built, per actor, comparing 2002-2004 and 1990-2004.
- The paper looks at both the general cost-effectiveness, efficiency and timing of the projects from a general point of view, and the communities' perception of aid, the watsan projects, and the quantity/quality of aid as perceived by beneficiaries.
- The paper briefly considers the coherence, connectedness and coordination of the implementation actors in the field.
- After overviewing the interventions specifically, it considers some additional themes, some "cross-cutting issues". These are: the transition from emergency to development; the incorporation of consideration of the broader water resource management environment; the existence of general policies for the sector;
- The paper moves on present findings and conclusions on the relevance and coverage of the interventions, and - at the donor level - a proposed framework for future interventions, incorporating coordination mechanisms, coherence, connectedness. The paper also offers the "aid providers" recommendations on timeliness and effectiveness, impact. The paper compares the relative success rate of the different "channels" for aid (government, UN, NGO, international organization).

Fuchinoue, H. Tsukatani, T. and Toderich, K. 2002

Afghanistan Revival: Irrigation on the right and left banks of the Amu Darya

Discussion paper No. 554 Kyoto Institute of Economic Research, Kyoto (pp47)

<http://www.kier.kyoto-u.ac.jp/DP/DP554.pdf>

This paper outlines opportunities for improving irrigation and thus agricultural productivity from Northern Afghanistan along the Amu Darya. Particular emphasis is given to rice as a crop. The basis for recommendations is a detailed comparison between land use and irrigation on the left (Afghan) and right (Uzbek) banks of the river. The paper provides:

- Data on flow and discharge rates of the Amu Darya, and the drainage volumes of its various tributaries.
- Detailed historical account of the emergence of irrigation on the right bank of the river, including a description of the systems currently being utilized. Mention is made of drip, sprinkler and subsurface irrigation technologies and their effectiveness.
- Discussion of rice agriculture in Uzbekistan, productivity and its yields relative to wheat and barley crops.
- The recent history of agriculture in Northern Afghanistan and the impact of the Soviet invasion
- Discussion of the interstate cooperation over the use of Amu Darya waters, and their legislative bases.

The main text of the report is supplemented with a considerable body of additional material, namely technical data describing the flow of the Amu Darya, and its particulate loads as well as copies of international agreements regulating water management within the river basin.

While interesting and informative, this paper is essentially speculative, since it identifies and considers none of the real obstacles impeding political economic and agricultural development in post-Taliban Afghanistan.

Klijn, F. 2002

Water Supply and Water Collection patterns in Rural Afghanistan- An Anthropological study Kabul, DACAAR (pp31)

<http://www.dacaar.org/dacaar.asp?id=99>

The Objective of this study is to identify community use of space in relation to water supply and water collection practices and identify the impact that external interventions have on these. Research was conducted in villages in Nangarhar, Laghman and Herat, and principally focused upon the concepts of owned space and gendered space:

- Owned space: A water source on privately owned land involves the wealthy landowner providing land to the poor and his neighbours as a form of charity. Where land is jointly owned, access to water may be through some form of reciprocity, and some form of loyalty or service is expected in return
- Gendered space: The concept of purdah seems to be related to socio-economic status, with poorer households unable to maintain this standard of behaviour (women leave the house to fetch water). Use of gendered space is based upon generations old consensus as to where and when different sexes may collect water. These patterns of segregation are not static.
- External interventions: Where as previously decisions about constructing new wells were made by wealthy with resources (and stricter respect for purdah), recent development assistance has been based upon much wider discussions. In recent years, wealthy households have become less inclined to sponsor the maintenance of public wells and more inclined to install their own private wells, at which stricter purdah is observed.

The study clearly demonstrates some of the ways in which there may be a social impact from the way in which water is provided to communities and therefore indicates the necessity for these impacts to be considered within development planning.

Pain, A. 2002

Understanding Village institutions: Case studies on Water Management from Faryab and Saripul Kabul AREU (pp22)

http://www.areu.org.af/index.php?option=com_content&task=view&id=42&Itemid=76

The report examines how water is managed within and between villages in two districts of northern Afghanistan and focuses on the rules which govern the distribution of water and the ways in which these rules are applied. The study identifies it as important to understand how informal institutions function since they are important in rural livelihoods and may have been subject to damage during recent years of conflict. The study concludes:

- Internal village management of water resources is fairly well regulated, although this does not mean that distribution of water is fair or equitable. A similar pattern was found in both areas, despite ethnic and cultural differences between them.
- Rules governing the distribution of water between villages seem to have broken down and in some cases downstream villages are being denied water.
- It is clear that access to resources is dominated by 'power holders', but it is also evident that historically these power holders may have changed, and so those who

claim to be denied access under 'traditional' rights may themselves have previously monopolized resources. Attempts to codify community rights to resources must be undertaken with caution.

The study argues similarities between the types of institutions governing access to water and pasture resources, and in the case of water allocations, field verification of allocations through timing and measurement of flows and irrigated areas. The author stresses that programmers should utilise traditional institutions with caution so as to avoid reinforcing existing inequities.

ICARDA, 2002

Needs Assessment on Soil and Water in Afghanistan, Aleppo, ICARDA (pp77)

The report describes the results of a mission to assess the state of irrigation systems, soil fertility, availability of fertilisers and other inputs, specifically to identify areas of greatest potential for intervention and capacity building needs for NGOs and other organizations active in supporting the rehabilitation of irrigated agriculture. With respect to content, the report describes:

- An overview of land use and Agriculture in Afghanistan, with data for patterns of production (yields) from different parts of the country.
- Overview of irrigation systems with an analysis of the relative importance of surface and groundwater resources and their geographic distribution in the country
- Consideration of irrigation systems, their functions and problems associated with them, including farmers' lack of knowledge about irrigation management. Information on the distribution of various types of water source and the role of groundwater resources in Agriculture
- Consideration of rainfed systems, including areas under cultivation, rainwater harvesting and the demands of watershed management
- Data is provided on patterns of cultivation methods (tractor/plough) and comparisons between yields under drought conditions 2002 for different crops
- Data also describes the impact of different fertilizer and soil nutrient treatments on yields

Overall, the report provides a useful insight into the state of agriculture and irrigation at the time of the survey. Some of the most interesting data includes the plotting of yields of different crop types against different forms of treatments and management interventions. Otherwise, most of the data is simply a series of percentage values presented as bar charts describing farmer responses to posed questions, and not particularly useful, especially given the rapidly changing conditions in Afghanistan since the survey.

Klemm, W. 1996

'Afghanistan: Promotion of Agricultural Rehabilitation and Development Programmes: Water resources and Irrigation' Islamabad FAO (pp 39)

This paper provides an overview of water resources and irrigation in Afghanistan during 1996. The paper begins by looking at climatic zones and water resources generally, (ground and surface), along with their management. It then turns specifically at the irrigation sector and prospects for its rehabilitation. The paper details:

- Climatic zones of Afghanistan and their characteristics (temperatures, precipitation and evapo-transpiration) are given province by province.
- Water Resources are defined first in terms of hydrological basins and their surface water resources. Surface water resources are determined in terms of estimated catchments and mean annual volumes of flow. The study identifies the lack of data on ground water resources

- Water use is discussed in terms of agricultural and drinking water uses. An estimate water balance is attempted on the basis of current (1996) and future consumption. Water resources management is addressed at both the local and macro (catchments) level
- Both traditional and modern irrigation systems are described, and differentiated by scale and management (informal and formal). Irrigation methods and efficiencies are also discussed. 1978 data describes major water resource management interventions and irrigated area by province
- An overview is given of relief and rehabilitation measures for irrigation, breaking down these efforts by stakeholders and institutions; indication is also given of overall rehabilitation strategy and priorities

The paper is a useful reference source, drawing together a diversity of material describing Afghan water resources and irrigation. A major limitation is the age of the material (ten years) and also the lack of any new data (it is principally a desktop study). The national scope of the report means that there is little (if any) insight into farm level irrigation management. The report itself emphasizes the scarcity and poor quality of information and the need for further research.

Lee, J. 2005

Mirab and Water Users Association Report: Western Basins Project, Final Report, Attachment 7 (pp 82)

This report constitutes an attachment to the main Western Basins Project Final report. It covers a several districts in the Lower Hari Rud. Work found that compared with many other parts of Afghanistan, traditional and community systems of water management have survived the period of civil conflict and neglect remarkably well. The structure of water management follows a basic pattern of community elected *mirabs* who are responsible for different sections of canal. Water conveyances are overseen at the canal level by elected *wakils*.

Water rights are assigned to farmers on the basis of traditional rotation measures either describing volume or time of flow. Heavy silting of canals during flooding necessitates the mobilization of community labour under the supervision of the wakil and mirabs during winter and spring to clear them. Canal maintenance is mainly manual. In some areas this basic system has been in operation 400 years., but is now facing increasing threats to sustainability:

- The system is threatened by population growth, changes in the agricultural calendar and cropping patterns, urbanization and damage to infrastructure, pollution and illegal extraction
- While there is a clear incentive and commitment to support and empower traditional community structures there is no clear consensus on how this might be accomplished. \
- The poor capacity of local government departments and ambiguity in legislation are likewise not conducive to effective support for traditional water management systems.
- Income for mirabs may be as little as \$50 month.

River Basin development strategy posits the establishment of 'Water Users Associations'. The author of the report argues that these are as yet unproven and that strategists should draw upon the existing *mirab* system as far as possible. The author proposes a possible structural organization for these associations based upon the existing *mirab* system, and sets out some possible interventions that the government could make in support of them. The report provides an extensive glossary of Dari terms.

Given the Governments of Afghanistans commitment to implementation of water resources development through an RBA approach, this report is of particular value in that it lays out a possible format for engaging traditional community systems into RBAs

Lee, J. 2006

Water Management, Livestock and the Opium Economy: Social Water Management
Kabul AREU (pp62)

http://www.areu.org.af/index.php?option=com_content&task=view&id=31&Itemid=36

This paper sets out to examine local methods of water management at community and canal level with a focus upon the management structures and social organisation of irrigated water distribution and allocation. The study provides a comparative analysis of water management at primary research sites in four Afghan provinces (Nangarhar, Kunduz, Herat and Ghazni). Given this range of study sites, the research encompasses

a diversity of types of water sources, including canals, springs karez and wells. The discussion of the paper contrasts approaches to management in different regions and with different water sources.

The paper sets out by outlining the current status of Afghan policy, legislation and official strategies on irrigation and water management. It then presents a range of data from field site observations and then compares these results in the light of current policy in order to reach policy and programming recommendations, which are raised in the final discussion of the report. The report reviews:

- The similarities and differences between the water management systems studied
- The strengths and weaknesses of the traditional water master role
- Community perceptions of contemporary water management policies and interventions.
- How water management systems of different types actually function and how and where abuses of the system or failings may occur
- Identified institutional problems and weaknesses together with the relevance of current irrigation planning and strategies to water users' needs. The paper provides recommendations for engaging traditional water management structures into water management and irrigation systems development.

Overall this paper provides a strong comparative overview of traditional water management systems as they exist in regional Afghanistan and sets these against the current policy environment. The paper identifies the key features of these systems, their strengths and weaknesses and how they might be utilized in development planning.

Anderson, I. 2006

Water Management, Livestock and the Opium Economy: Irrigation Systems. Kabul AREU (pp55)

http://www.areu.org.af/index.php?option=com_content&task=view&id=31&Itemid=36

This report is based upon the study of diverse irrigation systems at primary research sites in four provinces around the country. The study has a special emphasis upon irrigation structures and the technical aspects of water management, with attention given to the relationship between irrigation and cropping systems.

The report adopts a comparative approach, exploring the diversity of systems recorded around the country and discussing their basic features of operation, management and

impact upon farming systems. The report takes current water policy and legislation as a point of departure and considers how this relates to observed irrigation needs. The study concludes that:

- The assumption that authority for irrigation systems should be 'transferred' to communities is misplaced, since in practice most irrigation systems have been developed outside of government influence and the community already holds authority
- Inter-village water distribution problems require the engagement of communities at basin or sub basin levels of management.
- Interventions should avoid reinforcing existing inequities in water distribution between communities
- The unregulated sinking of tube wells for water extraction was observed as a problem and may negatively effect local water tables
- Considerable water losses currently occur through ineffective abstraction and conveyance systems in many systems
- Many communities are currently unable to cultivate summer crops due to water scarcity. Improved conveyance may allow second cropping in some areas and may even be of benefit in reducing dependency upon poppy

The report concludes overall that a lot of irrigation planning is not being undertaken with community in mind. In some cases, planned irrigation structures are beyond the capacity of the community to manage and may actually increase the problems of the community.

Merrey, D. 1998

Institutional design principles for accountability in Large irrigation systems

International Water Management Institute (pp32)

<http://www.iwmi.cgiar.org/pubs/pub008/body.htm>

Essentially, this paper examines which institutional conditions and principles are most successful in delivering high performance in gravity irrigation systems. The author contends that the organizational and financial performance of autonomous (single system) bodies is enhanced. The discussion examines a matrix of possible formats for irrigation management, from single self governing systems through to multiple systems under centralized management of a single institution.

- In many parts of the developing world, governments (under external pressure) have turned limited responsibilities for management of large irrigation schemes over to Water Users Associations. But because of the size of the schemes, WUA generally operate at secondary and tertiary levels (leaving public institutions in overall control).
- Two types of general irrigation systems; indigenous built/managed and State built/managed. On the whole, the State schemes tend to be larger than the traditional schemes.
- The paper cites a range of studies from Asia that indicate that local self-governing systems are characterised by better performance than 'bureaucratic' systems.
- The paper cites a range of literature and case studies in identifying the important design principals (characteristics) of successful self governed systems. These include a supportive legislative environment, capacity to mobilize resources for maintenance, benefits exceeding cost of participation, single unit manages single infrastructural system and financial autonomy
- Where WUA have been developed for large public sector irrigation schemes, they tend to be restricted to tertiary level rehabilitation and management because of the scale of infrastructure. This raises the questions about (i) the nature of the

relationship between WUA with the government managing agency and (ii) the nature of the agency itself.

- A potential problem is the accountability of the managing institution when the WUA is dependent on upstream or whole-of-system services. The relationship between WUA and government agency can range between autonomy and dependency
- Local managing agencies (WUAs) may manage single or multiple systems: research suggests that in the latter case, monitoring service performance becomes more difficult
- The paper cites and discusses indicators given in a range of literature to assess irrigation management effectiveness; including performance, sustainability and adaptability
- The paper posits five institutional frameworks for the delivery of irrigation management, ranging from autonomous single system local institutions, to dependent local institutions managing many systems. The discussion presents a wide variety of cited studies to explore the performance of each

This paper should be considered of particular value to the current research in Afghanistan, since it synthesizes the findings from irrigation management studies internationally. The key relevant messages from this study include the identification of indicators for irrigation performance (and supporting literature) as well as the conclusions about the effectiveness of diverse management organizations. The principal limitation of the study is its focus upon major irrigation schemes.

Norwegian Church Aid 2002

Guidelines for sustainable use of groundwater in Afghanistan, Kabul (pp56)

<http://www.kirkensnodhjelp.no/filemanager/download/134/policy%>

Given that a high proportion of interest and development activity in water resources management in Afghanistan has focused upon surface water resources, this report sets out to characterise the groundwater situation. Specifically, the report recognizes that there has been a virtual absence of regulation of extraction to the extent that the sustainability of supplies may be threatened. The report:

- Provides an overview of water resources in Afghanistan, encompassing both surface water (river basins) and ground water. An introduction is given to the geology and hydrogeology of Afghanistan and thus its recharge characteristics.
- Discussion of declines in water table and effects on hydrogeochemistry, specifically increasingly saline groundwater and deteriorating water quality. Impact of this on agriculture
- Discussion of various sources and management of groundwater and surface water, with data on areas under irrigation from different sources provincially
- Offers a range of case studies to demonstrate the problems of poor groundwater management

In concluding the report develops a model for draw down in water table from over-extraction from wells, and utilizes this as the basis for a set of recommendations aimed at improving the sustainability of ground water management. These recommendations are essentially practical and aimed at NGO implementers

Panella, T. 2005

Reconciling traditional irrigation systems with the development of modern irrigation systems: The challenge for Afghanistan Unpublished paper, Asian Development Bank (pp18)

This paper provides a background to water resources and irrigation in Afghanistan and seeks to set out issues that need to be addressed to achieve sustainable outcomes in irrigation, water resources management and rural development. The paper identifies a key challenge as being maintaining the tradition of strong community participation in irrigation in Afghanistan, while responding to the need for massive rehabilitation and new development.

This concise paper extremely useful in identifying a key challenge for developers, one which lies at the heart of the current policy of River Basin rehabilitation and management.

Qureshi, A. 2002

Water Resources management in Afghanistan: the Issues and Options Working Paper 49, Pakistan country series No. 14, International Water management Institute (pp 30)
<http://www.iwmi.cgiar.org/pubs/working/WOR49.pdf>

Written shortly after the fall of the Taliban, this document was designed to provide a general overview of water management and irrigation conditions in Afghanistan and how these relate to agriculture. The first twenty pages of the document provide a country description for Afghanistan describing the extent of cultivation in the country and levels of production. The second part of the document focuses upon the countries water resources in terms of both surface water (river basins and ground) water. The paper notes that:

- Afghanistan has 75 Billion Cubic Metres of potential water (55 surface and 20 ground). Per capita availability of water compares favourably to neighbouring countries. Irrigation constitutes the largest use of water.
- A water budget, set out in terms of current use, potential use and balance is given
- Discussions of ground and surface water and how these are being used.
- The paper has a break down of different types of irrigation systems, and their prevalence and distribution through the different provinces.
- The paper discusses irrigation system efficiencies and losses through conveyances, and relates these to losses in yields

The paper draws on the above information to identify and discuss the principal water management issues for Afghanistan. A number of recommendations are offered. The upgrading of modern irrigation systems damaged by war is identified as a priority. The authors do not at time of writing perceive availability of water to be a constraining factor. Although an important work, the work should be considered rather dated and the conclusions should no longer be accepted as relevant for the current situation.

Riviere, N. 2005

'Lesson learning' from the transition between relief and development in Afghanistan: Water Sector Review Kabul, Group URD (pp54)

This study analyses change in the institutional context of the water and irrigation sector, taking a historical perspective and looking at the how programmes, policies and institutions have evolved through the 1990's through to the current time. The report traces the emergence of current policy from the establishment of the new Afghan Government and its ministries, with the support of the International community in 2001.

The approach adopted has been that of Integrated Water Resources Management working at a River Basin level (IRBM). However in many respects the approach remains conceptual in Afghanistan with only limited and irregular progress and towards implementation yet having been achieved. Overall interventions have fallen into three categories;

- Micro-projects implemented by NGO's (and some international organizations), essentially as relief actions to deal with needs at specific locations. These have

generally not been centrally co-ordinated and so it is difficult to assess overall progress and achievements

- General non-focal government programmes, including those leading political and institutional transition. These include the NSP launched in 2003, and have had a significant impact within the water sector. NGO's have been facilitating partners
- Sector based Government programmes. Since 2004, institutional reform and strengthening of the water sector has led to the initiation of several sector based programmes, supported by donors. These rely heavily upon consultancy firms and international experts. The EC and FAO are major actors in trying to support this transition.

Overall, the general trend of development in the water sector has drastically reduced the scope for NGO's working outside major policy initiatives. At present, donor actions are not well coordinated with different donors taking different interpretations (or ignoring) national policy to serve their own interests.

As a more operational phase of implementation began in 2004, these discrepancies have become more evident, with the central ministry (MEW) lacking capacity to set and enforce common direction, or even to coordinate with partner line ministries (MRRD and MAAH). Despite the emergence of a strategic policy framework, activities in the water sector remain isolated and disparate.

Kuzmits, B. 2006

Cross bordering water management in Central Asia: Conflict constellations and ways of sustainable resource use Bonn, University of Bonn (pp23)

http://131.220.109.9/fileadmin/webfiles/downloads/projects/amudarya/publications/ZE_F_Amu_Darya_Series_2_01.pdf

This paper takes an integrated regional approach (combining environmental, ecological economic and political) data to consider the problem of water mis-management in Amu Darya basin and down-stream impacts on the Aral sea. The paper begins by setting the river valley in geographic and hydrological perspective. The paper considers the history of regional irrigation and water use and the impact of this on the downstream Aral sea and broader region. Against this context the author examines the problems and conflicts emerging between states including over-extraction, reduction in water quality (fertilisers, pollutants) , inefficiency of use lack of coordination in planning and disputes over quotas and allocations.

The author considers the various legal and institutional frameworks that have been applied in the region and their failures. For example it is pointed out that most agreements focus on the ex-Soviet states and neither China nor Afghanistan (important headwater states) participates in any. There is little regulation or enforcement at a national level. The author concludes that there is need for vast investment to improve water management and reform of institutional structures to ensure a most sustainable and equitable use of the resource between riparian states. It is controversially suggested that with Afghanistan's current lack of capacity to utilize water effectively, it could sell water rights down stream. Overall this paper is an interesting contribution putting the KRBP water management programmes into international perspective.

Ministry of Irrigation, Water Resources and the Environment 2004

Water Resources Management Policy Kabul MIWRE (pp22)

<http://www.adb.org/Documents/TARs/AFG/38252-TAR-AFG.pdf#search=%22Ministry%20of%20Irrigation%2C%20Water%20Resources%20and%20the%20Environment%202004%20Water%20Resources%20Management%20Policy%22>

This document constitutes a framework to address water sector development in a holistic manner with the implication that the water sector is based on a physical eco-system and interlinked water use infrastructure. The establishment of five River basin Authorities represents a step towards this new integrated approach to water systems management. Furthermore the water policy framework underlines the need for articulation with other national policies and sector development plans. After setting the background to the water sector in Afghanistan the document lays out the complex institutional context of the sector, based upon the cooperation of six ministries (MIWRE, MRRD, MWP, MMI, MAAH and MUDH):

- The basic structure for water sector delivery is envisaged to be a peak body combining representatives of stakeholder institutions and experts to design regulations and institutional arrangements for water nationally.
- Below the national structure, catchment-based River Basin Authorities will offer an appropriate vehicle for integrated water management
- At the local level, a range of community based service delivery organizations are conceptualized, mandated to maintain infrastructure at minimal costs.

The document sets out the vision, goals and principal policy issues for water resources management; principally those pertaining to the decentralization of control to the River basin level and adoption of integrated and sustainable approaches to resource management. Specific actions include:

- Development of legal framework and allocation of responsibilities
- Setting standards and controls for water quality
- Establishing RBAs

The document also urges the improved integration of policy development with other Ministries and sector development strategies. As a strategy for the management of Afghan water resources this policy document is an essential resource.

Rout, R. 2005

On Farm Water Management Specialist Report Western Basins Project, Final Report, Attachment 9 (pp 94)

This document provides a detailed condition assessment and outline for a rehabilitation program for the lower Hari Rud. It identifies that some 300,000 hectares of land is irrigated in the study area, 57% intensively irrigated.

The report provides an overview of the existing irrigation system in the Hari Rud, with quantification of flows and description of the seasonal cycle of water availability and use; against this context the management challenges and strategies of water users is examined. With the Western Basins project committed to rehabilitate irrigation systems. The report identifies key constraints on irrigation as being:

- Water availability mid to late summer, equity of distribution during this same period, distribution efficiency and build up of sedimentary materials.
- Poor condition of irrigation structures, urban encroachment resulting in pollution and bad maintenance access, flooding and erosion.
- Lack of ability to regulate flows during spring floods

On the basis of these identified problems the report sets out a range of interventions that should result in an improved irrigation efficiency. The author specifically recommends that the community should be engaged in relevant project elements

This report is of high value in that it assembles excellent technical data describing the distribution of water at canal level and the seasonal sequence of flows and scarcity and

evaluates the impact of these on irrigation performance. The approaches utilized and results attained have clear comparative value elsewhere in Afghanistan.

Sullivan, C. 2002

'Calculating a Water Poverty Index' *World Development* Vol 30. no.7 (pp18)

This paper proposes a multidisciplinary approach to evaluate water stress and scarcity combining socio-economic indicators with water allocation measurements to produce a water poverty index.

- Evidence suggests there is a strong link between water use and economic development. However there remain challenges in evaluating the deficit of water and its development impact to better inform allocation
- Conventional assessments of water use have either been global (total country resources) or through a grid cell methodology (estimating runoff by cell).
- Conventional measures do not take account of the extent of water stress on households. They fail to pick up on the impact of water availability (or non-availability) upon the household.
- Three water poverty analysis methods are proposed; based on access transaction costs, opportunity costs, economic welfare and associated household well-being.

The author identifies an important linkage between water availability and the impact of shortages and restrictions in supply. The methodologies suggested have potential value for analyzing patterns of water allocations in terms of cost benefits. This would be a valuable tool in understanding the equities/inequities in traditional water allocation mechanisms in Afghanistan.

Turton, A. 1999

Water Scarcity and social adaptive capacity: Towards an understanding of the social dynamics of water demand management in developing countries MEWREW Occasional paper 9, SOAS (pp40) www.soas.ac.uk/waterissuesfiles/occasionalpapers/Occ23.pdf

This paper aims to develop a theoretical understanding of the way that various societies cope with water scarcity. What will happen to societies that are facing natural resource scarcity while at the same time having a scarcity of "adaptive capacity"? Paper tries to develop this concept a little further by attempting to develop a theoretical model that links natural resource scarcity (such as water), with the "adaptive capacity" of a society, in the hope that this can contribute to a deeper understanding of the social dynamics of resource scarcity. Considered in the context of work by Ohlsson which suggests that the "adaptive capacity" of a society should also be regarded as a resource.

The paper is of major relevance to ongoing studies in Afghanistan, especially as studies of social water management have tended to focus upon the role of society in managing water supply rather than demand.

Vermillion, D. 1997

Management Devolution and the Sustainability of Irrigation: Results of Comprehensive versus Partial Strategies, FAO Rome (pp12)

The paper begins with the premise that with growing populations and need for better food security, and competing demands for water societies are going to have to make ever more efficient use of water resources. Other than for inter-basin water transfer projects, the supply of water within basins is basically fixed. A major trend in water management policy, both for fiscal and technical reasons is the devolution of management responsibility to water users associations to increase participation and incentives for improved management. However:

- Devolution is frequently imposed before an implementation strategy is devised, so there exists a knowledge gap about the process of management transfer
- The theory of devolution suggests that local users of a water resource will manage it more effectively than a centrally financed government agency. But this is contingent on the existence of local management capacity prerequisite for management (effective institutions, regulatory framework)
- In some cases, devolution is promoted in areas where these prerequisites do not exist or is implemented incrementally which may strengthen resistance to reform. The paper focuses on the basic institutional elements required for successful devolution.
- The paper considers three case studies for irrigation management devolution: Comprehensive (USA), Partial (Columbia) and Minimal (Sri Lanka).

The paper concludes that although the prerequisite capacity for water management was available in all three research sites, there were differences in the effectiveness of delivery. These correlated to the extent of devolution. Comprehensive devolution involves (i) investing legal rights in WUA, (ii) an agreed level of irrigation service (iii) a balance between responsibility and authority devolved (iv) integrated management of finances, conflict resolution and operations and (v) capacity to impose incentives and sanctions on members. The discussion is pertinent to planned research in that it identifies some key prerequisites for successful local water resources management, which may be applicable to the Afghan example, and set a framework for investigation.

Walton, R. 2005

An assessment of the comparative advantage of irrigated agriculture in Herat province Western Basins Project, Final Report, Attachment 8 (pp 60)

This report looks at the capacity for the Hari Rud basin to respond to growing demands for food through irrigated cultivation and associated farm activities. The author performs an economic analysis of farm productivity and specifically estimates the necessary increases in farm performance required to meet growing demand for cash and food commodities. Using the conclusions of this analysis the author lays out some recommendations for policy and strategy reviews. The author identifies that:

- Population growth in the Western Basins is reckoned at 1.9% per annum and *per capita* incomes are expected to increase by 5% per annum over the next ten years. Over the same period food intake will grow by 40%. These shifts are expected to influence regional cropping patterns.
- Intensification will occur in cropping and fruit, vegetables and dairy will grow in importance: farmers will become increasingly sensitive to markets
- While projected irrigation improvements should allow incremental growing demand for rice to be locally met, the same is not true of wheat which is unlikely to keep up with increased demand. Wheat scarcity may have the effect constraining the entry of poor rural farmers into higher value crop production.
- Projections for improved irrigation performance and consumption suggest that approximately half of all increased demand for vegetables and all of increased demand for potatoes could be met locally within the catchment.
- Even with projected rehabilitation of irrigation systems, expansion of orchards and vineyards will be unable to meet growing demand for fruits and raisins.
- Alfalfa production would need to increase by 30% and feed grain production would need to double to achieve supply to meet projected incremental demand for dairy products. This seems very unlikely to happen. Rehabilitation may however, facilitate meeting growth in demand for fuel woods.

- Analysis suggests that high value crops grown for national market supply will never provide comparable incomes as is today achieved through cultivation of opium poppy. While prospects for some types of Afghan exports (some types of fruit and nuts) are good, the scale of these will remain restricted

This report is of considerable significance in attempting an objective evaluation of the potential for agricultural intensification within the context of a major irrigation rehabilitation program and River Basin Development scheme. The conclusions of the study indicate, that even under these (close to best-case), conditions, production may fail to meet incremental growth in demand and food self sufficiency (let alone export capacity).

These findings are significant both for demonstrating the potential for agricultural development utilizing the new River Basin approaches, but also shed light on the expectations for growth of the national agricultural sector as anticipated by some optimistic development planning.

4. Livestock

4.1 Summary of literature

Prior to the civil war and Soviet invasion, livestock constituted one of the most important agricultural sub-sectors in Afghanistan and animal production made a strong contribution to the national economy. With a large proportion of the country unsuitable for cultivation, extensive livestock production constituted a primary agricultural activity. Consequently, the livestock sub-sector has attracted significant attention in the form of studies and discussion documents.

In its most rudimentary form, this literature constitutes general descriptions of livestock population, production systems and the situation of the sub-sector. Owing to the impacts of conflict and drought and the liquid nature of livestock assets the sector has been subject to significant change over recent decades and so has attracted regular assessments to update knowledge (Swedish Committee Afghanistan 1990, Thieme 1996, Khan *et al* 1999) to provide a basis for effective planning. While some studies have taken the form of wide-scale surveys with extensive data collection (Swedish Committee 1990, Thieme 1996), these studies are today rather dated and of primarily historical value. Early post-Taliban assessments seemed to suggest that given good conditions for production, the livestock sector could be resilient, and recover after losses (Khan *et al* 1999, Future Harvest Consortium 2002). Livestock therefore have been highlighted as a priority sub-sector for development investment.

Furthermore, over the last ten years, there has been a growing appreciation in the literature of the relationship between livestock and food security (Hefferman 1998, Neumann 2000). Given the political and environmental context of Afghanistan, and relief priorities in the Taliban/post-Taliban years, these observations found special relevance. Some studies and programmes have consequently looked specifically to the food-producing and livelihoods functions of livestock (Barker 1998, Favre 2004). Migratory pastoralist (*kuchi*) households are particularly dependent upon their animals in this way, and this community are considered highly vulnerable to the impact of stresses upon their herds (De Weijer 2002, Fitzherbert 2006, Charpin 2005, Jost 2004).

A principal objective for livestock systems analyses has always been problem diagnosis and assessments of priority needs for policy making and sector development. Several key issues emerge from these studies; in the first instance, studies have placed a strong emphasis upon animal health and the need for improved veterinary care. This in some part remains a legacy of the FAO veterinary programme which was active in Afghanistan during the 1990's and set up the framework for livestock development interventions (Barker 2000),

but also to some extent because many assessments have been authored by individuals with veterinary rather than animal production backgrounds (e.g. Barker 1998, Jost 2002, De Weijer 2005). Indeed, the emphasis on livestock health in programming, almost to the neglect of livestock husbandry, has been noted (Fitzherbert 2006). However, some argue that although animal mortality is the most visible sign of livestock problems, the actual extent to which health and disease is actually a significant issue have yet to be determined by in-depth studies (Thomson 2006).

A further problem cited widely in the literature is the availability of animal feeds, especially winter fodder. Assessments suggest that constraints on winter feeding may be one of the major inhibitors of livestock sub-sector growth (Thieme 2000, De Weijer 2005, Favre 2004, Future Harvest Consortium 2002, Thomson *et al* 2003, Thomson 2006).

Inextricably linked to problems of animal nutrition in the extensive livestock production systems practiced in Afghanistan has been the condition of the natural resource-base supporting livestock populations. The need for access to land, (either common property pastures or agricultural holdings for cultivating fodder), is a theme echoed much writing on the livestock sector (Thieme 2000, De Weijer 2005, De Weijer 2006, Future Harvest Consortium 2002, Thomson *et al* 2003, Bedunah 2006, Fitzherbert 2006). Traditionally Afghan livestock sector development and sustainability was closely linked to rangeland resources (Casimir *et al* 1980), and this relationship remains strong in the case of migratory pastoralists (De Weijer 2002 Fitzherbert 2006 Thomson 2006), without land resources to cultivate food crops. Assessments suggest that up to a third of the Afghan livestock population may be managed extensively (De Weijer 2006).

Studies suggest that rangeland resources have been threatened in two major ways: First, the years of conflict and breakdown of natural resources management systems has precipitated conflicts over ownership and use of traditional grazing grounds. In some cases traditional users have been displaced by other users or land has been appropriated for other purposes. A particular problem has been the encroachment of rain-fed agriculture onto traditional pastures (Favre 2003, Bedunah 2006), while a second problem has related to the potential losses in productivity following drought and unsustainable management (CADG 2004, Bedunah 2006).

Drought in particular led to losses of up to 80% of herds during the early years of the current decade and so a considerable element in the literature has been devoted to consideration of restocking (Thomson *et al* 2003, De Weijer 2005, De Weijer 2006, Thomson 2006). The broader literature cautions against restocking through active animal supply programmes: these have been demonstrated to be problematic (Hefferman *et al* 1998), with potentially only marginal if any benefits to households (Hefferman 1998). However, studies suggested that under current conditions of production, restocking to pre-drought population levels may be a longer process than initially envisaged, taking up to 10 years. There may be strong reasons for encouraging the allocation more land to fodder cultivation to support this restocking (Thomson 2003, Favre 2004, Thomson 2006). Furthermore, it has been concluded that scarcity of animals is currently a major factor inhibiting the growth of markets for livestock and their products, and depriving rural communities of the benefits of these (Thomson *et al* 2005).

Recognition and improved understanding of problems have led to a diversity of recommendations for policy initiatives to support livestock production and the sectors natural resources base. At present, the primary reference document is the Agricultural Masterplan (MAAH 2005), which identifies livestock development as a sector priority. Policy documents pertaining to land tenure are considered elsewhere in this bibliography, but a range of recommendations have been offered to improve the management of pastures. Most comprehensive of these has been the work undertaken by the RAMP programme (Bedunah 2006 and with respect to *Kuchi's*, De Weijer 2006), while in southern Afghanistan a localized programme of action has also been identified (CADG 2004, Jost

2002). A preliminary assessment of the relevance of the objectives of MAAH livestock policy based upon field observations has been undertaken (Fitzherbert 2006).

At present the literature suffers from a number of weaknesses. As the vast majority of studies have been based upon surveys or rapid appraisals very little is known (beyond anecdotally), about livestock performance and production constraints, which require more in-depth study; little is currently known about expected and potential productivity of different species under differing conditions of management. Furthermore, while there seems to be a consensus of opinion that under present conditions of production, access to feeds (particularly winter feeds) stands as an obstacle to restocking and livestock development, there seems no clear strategy for how to overcome this. While some argue for improved management of Afghanistan's traditional rangeland resources, others contend that development can only follow intensification of cultivated fodder production and improved agro-livestock systems.

Because of the traditional predominance of *kuchi* pastoralists as livestock managers, a large proportion of the literature focuses upon them and extensive production systems while much less information has been gathered about production within intensive integrated crop/livestock systems. This shortcoming is significant given that some schools of thought postulate that these integrated systems will be of growing importance in the future.

Furthermore despite various surveys conducted, little is yet understood about the significance and role of livestock within Afghan rural livelihoods.

4.2 Literature review

Barker, T. 2000

Animal health and Livestock Production Programme in Afghanistan, Kabul, FAO, (pp 84)

This document constitutes the final report of the FAO Integrated Livestock Development Programme which ran in Afghanistan between 1994 and 2000. This programme brought together a number of NGO partner institutions and was umbrella to a range of livestock and veterinary activities.

- Despite poor funding, the programme initiated actions on fodder production, artificial insemination, urea blocks, urea treatment of straw, fisheries, poultry and milk collection during its lifetime.
- The programme undertook training to establish a system of participatory veterinary practices. This was effective in improving the extension of improved livestock management
- The programme worked to establish a privatized veterinary service (Veterinary Field Units) during the 1990's. The results of this were mixed when funding ended
- By 2000, the scope and activities of the project were very much reduced owing to funding and political challenges
- The document provides significant data on changes in animal productivity following interventions in project areas. The 'before' data therefore provides a useful benchmark for unimproved animal production in those areas at that time

The report provides an overview of the general direction and achievements of livestock development activities in Afghanistan during the 1990's. However, as made clear in the report, due to limited resourcing, interventions were restricted to certain geographical areas and mainly occurred as pilots. There is no indication of the longer term success or sustainability of these initiatives at a broader scale.

Barker, T. 1998

Livestock Development for Food Security in Afghanistan FAO (pp5)

http://www.pcpafg.org/Organizations/fao_livestock/ProgrammeReport.htm

Summary update document on the 'Livestock for Food Security Programme'. The report details the achievements of the program, in terms of actual actions, infrastructure and asset acquisitions. The report details some of the ongoing challenges and weaknesses of the existing programme and identifies needs and priorities for further action.

Casimir, M. Winter, R. and Glatzer, B. 1980

'Nomadism and remote sensing: animal husbandry and the sagebrush community in a nomad winter area in Western Afghanistan'. *Journal of Arid Environments*, 3, (pp23)

This paper sets out to test the assumption that nomadic pastoralism contributes to the degradation of rangelands in Western Afghanistan. The study takes a quantitative approach, estimating herd consumption, and then estimating Gross Primary Production utilising transects, measurement of dry-biomass (and calculation of associated protein values). The researchers employ early satellite imagery to assist in this calculation. Researchers also investigated the impact of nomad collection of fuel shrubs. Data collected indicates that:

- 25-33% of Gross Primary Production is consumed by the nomad economy either through grazing or fuel collection.
- Livestock populations seem to be balanced at levels that ensure sustainable use of land resources.
- Successive years of drought would establish a new equilibrium between livestock and pasture capacity, resulting in losses from livestock herds

This paper is interesting in that it describes the application of traditional range evaluation methods in the Afghan context....data describing the composition of ranges and their production will have historical as well as comparative value. The principal problem with this is the considerable re-evaluation of thinking which has since occurred in range science since the paper was written. Contemporary theory characterises range systems as being in dis-equilibrium, not balanced against inputs and pressures (such as livestock grazing). Utilising this model, the notion of balanced carrying capacity must be discarded. (See Dijkman, J. 1998)

Thomson, E. Chabot, P. and Wright, I. 2005

***Production and marketing of Red meat, Wool, Skins and Hides in Afghanistan* Kabul, Macaulay Institute (pp55)**

<http://www.macaulay.ac.uk/MRCS/intl/LivestockMarketingReportFinal.pdf#search=%22Production%20and%20marketing%20of%20Red%20meat%2C%20Wool%2C%20Skins%20and%20Hides%20in%20Afghanistan%22>

This paper was researched and produced under the auspices of the RALF programme with the objective of exploring the possibilities for developing livestock production and marketing as a viable alternative to reliance on poppy. Research was undertaken in three provinces, Kunduz, Kabul and Kandahar over a three month period. The studies conclude that:

- There were considerable informal transaction costs that reduced profit from sales of animals at the market (between 10-25 %).
- There was little if any income from wool as most was consumed domestically
- Skins and hides from Afghanistan are being exported to Pakistan which derives the benefits of added value leather industries.

- The major factor limiting the participation of rural families in livestock production is the lack of animals... most communities were de-stocked after the drought.
- There could be utility in credit schemes to support purchase of animals and restocking

While process for livestock have increased over several years it is demonstrated that incomes from livestock alone cannot compete with those from poppy. However it is expected that the livestock subsector will contribute to general agricultural and rural development in Afghanistan.

This study constitutes an extremely useful document, providing an analysis of livestock marketing to a level of detail not previously attempted. The principal limitations upon it relate to its limited geographic scope and duration; given developments in the condition of the livestock market, some of the findings are in need of updating.

Central Asia Development Group 2004

Registan Pasture Water Assessment Kandahar, CADG (pp127)

<http://ideas.repec.org/p/kyo/wpaper/606.html>

The purpose of this study was to understand the conditions and problems of internally displaced nomadic communities and to devise solutions to the problems that they face. Special focus was given to assessing pasture and water resources upon which these groups rely. Work occurred during spring 2004 and methods included hydrological testing, GIS data manipulation, range ecology analysis and interviews. The report is divided into three major sections, first providing a situation overview, then a resources assessment (water and range) then asset of strategies for resource rehabilitation, conservation and resource development. Specific data presented includes:

- Detailed soils and climatological data
- Water quality/chemistry analysis from the Helmand river and various inland sources; description of types of wells and artificial catchments and their locations
- Description and discussion of the Registan flora from the results of a botanical survey; discussion includes breakdown by palatability
- Discussion of grazing carrying capacity including herbage yield estimates under different levels of precipitation, using an imported model.

In its final section, the report sets out some proposed future strategies for range rehabilitation and pastoral development. These actions include the re-seeding of pastures, the stabilization of sand dunes and the improvement of livestock production.

The Report comes with extensive appendices providing supporting data.

While the report makes a strong contribution to our understanding of environmental conditions in a single area of rangeland at a single point in time, data collection was limited to relatively few localities and test sites during a single spring season. A major conclusion of the work is the need for more systematic surveys and research, not only in the southern regions of Registan but more widely throughout Afghanistan. Some of the methodological approaches (such as estimation of carrying capacity are subject to challenges elsewhere in the literature).

Jost, C. 2004

Men Women Children and Livestock: A livelihood analysis of the Registan Kuchi focused on gender and animal health Kabul, GRM international, (pp37)

http://www.tufts.edu/vet/vet_common/pdf/ivm/report.pdf

This study was undertaken with the purpose of designing programs to support internally displaced nomads. It focuses upon the role of women and livestock health in pastoral

systems. The study was the result of ten days fieldwork and covers the following thematic areas:

- The ethnic constitution of groups using Registan pastures and their ethno-ecology including migration patterns, types of social capital and types of tenure under which resources are accessed.
- An analysis of which types of households are most vulnerable: namely widows, handicapped or resource poor households, decision making processes in nomad households and their responses to shocks (such as drought)
- The vulnerability of returnee household animals to disease owing to drought factors, poor access to land small herd sizes and the failure of VFU's in southern Afghanistan

After reviewing a range data, the author recommends that current veterinary training programs for southern Afghanistan be halted until a new system of community level primary healthcare can be designed.

Thomson, E. 2006

Water Management, Livestock and the Opium Economy: Livestock production and Health Kabul AREU (pp27)

Afghanistan to establish the basic conditions of livestock production and farmer strategies. The results of the report are presented as a series of thematic discussions;

- Restocking and recovery after drought: Farmer strategies and capacity to rebuild herds
- Feeds production: Farmer strategies to cultivate or otherwise acquire fodder for livestock. Questioning the extent to which feed constitutes a limiting factor on livestock production
- Animal disease and health: Which diseases and health conditions prevail, their impact on herds and how farmers treat them.
- Increasing offtake: A general discussion of limiting factors in current production systems and the scope to increase productivity through interventions. This part of the report sets out a research strategy for testing some of these assumptions and demonstrating ways of improving livestock productivity

Fitzherbert, A 2006

Water Management, Livestock and the Opium Economy: Livestock Husbandry Kabul AREU (pp72)

This paper provides a detailed description of livestock husbandry practices at primary research sites in four provinces. Specifically the paper provides contextual depth with respect to cultivation practices and ethnic composition at diverse research sites. The discussion begins with a review of the livestock policy goals in the MAAH Masterplan and considers their validity in the light of field observations.

Although the study is predominantly descriptive rather than analytical, it provides a level of detail rarely achieved through recent reports, and sets the scene for further investigations. The closing discussion of the study emphasizes the linkages between cropping and livestock systems and the need for an integrated policy approach to these.

Thieme, O. 2000

Country pasture/Forage Research profile -Afghanistan, Rome FAO, (pp22)

<http://www.fao.org/waicent/faoinfo/agricult/agp/agpc/doc/counprof/afgan.htm>

This report puts the Afghan livestock production environment in geographic perspective, presenting a range of data on land use, climate crop production as well as livestock systems. It further provides an overview of pasture of pasture types and conditions in the country. Specifically it details

- Breakdown by area of land use and types, together with data on crop cultivation area and mean yields
- Data on livestock numbers by species up to 2003, divided by management type
- Basic soils information
- Basic ecological zoning for the country with climatological data
- Outline of livestock production systems
- Overview of the pasture resource, both natural and improved

Although the report contains no new data, it conveniently draws available and relevant material together in a very accessible form. In doing so, the author indicates the lack of available information about the range ecology of Afghanistan and the clear need for further research

De Weijer, F. 2002

Pastoralist Vulnerability Study Kabul, World Food Programme/ Vulnerability Assessment Mapping Unit (pp35)

This study was undertaken as an attempt to try and assess food security among Kuchi pastoralists as a basis for programming. The data presented in the study was drawn both from a review of literature but also from some field interviews undertaken by the author. The report covers:

- Background information (including definition of the terms 'pastoralist' and 'nomad', the social structures of the Afghan tribes, discussion of available population figures for Kuchis and discussion of migration patterns in different parts of the country).
- Particular focus is given to summer migration into the Central Highlands Region and the historical/political circumstances disrupting this.
- Internal and external social relations of Kuchi's are outlined, notably the social networks and resilience of the community to cope with stress and their relationship with settled communities.
- The relationship with sedentary peoples is characterised as ranging from conflict and tension to interdependency, with the pastoralists being most reliant on exchange and relations with farmers. Nomads are described as having poor links to urban communities.
- The report outlines Kuchi food consumption, emphasizing the role of milk in household diets, and indicating the relatively minor importance of meat. The study indicates that food availability is strongly seasonal. Food consumption is described, broken down by food types (%).
- Growing dependency on purchased foodstuffs requires increased access to cash either through sale of livestock products or labour. This form of cash acquisition important in times of resource stress.
- An analysis of Kuchi labour opportunities and incomes is presented (agricultural labour, trade, hired shepherding, dung collection and sale, wood collection and casual labour).
- A breakdown of cash expenditures is cited
- Inter-household redistribution acts as a social safety net
- Vulnerability analysis is offered together with potential interventions for alleviating Kuchi vulnerability.

This report is useful in the specific data it provides on Kuchi livelihoods, notably data on consumption. However, the analysis is unclear whether consumption data has been presented on a per capita basis. Also the lack of any production data to tie in with consumption weakens the analysis. Finally it is clear that the data presented refers to a very restricted study group with only limited broader applicability.

De Weijer, F. 2006

Draft Pastoralist Support Strategy, Kabul, RAMP (pp 42)

The Strategy document constitutes a principal output from a conference convened by RAMP in November 2005. The objective of the document is to advance the process of state support for nomadic pastoralists by the Afghan government (Ministry of Frontier and Tribal Affairs, Ministry of Agriculture, Animal Husbandry and Food). The document emerges from a consultative process that includes experts, stakeholders and nomads themselves. The major elements of the document:

- Defines the meaning of the term 'Kuchi', and gives data for size of this population in Afghanistan. These figures suggest that up to 10% of the total population may be nomadic.
- Provides a justification for a Support Strategy for this particular group (citing a combination of Economic, Environmental and Political factors)
- Identifies key issues to be addressed, namely Institutional representation, natural resources access and the sustainability of livelihoods and agric-systems, marketing problems and access to labour markets
- Sets Goals for pastoral support, specifically institutional strengthening, strengthening of pastoral livelihoods, and support for income diversification

While the document highlights major areas identified for interventions in support of pastoral livelihoods, it fails to give a clear indication of which bodies will implement these actions, how they will be funded and benchmarks against which progress can be measured. The document does however add to the weight of material calling for recognition of nomads' exclusion from services and government support.

De Weijer, F. 2005

Microfinance for Kuchi Kabul, MISFA (pp53)

This study was commissioned by the Microfinance Support Facility of Afghanistan, with the objective of studying and characterising the problems and opportunities associated with extending microfinance actions to nomadic and semi-nomadic herders of livestock. The research argues that the special conditions of nomadic livelihoods require that specific financial products be designed to Kuchi needs. The report utilizes participatory field work among a number of Kuchi Groups in Nangarhar and Laghman provinces and provides evidence to characterise their production system and their credit needs. The report contains:

- Lessons learned from efforts to supply microfinance to nomads internationally (Africa and Asia).
- Categorisation of Kuchi's in the study areas on the basis of mobility
- Discussion of the Kuchi economy (production consumption, incomes and expenditures) and the main features of the Kuchi livelihoods.
- Management of risk: identification of the main risks associated with Kuchi production (political economic and environmental). Description of Kuchi production strategies to mitigate risk (both before and after the event). The point is made that many strategies are based purely upon livestock economy.

- Loan products which Kuchis are interested in: specific points in the Kuchi economy where financial support would enhance and secure production or support diversification.
- Discussion of the utility and constraints on loan products: preference for financing purchase of additional stock, although this may not always be appropriate. Challenges including livestock mortality, existing debts, loan repayment, remote ness and husbandry skills
- How to facilitate Kuchi loans: using existing institutions... stressing the high reliance of Kuchi on their traditional institutions and the possibility of utilizing tribal shuras in finance management and repayment.
- Risk reduction for credit implementation. Gradual staging of loans, (by size and by type), seeking shura guarantees against loans
- Establishing eligibility criteria (successful herders as opposed to most vulnerable), establishing a risk typology and approach for negotiating loans.

This paper has specific utility in describing contemporary Kuchi production systems and broadly identifying the potential of credit to enhance the effectiveness and security of these systems. It describes risks and optimal systems for approaching the delivery of credit to Kuchi's. However, the study has only limited empirical data describing pastoral livelihoods and therefore does not accurately identify where and how effectively loans would be utilized. The document fulfils a policy, rather than a technical function.

De Weijer, F. 2005

National Multi Sectoral Assessment on Kuchi Kabul, Government of Afghanistan (pp46)

The report is the product of a baseline socio-economic survey of Kuchi (nomadic pastoralists in Afghanistan). The survey utilized a single visit questionnaire and was undertaken in 30 Provinces. The findings suggest:

- Kuchi's engage in diverse range of residence and migration activity: a variety of categories are hypothesized to describe mobility. Data is given on % population within categories
- Provincial level data on Kuchi seasonal distribution and a diagrammatic summary of migration routes
- Provincial summer pasturing preferences and factors constraining this access and the reported prevalence of conflict over land access.
- Kuchi land ownership and livestock , given by province .
- Information on livestock diseases and access to veterinary services
- Information on labour and supplementary incomes
- Access to water resources, healthcare and schools given as aggregate reported percentage.
- Data on reported mines and recommendations for intervention priorities. The two major Kuchi concerns were restocking and access to water.

This report provides a basic overview of the some of the demographic characteristics of Kuchi populations. Since it was undertaken to inform national policy making, it employs an essentially descriptive and aggregate approach with limited depth of analysis into production systems or investigation of household economics. It does however indicate the national significance of the Kuchi population (nearly 2.5 million enumerated) and some of the challenges facing the extension of services to this group.

Charpin, A. 2005

Indigenous Peoples Report Western Basins Project, Final Report, Attachment 3 (pp 84)

This report discusses the situation of the nomadic pastoralists in the Hari Rud basin and the potential for their engagement in the proposed development action. The author argues that while pastoralists were once integrated producers within agricultural (and export markets) they are now becoming increasingly marginalized and rely on livestock for their own subsistence. It is argued that nomads have become predators of natural resources and from producers have turned into consumers. Lack of tenure and access rights to pasture are cited as being of particular significance in this 'marginalisation'. The report includes;

- An introduction to 'Kuchi's' , their identity and status as indigenous peoples and migratory behaviour
- Structural elements of migratory lifeways, notably the function of winter settlements and pastures, the social and economic basis of access to these, migratory calendars and access to markets
- Social cultural aspects of nomadism; communality, tribal relations, IDPS and returnees and new social units. The role of women.
- Livestock and the economics of migratory pastoralism; access to natural resources, water and pastures The impact of recent livestock and land losses on nomadic peoples, and their adaptability.

The latter part of the report sets out recommendations for an Indigenous Peoples Development Plan for the Hari Rud basin. The overall recommendations fall into three separate categories:

- Provide more secure access to pastures
- Engaging communities in Community, forestry and resource management
- Working to rehabilitate the pastoral economy

This paper provides an interesting counterpoint to most other contemporary research on nomads (much of which is undertaken in eastern Afghanistan), and also research from the Hari Rud basin undertaken by Casimir, Glaztner and others in the 1970's.

Favre, R. 2004

Review of relevant surveys data in the livestock /dairy sector and their implications for programming Kabul, AADP (pp11)

The objective of this paper was to review the state of the livestock sector at its perceived nadir after the years of conflict and drought. The paper aggregates the most recent data on cattle population and their distribution, on dairy production and small ruminant production. Rough calculations based on aggregations of Livestock Units LSU and assessments of natural forage production indicate that livestock populations in Afghanistan are heavily dependent upon cultivated fodders. Feeds are to be considered one of the principle constraints upon livestock development.

The paper outlines the major initiatives to collect and produce milk. These are restricted to the major cities of Kabul, Mazar and Kandahar. At time of writing there was a proposal to construct a major production facility at Pul-i-Khumri. The paper concludes:

- The idea of developing domestic production of milk in Afghanistan is good
- Strong practical and logistical problems exist to collecting milk under existing problems
- To increase localized collection beyond 3000 litres per day would require improved veterinary programmes and more land allocated to fodder production

Dijkman, J. 1998

Carrying capacity: outdated concept or useful livestock management tool? (pp9)

Pasture Development Network, London, Overseas Development Institute

<http://www.odi.org.uk/pdn/drought/dijkman.pdf>

This paper reconsiders the theoretical validity of the notion of 'carrying capacity' as a basis for assessing sustainable use of land by livestock populations. The paper provides an outline of the concept of CC which has dominated range science for many years. CC calculations are usually made on the basis of forage production measurements, together with estimated livestock per capita consumption. The author questions the utility of this formalized approach because:

- Livestock may be managed for a variety of different purposes (i.e. fibres, meat milk draught), which involve different stocking densities (even of the same species) and therefore different sustainable CC's
- The concept of CC was developed in relatively stable environments with little inter-annual variability in vegetation succession
- New thinking identifies some rangeland systems as highly unstable and essentially in non-equilibrium, with the consequence that under some condition there may be an appearance of overstocking under CC assumptions. Livestock /rangeland interactions are viewed as more complex than under equilibrium conditions
- There are immense problems in undertaking CC calculations, particularly when expressing animal numbers in substitution units, in estimating range productivity and also in factoring in sustainable use variables (i.e. the level of use allowing recharge of the seed bank)
- The notion of management through CC calculations is maintained on pastoral properties in Australia and elsewhere where tenure and access to resources is relatively controlled but has less utility under common property conditions of management

The new thinking recognizes pastoral management differentiated by livelihood objectives, and that the productivity of arid rangelands is heterogeneous over time and space, making flexible management and mobility of stock a valid strategy. Thirdly dis-equilibrium theories suggest that grazing or even over grazing has a limited long term effect on grasses and other annual species. Consequently, CC as a general tool for landscape level management is questioned. However, the paper does not suggest alternative methods for range assessment.

Future Harvest Consortium 2002

'Needs Assessment on Feeds Livestock and Rangeland', Aleppo ICARDA (pp92)

<http://community.eldis.org/webx?233@308.rreAaCstdDH.0@.ee9c621!enclosure=.ee9c622>

This study was built upon a Rapid Diagnostic Survey conducted in 2002, in order to investigate needs in order to strengthen the livestock sector after the impact of years of war and drought. It is valuable in that it provides a useful overview of livestock and agricultural systems in the post Taliban and post drought period, and in addition to drawing upon documentary evidence, contributes some additional evidence to our understanding of Livestock systems. Specifically;

- The report briefly introduces diverse farming systems in Afghanistan, sedentary cropping, livestock farming and pastoral nomadism.
- The report outlines the institutional status and technical capacity of Afghanistan to support livestock development (universities, technical skills within ministries).
- The report reviews the achievements of past and current livestock related projects covering fields such as animal health, Feed and fodder production, Dairy, Poultry and various Survey and information projects
- Key areas identified for enhancing livestock production, (feeds, Kuchi and ranges, animal health, production, information and marketing).

- Methodology of the Rapid Diagnostic Survey and results (describing agricultural production, livestock ownership and losses during drought, feed regimes, production calendar, restocking model, herd structures marketing of livestock products, farm gate prices at time of study)
- Discussion of the needs identified through the Rapid Diagnostic Survey, specifically the outputs of a wrap-up workshop conducted by the study team

The study is of particular value in describing the impact of the recent drought on the livestock economy and animal based livelihoods. The study further provides a broad overview of production patterns coming into the post-drought period. However the study was undertaken at the community level rather than the individual level, and results represent 'consensus' opinions across all community members. The single visit methodology may also limit the accuracy of data collection and the capacity to track change over time.

Heffernan, C. 1998

Livestock Destitution and Drought: the impact of restocking on food security post disaster Pasture Development Network, London, Overseas Development Institute, <http://www.odi.org.uk/pdn/drought/heffernan.html>

This paper presents an analysis of the outcomes of restocking as a method for 'rehabilitating' pastoral communities in the wake of drought and other disaster events. The study utilizes data from restocking programs in Kenya, East Africa. The paper examines the utility of restocking as a mechanism for ensuring food security. It begins with a theoretical discussion of food security;

- The authors argue that there is little consensus on the meaning of the term 'food security' and in recent years it has been used to mean many things. It is argued that in reality pastoral food security is linked to factors such as the market exchange rate for animal products and cereals.
- It is argued that in some cases, pastoralists have the objective of destitution avoidance rather than avoidance of starvation. This effects sales and labour allocation decisions within households
- The results of the study demonstrate there is wide difference in the income benefits resulting from stocked herds. In some cases a year after restocking beneficiaries were receiving no additional income or benefits from their herds due to falling livestock prices (related to continuing drought). Very small restocked populations may require labour inputs in excess of their value
- The study found that a majority herding households were engaged in diverse other activities, (like trading, collecting wood, wage labour and hired shepherding), to supplement their incomes. The most successful herding households seem to be in receipt of these cash incomes. Owing to cash generating activities, livestock management may have an opportunity cost.
- In many cases regular household expenditures exceed restocked livestock incomes. Veterinary expenses alone could account for 8% of total income
- Herd recovery (growth) models were developed for each of the studied livestock populations (based on population dynamics under both normal and drought year conditions). The incidence of drought years was calculated on the basis of local records
- Drought was demonstrated to have a high impact on the growth of herds; even a single year of drought could result in negative population growth over five years

The study suggests that overall, restocking projects have little overall effect on food security and livelihoods. In nearly all cases alternative sources of income underpinned household food security with small stock acting as 'stores' of value. Evidence suggests that

during drought or times of food shortage, animals are sold off, with the consequence that they have little capital growth value.

Khan, U. and Iqbal, M. 1999

The Role and Size of the Livestock sector in Afghanistan Islamabad, World Bank (pp 62)

This report provides a sectoral overview of livestock production in Afghanistan, with a focus upon its national economic significance. The report indicates the primary importance of livestock in the economy prior to the war and compares this with the situation in the late 1990's.

- The report outlines the geographic diversity of livestock production; its traditional importance in different areas of the country and current trends in ownership and production systems
- The report reviews data describing the overall size of the livestock sector, suggesting that by 1999 it had largely returned to pre-war levels
- An estimate of the value of livestock products (Milk, Beef, Mutton, Poultry and Eggs).
- The report suggests an overall growth rate in the livestock sector of 2%-4% per annum after 1996.
- The study identifies specific animal breeds and their distribution in Afghanistan, together with characteristics of their management , suggesting that nomads manage significant numbers of livestock
- Major sources of animal fodder are identified and given together with their Dry Matter, Crude Protein, Crude Fibre and Total Digestible Nutrients values
- The current state of veterinary health provision around the country is reviewed
- Major constraints to the growth of the livestock sector are discussed

The report was undertaken as a desk top study and thus provides no new data. However, it is very useful as a reference describing the growth potential of the livestock sector, indicating the role they may play for domestic capital growth and poverty alleviation.

Neumann, C. 2000

Livestock Development and impact on diet quality and the growth and development of children. Los Angeles UCLA (pp 9)

<http://www.cgiar.org/ilri/Infoserv/webpub/fulldocs/Aesh/Livestock.htm#TopOfPage>

This paper identifies the significance of livestock products to human nutrition, especially in early stages of development and for reproductive health. It therefore indicates the important role that livestock can play in supporting human development. The paper begins with observation that diet in many developing communities is found to be deficient, both in energy, and in nutrients and minerals, and that livestock products may go some way to offsetting these deficiencies;

- Livestock provide high quality and readily digestible protein as well as well as calcium, iron zinc, vitamins A and B12.
- More than half of all Asian children are stunted owing to inadequate energy and nutrient intakes.
- Nutrient deficiencies also lead to impaired cognitive function and learning, anaemia and reduced resistance to infection
- While nutrients are available from certain vegetable types, the quantities needed to satisfy daily requirements are beyond the ability of children to consume

- Evidence demonstrates that fibre, cereal and legume dominated diets in developing countries are linked to poor child growth and diminished learning ability....

The paper concludes that small stock and mixed farming have a high potential to alleviate malnutrition, and suggests that the challenge is to ensure that as many households as possible have access to livestock, be it through credit programmes, education, or extension services. The paper clearly identifies the value of livestock within the household economy, and the human development benefits they offer.

Swedish Committee Afghanistan 1990

Agricultural Survey of Afghanistan: Livestock, Peshawar (pp25)

The Survey report provides a detailed description (province by province) of livestock ownership in Afghanistan. The first 25 pages of text give an overview of the results while the latter bulk of the volume provide the actual data, given in tables and figures

Because of the age of the survey, the document is primarily of historical value, but gives an excellent indication of the pattern of livestock holding prior to the civil war, Taliban ascendancy and drought of the 1990's. It may be useful for making comparisons of livestock numbers, holdings or herd structures with contemporary data

Thieme, O. 1996

Livestock production Rome, FAO (pp37)

This document is a report prepared for the FAO, providing a general overview of the Livestock Production systems in Afghanistan in the mid 1990's. The report provides data on numbers of livestock in the post war era and also goes some way to characterising the variety of systems being utilised and their geographical heterogeneity.

Specifically the report details:

- Overall livestock numbers and trends of change in the post war era. It suggests that by 1996 livestock numbers had recovered to pre-war levels
- Overview of the principal livestock species in Afghanistan and the systems of production associated with them
- Background to animal health and extension services and the progress achieved by the mid 90's
- Data on animal nutrition and fodder availability in Afghanistan
- Macro-scale data on national production and consumption of livestock products
- Options and constraints for the further development and intensification of the livestock sector in Afghanistan
- The report details production gross margins for two herds based on questioning during fieldwork component of the study

The report provides an extensive bibliography citing documents and literature describing livestock systems in Afghanistan and Central Asia. While providing an useful introductory overview of the livestock sector in Afghanistan, the report describes the sector prior to the major drought of the later 1990's and 2000's. It is also primarily a desktop study and lacks empirical data.

Umrani, A. 1998

Sustainable approaches for rangeland management and livestock production in arid and semi arid regions of tropical countries Pasture Development Network, London, Overseas Development Institute (11pp)

<http://www.odi.org.uk/pdn/drought/umrani.html>

This paper considers (reconsiders) the challenge of achieving sustainable stocking of arid rangeland areas with highly variable environments. The paper is essentially theoretical although drawing on research findings from northern Pakistan. The paper argues:

- Owing to complexity and variability, decision making in rangeland management needs to be flexible and adaptive. Management needs not only to respond to changing opportunities, but to use these at a sustainable rate
- Grazing pressure has a less devastating effect on ranges than fire cultivation, deforestation or development, but disruption of traditional grazing management may threaten sustainability
- Traditional systems of use had ecological rationale; mobility, manipulation of herd structure and species composition. These facilitated pastoral adaptation to variability in resources
- Pastoralists have had to cope not only with fluctuations in forage availability but also change in political and social structures around them.
- Herding objectives may differ widely between pastoral groups; many groups seek to maximise animal numbers rather than outputs per animal, making control of animal numbers (and sustainability) difficult.
- Climatic variability means that sustainable stocking would require light stocking rates with loss of potential profits in good years
- There must be improved understanding of species competition and succession on rangelands and the stages of degradation. There are also problems carrying knowledge from pilot trials across to landscape scale programmes and interventions.
- Policy interventions can provide services and incentives to reduce animal population numbers, improve productivity and marketing. Efforts should be directed to raise per capita productivity
- Stocking rates cannot be constant owing to variability, although conservative stocking rates can reduce risks of range degradation and improve per capita productivity. The major challenge lies in convincing pastoral people of this.

This paper revisits several of the major arguments of rangeland debate in the early 1990's. In some ways the paper reflects contemporary thinking on disequilibrium but offers the compromise and rather impractical solution of understocking to sustain range condition. The notion of convincing pastoralists to increase per capita productivity at the expense of absolute numbers is, as the author suggests, a 'challenge', given the risk-averse objectives of herders.

Bedunah, D. 2006

Analysis of Afghanistans Rangelands and Management Issues, for the Development of Policy and Strategies for Sustainable Management, Kabul, RAMP (pp 80)

This report constitutes a background document to ascertain current understanding about the state of Afghan rangelands, the way in which they are being managed and issues and problems arising from these. Essentially, the document draws together most of what is currently known about Afghan rangelands in order to facilitate the development of effective policy and strategies for the future management of rangelands. The report is broken into eight sections which include:

- Review of pertinent FAO literature and state of knowledge on range conditions
- Review of the current rangelands policy environment, including a range of policy initiatives and ministries
- Overview of the extent and types of rangelands in Afghanistan
- Categorisation of rangelands according to species composition and productivity levels

- Assessment of rangeland carrying capacities including seasonal variation; drawing together information from diverse sources
- Current rangeland management practices and the sustainability of these given identified carrying capacities.
- Identification of key rangeland management issues and options for their resolution

This study provides the most comprehensive review of what is known about the state of Afghan rangelands and issues pertaining to their management. The study compiles the results of the majority of rangelands studies conducted in Afghanistan, and provides direct citations and a review of almost all of this body of work. This excellent report should now be considered the authoritative source on Afghan rangelands and issues thereof.

Hefferman, C. and Rushton, J. 1998

Restocking: A Critical Evaluation. Pasture Development Network, London, Overseas Development Institute, <http://www.odi.org.uk/pdn/drought/heffernan-rushton.html>

Restocking is widely promoted and utilized as a method for rehabilitating destitute pastoralists following drought. Sociological, economic and ecological justifications have been cited as reasons for this. However, much empirical data from such projects is based upon short term evaluations of success, without longer term assessment.

- Arguments for restocking cite that although more animals are introduced to the range, larger herds induce sedentarised pastoralists to become more mobile and spread grazing away from settled areas. Also argued that stock is often procured locally and so is not introducing more stock to area
- However, political instability may deter pastoral dispersion. Furthermore restocking with small stock (ovicaprids) restricts mobility of herds from water sources. Finally, as restocking requires breeding females, there may not be sufficient of these locally and need to be brought in from elsewhere
- Author discusses notions of 'ecological carrying capacity' (supportable by range resources) and 'economic carrying capacity' (population that supports maximum economic offtake). Under normal conditions, ecological carrying capacity is thought higher than economic.
- Some approaches to stocking contend proactive de-stocking and restocking to balance livestock populations with available fodder. During drought animals are sold off (de-stocked), and afterwards restocking is supported through projects.
- This approach raises a number of problems; (cultural acceptability, the difficulty of gauging when drought periods are commencing or ending and how to support communities through de-stocked periods).
- A project supporting livestock prices by buying during drought de-stocking will not be able to resale for several months until animal condition is improved; fodder may have to be imported to support them at considerable expense.
- Allowing pastoralists better access to national and regional markets would support them through local droughts
- Economic analyses are conducted to demonstrate that re-stocking is not necessarily a cost effective mechanism for supporting post-disaster rehabilitation
- There is a possibility that restocking may favour large herd owners and traders over the most vulnerable and exacerbate wealth differences.
- The long term sustainability of restocking is based on the assumption that restocked households return to independence upon the ranges. Evidence exists to the contrary.

This paper provides an excellent discussion of the challenges and processes associated with restocking as a strategy for post-drought/conflict conditions. As such, the arguments are of applicability to Afghanistan. However, the major limitation of the discussion is its

focus upon nomadic pastoralists, without reference to agro-pastoral and integrated farming systems which account for a significant part of rural livestock production in Afghanistan.

Favre, R. 2003

Grazing land encroachment Joint helicopter mission to Dasht-e Laili Kabul, FAO (pp19)

ftp://ftp.fao.org/country/afghanistan/dasht-e_laili_mission_report.pdf

This report describes the results of a mission to investigate the changing condition of the Dasht-e-Laili grazing lands as a case study of threats to pastures areas generally. After describing the natural condition and economic significance of the Dasht, an approximate assessment is made of encroachment of arable cultivation using comparison between 1999 satellite imagery and more recent aerial photography.

The study indicates that:

- Once ploughed, land may take 3-4 years to return to its natural (pasture) state. There are threats of sand dune encroachment onto the dasht
- High salinity and lack of groundwater means that dasht users are largely dependent upon surface reservoirs to harvest rain water
- Pasture rights to the dasht reflect changing historical and political fortunes of different user groups; Currently lack of central authority leaves the land vulnerable to exploitation and illegal development

The report concludes that grazing land management is a complex and multifaceted problem that needs to be addressed at a national level. It provides an important resource for many livestock managing groups that are rendered vulnerable in the post conflict environment. The report suggests creation of an inter-ministerial commission on land and grazing.

Thomson, E. Barker, T. and Mueller, J. 2003

'Drought, Livestock Losses and the Potential for Feed Production from Arable Land in Afghanistan: A case study of 183 villages with mixed Crop/Livestock farming systems' Aleppo, ICARDA (pp 34)

The study presents the results and conclusions of a Rapid Diagnostic Survey undertaken in 2002. The study looks primarily at the impact of the recent drought on livestock production in the Afghan provinces, and identifies constraints upon, (and strategies for), restocking.

- The study provides a discussion of the drought and the data to support this
- The study provides data on mean livestock populations by species in villages of five Afghan provinces (Balkh, Ghazni, Herat, Kunduz and Laghman), both before and after the drought, giving mean percentage reductions in numbers
- There is also data on mean household ownership, before and after the drought in all study areas, suggesting losses of up to 80% for some species in some areas.
- The study models the rate of restocking under normal conditions of herd growth and suggests without interventions stocks will not achieve pre-drought populations for up to ten years (depending on species)
- The study identifies forage availability as a constraint on restocking and provides data on current land use.
- Data is provided on mean arable land cultivation per household in five provinces, with breakdown of crops under cultivation
- The study suggests the introduction for evaluation of alternative fodder species to help precipitate and sustain restocking

This study constitutes a useful resource. Although the methodology is imprecise, it constitutes one of most systematic appraisal of drought impact on Livestock production Afghan provinces, and offers a snapshot of trends in Arable land cultivation in the five provinces studied.

5. Opium

5.1 Summary of literature

There can be few commodities that have attracted such a range of views, analysis and positions from so great a spectrum of disciplinary and political perspectives. The issues relevant to the opium poppy phenomenon range from the agronomic to the social, the economic to the political, from processing to international trade, from emergency to development and from health and crime to security and terrorism. In some ways this illustrates well the complexity of the issues surrounding opium poppy cultivation.

The opium poppy literature raises particular challenges of review. Much of the writing is anecdotal and recycles impressions, comment and statements of dubious provenance that assume a life of their own and become truths. Some of the information on security and international trade is simply not in the public domain since it is seen to touch on issues of international crime and security. Other papers are so driven by a moral agenda and certainty (e.g. that opium cultivation is a bad thing and must be wiped out - the parallels between the war on terrorism and war on drugs theme) that any pretence to dispassionate evidence gathering and argument building is abandoned. It must be said that the issues that opium poppy raises are so complex and intractable that they invite simplification and a distillation to self-evident truths because the complexity is simply too difficult to handle. And at its most simple, a division of the literature between those who would treat opium cultivation as a 'cause' and those who would regard it as a 'symptom' would be one way to position an exploration of what has been written but then of course opium poppy cultivation is both these things.

A starting point for exploring the spider's web of literature on opium poppy in Afghanistan (and the literature cited makes no attempt to be comprehensive but is deliberately selective to demonstrate the range and key readings in each area) is to begin with the numbers. The United Nations Office on Drugs and Crime (UNODC) annual surveys of opium poppy cultivation area and estimates of opium production (published from 1994) have been seen to provide the benchmark. The extent to which these provide a robust time-series of data must be open to question given changing survey techniques, differential provincial and district coverage between years and unreconciled differences between the area data from remote sensing undertaken by the Americans which do not appear to be widely used.

Evidence and analysis on the reasons behind shifting patterns of cultivation - or what for any other crop would be called patterns of diffusion and adoption - is rather patchy. Prior to 2001 UNODC¹ undertook a number of strategic studies to attempt to build deeper understanding of such processes (see in particular UNDCP 1998a, Strategic Study No 1, UNDCP 1999e, Strategic Study No 5 and UNDCP, 2000c, Strategic Study No 7) which drew attention to the significance of trade and labour networks in diffusing both skills of cultivation and market linkages although up until 2001 opium poppy cultivation was largely concentrated in two core provinces - Helmand and Nangarhar. Pain (2006) complemented some of that understanding with a particular look at the development of the transit trade of opium across Ghor to Helmand.

¹ Note that up until late 2002 the UNODC (The United Nations Office on Drugs and Crime) was known as UNDCP (The United Nations International Drug Programme).

Since 2001 with the development of a counter-narcotics strategy and eradication, the 'drivers' of opium cultivation have become more complex as opium poppy cultivation has moved into the twilight zone between legitimate if not entirely legal, to illegal but not entirely illegitimate. On the one hand there has been the development of a 'farmers intentions literature' (see UNODC, 2003b; Mansfield, 2004a & 2006) post 2001 which has sought to assess the factors influencing farmers decisions as to whether or not to cultivate opium poppy and the influence, in particular, of counter-narcotic measures. Eradication pressures have certainly squeezed opium poppy cultivation out of areas (see Mansfield, 2004d and Mansfield and Pain, 2005, UNODC, 2005, Annual Opium Survey: Introduction) and pushed it elsewhere (in a sense direct eradication effects). But by and large the analysis of diffusion practices and understanding of where opium is and is not grown which requires fine grained analysis around agro-ecological structures (patterns of water availability for example) and social actors which) which is largely absent from the literature although the various writings of Mansfield point clearly to the significance of these spatial dimensions.

At a different level of analysis in relation to the development and origins of Afghanistan's opium economy and analysis of these dimensions is particularly thin, attention is drawn in particular to the work of Goodhand (2002 and 2005) which explores its origins in terms of Afghanistan's historical location, its borderland economy and the problematic processes of state formation and failure stretching back deep into history. He emphasises in particular the complexity and location specific determinants in relation to the establishment of opium poppy cultivation.

Rather more work has been done at the micro level looking at the interests and motivations of opium poppy cultivators (of which the intention studies are in effect a continuation) and the work of UNODC largely prior to 2001 (see in particular the UNDCP Strategic Studies of 1999c, No 3; 1999d, No 4; 2000b No 6. and 2003b, No 9.) has on the basis of empirical field work drawn attention to the critical role of opium as credit, the role of women in opium poppy cultivation, in the strategies of itinerant labour and farmers intentions. This work has been carried forward by Mansfield who has been particularly critical of assumptions around the overall profitability of opium as a driver for cultivation (see Mansfield 2001a) and has drawn particular attention to the differential returns to opium poppy cultivation according to household asset base. Mansfield has continued to develop this household level understanding of the causes of opium poppy cultivation and their dynamics through fieldwork in Badakhshan (Mansfield 2004 b, and see also Pain, 2004 on Badakhshan) Nangarhar and Laghman (Mansfield, 2004c), and of wider factors driving opium poppy cultivation (Mansfield, 2004a).

On opium trade the field studies of UNDCP (Strategic Studies No 2, 5, 1 and 7) prior to 2001 provide evidence from the field on opium trade at the provincial level, differences at the district level and the structures of opium markets at this level. Further field evidence on these dimensions post 2001 for Helmand and Ghor can be found in Pain (2006) but by and large evidence and understanding of how opium markets work is, for obvious reasons fairly under-researched. UNODC (2003b) volume on the opium economy contains one chapter on the opium trade (Chapter 5), which draws to some extent on the earlier UNDCP studies but develops arguments and claims beyond this material that draw to some extent on grey literature that does not appear to be in the public domain and is therefore difficult to evaluate.

Literature and data that specifically addresses opium processing and cross-border trade is essentially absent from the public domain and therefore it is not possible to assess the claims that are made, including within UNODC (2003b) on these aspects.

The moment one moves beyond any dispassionate assessment in treating opium poppy as simply another agricultural commodity, one moves into a body of literature concerned with the effects at various levels of the opium economy.

One strand of this addresses debt credit relations and their consequences (see for example UNDCP, 1999c; Mansfield, 2001a) although given how little is known about informal credit systems in general it is difficult to know whether to what degree the socio/economic relations embedded around opium poppy differ in either quality or quantity from other informal credit relations.

A contrasting strand relates to opium and more general drug use and concerns as to the extent to which an expansion in opium poppy cultivation is leading to an increasing drug use problem. Examples of this literature are to be found in UNDCP Community Drug Profile reports (UNDCP, 1999a, 1999b, 2000a, 2001, 2003a), which are largely concerned with assessing the incidence of drug use and the reasons for it. There are difficulties in separating out the effects of a history and tradition of opium consumption (see for example Pain, 2004 with respect to the Wakhan corridor) by particular social groups in Afghanistan from the refugee experience in Pakistan (see UNDCP, 1999) from alienation and unemployment in urban centres linked in some cases to returnees (UNDCP, 2003) from specific effects of a drug production context. One only has to consider the scale of drug use in the west to appreciate how tenuous it can be to argue for direct linkages within Afghanistan between production and consumption.

There is a major strand of the opium poppy literature that concerns itself mainly with what are seen to be the negative effects of opium cultivation at various levels although some writers (see for Kenefick and Morgan, 2004) draw attention to both sides of the coin - the 'Good Evil' as Kenefick and Morgan put it, noting the positive outcomes that opium poppy cultivation has provided for some at the household level (see also Pain, 2004). But beyond the household level the links between opium trade, warlords and insecurity (Mansfield 2004c, Mansfield 2004d, and Mansfield [forthcoming]), wider criminality, instability and terrorism (UNODC, 2003c and see TNI, 2001 with a critical view towards these claims) and to the state building project (Rubin, 2004) all adopt a rather negative stance towards the effects of opium poppy cultivation and the reconstruction agenda.

At a more macro-economic level the work of Byrd and Ward (Byrd and Ward, 2004; Ward and Byrd, 2004) takes account of the pro-poverty reduction benefits and the positive effects on the economy that have come from opium poppy cultivation. While recognising the considerable down sides of the opium economy they are particularly concerned with the negative effects that an inappropriate counter-narcotic strategy leading to a rapid and sharp reduction in opium area might have on both poverty levels and the economy as a whole.

Much of the debate on counter-narcotic policy (and see Ministry of Counter-Narcotics, 2006 for the National Drug Control Strategy) lies between a spectrum of a hard military approach driven by area reduction objectives to a much softer view that would argue that opium poppy cultivation is a symptom rather than a cause and the circumstances that gave rise to it have to be addressed first. An outlier on this spectrum is the position of the Senlis Council (see Senlis Council, 2005) who have advocated for the legalisation of opium poppy cultivation, a position that has found little support.

The core of the debate on counter-narcotics policy has been about balance, means and sequencing between interdiction, eradication and alternative livelihoods. On the one hand there is a hard-line eradication position that TNI (2005) is particularly critical of, questioning the extent to which an American Plan Afghanistan drawn from a parallel Colombia Plan offers any comparative evidence of success. Somewhere in the middle are those who argue for a balance between these dimensions (See UNODC, 2005) but see alternative livelihoods as an instrumental means of achieving opium poppy production and make claims for links between alternative livelihood projects and area reduction. This is a position that Mansfield and Pain (2005) are critical of, arguing the an alternative livelihood approach, developed out of the ashes of alternative development in Afghanistan (see TNI, 2001) is one that supports mainstreaming counter-narcotic objectives and alternative

livelihoods as an outcome rather than a means of achieving reduction in opium poppy area. Furthermore there is more to alternative livelihoods than simply developing alternative income sources. It is the context within which individuals and households may take least-worst choices that has to be understood and changed. The lessons from a global evaluation of Alternative Development (Commission on Narcotic Drugs, 2005) which argues the case for what good alternative development practice should be has yet to be systematically applied in Afghanistan.

In summary understanding on the nature of the opium poppy economy in Afghanistan and what drives it remains partial and as much determined by prior assumptions and counter-narcotic policy positions as evidence from the field. There is considerable work still to be done in building understanding of the drivers of opium poppy cultivation. It is to be hoped that programme and project implementation around 'alternative livelihoods' systematically builds monitoring and learning systems that help promote that better understanding rather than simply monitoring to prove programme delivery and assumptions of effects. The documentation and analysis of the impacts from the implementation of counter narcotic strategies elsewhere in the world is notably unsystematic and limited and few lessons can be easily drawn from it. The opportunity to make a significant contribution to building understanding and thus improve counter-narcotic policy and practice exists but it requires a patience and commitment to detail and time that some have little enthusiasm for.

5.2 Literature review

Byrd, W. and Ward, C. 2004

Drugs and Development in Afghanistan. Social Development Papers: Conflict Prevention and Reconstruction. Paper No. 18, Washington, World Bank (pp. 34)

This paper which provides an analytical background and some overlaps with Ward and Byrd (2004), explores the linkages between drugs and development in Afghanistan. It reviews the evidence on the opium economy and develops a set of arguments in relation to opium's development impact, drawing lessons from comparative experience. It concludes with an analysis of the National Drug Control Strategy (2003) and identifies some of the options and trade-offs in the implementation of that strategy. Key points made include the following:

- the unprecedented scale of Afghanistan's opium economy
- the negative and positive development impacts of it
- The drawbacks of the opium economy both at the macroeconomic level, its effects on poor rural households and the interface between drugs and insecurity and the implications of this for the reconstruction agenda;
- The need to be aware of the poverty implications of a counter-narcotic policy and focus on the most harmful dimensions of the opium economy, namely the trafficking and processing dimensions;

It concludes that the Government National Drugs Control Strategy provides a sound framework but there is a need to reconcile the drive for targets in relation to reduction and a reality of caution in being able to achieve quick gains in relation to changing the conditions that have fuelled the growth of opium poppy cultivation. It argues that there is a danger the former will take precedence over the latter but recognises that there are no easy answers.

Commission on Narcotic Drugs, 2005.

Alternative Development: A Global Thematic Evaluation Final Synthesis Report, Vienna, CND, (pp. 35)

This is the report of a comprehensive thematic evaluation of Alternative Development based on studies of AD in Southern Asia and South American Andes and other sources. While it does not draw on Afghanistan specifically the lessons that it offers are relevant. It draws attention to the contrasts between Andean clients of AD who are essentially marginalized within a society while in the South Asian case opium poppy cultivators have not been even part of the state and need to be brought into it first. The report argues that Andean peasants cite a lack of markets for alternatives while Asian peasants lack access to state services.

Major conclusions include the following

- AD policy formulation should be based on participatory processes that include all stakeholders to develop a consensus and that policy must be flexible and relevant to context.
- Community participation throughout the project cycle - from feasibility assessment to monitoring and evaluation is essential
- Impact must be measured at the household level using indicators of human development as well as drug control. Only by understanding the processes by which households move from illicit to licit livelihoods can policy development become evidence based and accountable
- AD projects led by security and other non-development concerns are typically not sustainable and may result in the spread or return of illicit crops
- As growers of illicit crops accept participating in AD project, they need to be allowed a transition period until AD activities (on or off-farm) will provide to be suitable to their environment and start generating income

UNODC 2005

Mapping of Alternative Livelihood Projects in Afghanistan Kabul, UNODC (pp59)
http://www.unodc.org/afg/alternative_livlihood_2005.html

This report details the portfolio of actions implemented and ongoing under the aegis of AL strategies. The report is built out of the MCN database on AL project activities and provides details on a project by project level. Data includes:

- Total committed funds (by action and by geographic locations)
- Types of programmes
- Thematic areas of intervention
- Main donors
- The contribution of national programmes

Consequently the report provides an extremely useful overview of the both what the government and donors regard as 'Alternative Livelihoods' actions, but also a comprehensive review of what has actually been invested and implemented to address community engagement in poppy cultivation

Goodhand. J., 2000

From Holy War to Opium War? A Case study of the Opium Economy in North Eastern Afghanistan. Central Asian Survey, 19 (2): (pp. 265-80)

This paper based on a detailed analysis in one village of Afghanistan in 1999 examines the shift in the local economy from wheat to poppy cultivation and from livestock to opium trade. It situates these shifts in relation to the transformation of social relations and informal institutions within this village. It argues that these shifts have to be understood in terms of new and expanding forms of transborder trade associated with changes in the global political economy. Such changes should not be seen as transitional or temporary and are likely to lead to transformatory effects. They illustrate the fact that conflict is not

just about breakdown but also about change and policy responses need to take this into account. However it concludes that action often takes precedence over understanding.

Goodhand, J. 2005

Frontiers and Wars: the Opium Economy in Afghanistan. *Journal of Agrarian Change*, Vol 5 No 2, (pp. 191-216)

This paper is essentially a historically informed political analysis exploring the factors behind the evolution of Afghanistan's opium economy. It argues that attention has to be paid to Afghanistan's historical location and its borderland economy and the particular problematic processes of state formation and failure. It argues that the emergence of current opium economy has to be explained in terms a response to a war or combat economy, the emergence of a shadow or black economy engendered by conditions of state failure and the conditions of poverty that have made opium poppy the crop of choice.

The paper argues that conflict of which opium cultivation should be regarded as a symptom rather than a cause should be seen more in terms of a re-ordering and transformation of political and economic relations rather than a breakdown. Simplified stories about and responses to the opium economy while useful for agency purposes and counter-narcotic responses to not do justice to the complexity and variability within the opium economy and are likely to lead to poor policy choices. Afghanistan has to be understood as a borderland with problematic processes of state formation and firmly located in its regional context.

IRIN, 2004

Bitter-Sweet Harvest: Afghanistan's New War. IRIN Web special on the threat of opium to Afghanistan and the region. (pp.48) www.IRINnews.org

This overview, prepared by the news service of the UN provides a summary brief on the opium economy of Afghanistan. It is based on a series of interviews with key official and unofficial figures and a review of official secondary sources. It largely reflects the official position but as its title suggests recognises the double-edged sword that opium is. The brief that is written for a general public contains:

- An overview and presents arguments of the threat that opium poses to the peace process
- Briefly reviews poppy cultivation, its processing and the role of women in its cultivation;
- Looks at eradication efforts in Afghanistan
- Explores dimensions of opium addiction in Afghanistan
- Situates the opium economy of Afghanistan in its regional context
- Reports on five interviews with various actors, official and unofficial engaged in different ways with the opium economy
- Presents a summary chronology of opium in history

Kenefick, R. and Morgan, L. 2004

Opium in Afghanistan: People and Poppies, the Good Evil. Afghanistan RAMP Rebuilding Agricultural Markets in Afghanistan, Kabul, Chemonics, (pp. 23)

This discussion paper written by two team members of Chemonics, an American contractor working for USAID on Alternative Livelihood Projects offer an open discussion around what they recognise is a complex subject, largely for the purposes of getting a wider debate. But as they put it 'this is no time to knowingly embark on a perverse and/or counterproductive strategies for dealing with the 'evil' aspects of opium poppies, Incorrectly attacking the 'good' aspects of poppy production would be even worse'. They

draw substantively on the work of David Mansfield and Jonathan Goodhand to draw attention to the complexity of the issues that are faced.

Key proposals that they offer to mitigate the evil dimensions but respond to the 'good' aspects include:

- Focus on rural development in its widest sense
- Work with existing social structures to use local peer pressure to accomplish poppy reduction objectives
- Do not forcibly eradicate
- Focus more on building understanding on why things are happening

Mansfield, D., 2001

The Economic Superiority of Illicit Drug Production: Myth and Reality. Opium Poppy Cultivation in Afghanistan. Paper prepared for the International Conference on Alternative Development in Drug Control and Cooperation, Feldafing, Germany, September 17-22, 2001. (pp. 17)

This paper presented at an international community draws from field evidence generated through the various UNDCP Strategic Studies. It seeks to critically examine the extent to which profit and price drives opium poppy cultivation. It examines the different motivations and factors that influence opium poppy cultivation and how these are prioritised across different socio-economic groups. Its key arguments are structured as follows:

- It questions through an exploration of the diversity of opium poppy cultivation in Afghanistan how arguments about the primacy of profit do not explain the scale and spatial distribution of its cultivation;
- Drawing on evidence with respect to land tenure relations and credit it emphasises the role that opium as a currency plays within a society structured by personal relations and how unequal these relations, based on ownership of land and money, are;
- Through an analysis of gross and net returns on opium poppy production it shows how unequal the returns are with the asset rich disproportionately more;
- For the poor through labour costs are a critical determinant of their returns and often it is not a profitable enterprise for them and production is effectively subsidised by self-exploitation of household labour;

The paper concludes that there is both myth and reality with respect to the economic returns to opium poppy production and it all depends on what assets you command. It suggests that there is a need to develop better understanding of the diverse livelihood strategies of different socio-economic groups in designing appropriate interventions for alternative development.

Mansfield, D., 2001

The Failure of Quid Pro Quo: Alternative Development in Afghanistan. Paper prepared for the International Conference on Alternative Development in Drug Control and Cooperation, Feldafing, Germany, September 17-22, 2001. (pp. 19)

This paper, drawn from field research and project reviews is a critique of the practice of 'Alternative Development Projects' implemented in Afghanistan by UNDCP up to 2001. It draws attention to the series of development interventions since 1989 aimed at reducing opium poppy cultivation and their lack of impact. The paper is divided into four sections:

- The first is a critical review of the experience of alternative development in Afghanistan and its attempt to implement strategies based on quid pro quo;

- The second section through a review of the concept of alternative development argues that there is a need to develop a more strategic approach that takes account of the factors that drive opium poppy cultivation and the difference between households;
- The third section draws particular attention to the particular spatial characteristics of opium cultivation - and its cultivation in the most accessible places in marked contrast to other drug producing environments; it questions what alternative development can achieve under circumstances of the effective absence of a state;

The paper concludes that alternative development has a limited role in the pre-2001 circumstances of Afghanistan and that preconditions for effective drug control depend on wider social and political stability.

Mansfield, D. 2004a

What is Driving Opium Poppy Cultivation? Decision Making Amongst Opium Poppy Cultivators in Afghanistan in the 2003/4 Growing Season. A Report for the Drugs and International Crime Department of the Foreign and Commonwealth Office, London. (pp. 35)

This study, based on over 200 interviews in 14 districts for the four key opium poppy cultivation provinces of Afghanistan in 2003/4 (Badakhshan, Nangarhar, Helmand and Uruzgan) building on work done during 2002/3 but also expands its coverage into a new province Ghor where opium cultivating has expanded since 2001. The study seeks to capture diversity amongst opium poppy cultivating households and the factors that influence their decision to cultivate opium poppy. It particularly seeks to explore the impact of various counter narcotic interventions.

Major conclusions from the study were:

- That despite price falls there are still pressures for an expansion of cultivation but that these vary by location and socio-economic group; greater availability and security of supply of wheat is favouring opium poppy cultivation for landowners who largely determine crop choice for sharecroppers; land rental was found to be increasingly set in terms of potential opium production rather than in wheat;
- Accumulated debt remains a continuing influence on the land poor to cultivate opium in the absence of alternative sources of credit; however eradication was having some effect on informal credit systems;
- In part there has been a lack of consistency between central government statements and local government action and that eradication in 2002/3 may have created the conditions for further increases in opium poppy cultivation for 2003/4;
- Many farmers still feel that there are few alternatives to opium poppy cultivation given its critical role in providing access to resources for the poor;

The study concluded that the evidence indicated that eliminating opium poppy prior to the development of secure alternative livelihood sources would be unlikely to work and be sustainable.

Mansfield, D., 2004b

Coping Strategies, Accumulated Wealth and Shifting Markets: The Story of Opium Poppy Cultivation in Badakhshan 2000-2003. A Report for the Agha Khan Development Network. Kabul, AKDN. (pp.24)

This report examines the different factors that have led to a dramatic increase in opium poppy cultivation in Badakhshan since 2001, drawing on a wide range of field interviews and respondents. The report argues that:

- The combined effects of drought, shifts in the regional market for opium and the end of conflict have created the conditions for the expansion of opium poppy cultivation in Badakhshan although this increase might have run out of steam;
- For the poor who were hard hit by the drought, opium poppy cultivation has provided the means to achieve at least short-term food security although they have been less successful in regaining key productive assets (land, livestock) lost during the drought;
- For the resource rich the expansion of opium poppy cultivation has been extremely beneficial allowing them not only to gain profits from opium poppy cultivation but also to obtain increasing control over land and credit.

Note however should be made of the specific conditions of Badakhshan as a mountainous region with poor access and located on an international border. Such conditions might favour the emergence of a narco-economy.

Mansfield, D, 2004c

Diversity and Dilemma: Understanding Rural Livelihoods and Addressing the Causes of Opium Poppy Cultivation in Nangarhar and Laghman, Eastern Afghanistan. GTZ Project for Alternative Livelihoods in Eastern Afghanistan. (pp. 91)

http://www.gtz.de/de/dokumente/enLIVELIHOODS_STUDY_PAL_ID_NO_2.pdf

This study, done under the auspices of a Project for Alternative Livelihoods in Eastern Afghanistan undertook fieldwork to building understanding of the diversity of rural livelihood strategies and the role of opium poppy cultivation within these in Nangarhar and Laghman provinces. Working through household and key informant interviews the study seeks to analysis the different resources that households of different socio-economic status can draw on and how income is mobilised and used.

Key lessons to be drawn from the study include:

- The extent to which drought, population pressure and lack of alternatives make opium poppy cultivation perhaps the only means by which a farm based livelihood can be gained in these provinces and basic needs secured without recourse to migration;
- For most of the poor opium poppy provides a mean to survive and no more while the rich are able to prosper, reinvest in opium and accumulate assets;
- Opium poppy cultivation appears to be concentrated amongst those households with limited access to cultivable land and irrigation and with the highest levels of food insecurity; although off and non-farm labour opportunities are available they are not as secure as the opportunities to be gained from opium poppy cultivation;
- For asset rich households, opium poppy income contributes to a wider income portfolio from farm and livestock sources as well as non-farm income sources. However even for these household annual cash income may only reach \$300.

Under such conditions the study concludes a dramatic reduction in opium poppy cultivation may have extremely negative effects on the livelihoods of the poor through the loss of wage labour opportunities and access to land. The study argues against dramatic policy responses such as eradication under these conditions and for more focused, targeted interventions seeking consistency of counter-narcotic objectives with broader development goals.

Mansfield, D. 2004d

Pariah or Poverty? The opium Ban in the Province of Nangarhar in the 2004-05 Growing Season and its Impact on Rural Livelihood Strategies, GTZ Project for Alternative Livelihoods in Eastern Afghanistan: Internal Document No 11. (pp. 46?)

Mansfield, D., 2006

Exploring the 'Shades of Grey': An Assessment of the Factors Influencing Decision to Cultivate Opium Poppy I 2005/06. A Report for the Afghan Drugs Inter Departmental Unit of the UK Government. London

This report is based on fieldwork looking at farmers' intentions with respect to cultivating opium poppy in the 2005/06 season. It follows from a decline in opium area by 21% between 2003/04 and 2004/05. Findings include the following:

- There is evidence that in the more accessible and relatively asset rich areas of Nangarhar and Laghman a significant decline in opium poppy area has stuck and this is unprecedented; however in the more marginal areas cultivation has become entrenched
- However elsewhere, particularly in some of the southern regions of Afghanistan there has been a marked increase in cultivation;
- This emphasises the need to disaggregate changes by provincial level and below rather than simply focus on the national figures and is supportive of an emerging picture of centre - periphery in relation to opium poppy cultivation distribution, with cultivation taking place in the more marginal areas where the state is largely absent or weak;
- There is a continuing perception that eradication targets the poorest and those without connections to local power structures and the effects of eradication remain uneven;
- Alternative livelihood interventions have largely been perceived to be absent, particularly in the south or of limited value.

Of particular concern is the tightening of credit systems associated with opium cultivation. It remains unclear what effect this will have particularly for those with outstanding opium denominated debt.

Mansfield, D., and Pain, A. 2005.

Alternative Livelihoods: substance or slogan? Briefing Paper, Kabul, Afghanistan Research and Evaluation Unit (pp. 14)

This AREU briefing paper based on evidence from the field of change in opium poppy cultivation in Nangarhar and Helmand in 2005 provides a critical analysis of the Alternative Livelihoods Programme and argues that thinking and practice is muddled. Key issues raised by the paper include:

- The fact that opium poppy cultivation is a low risk crop in a high risk environment supported by a well linked market; there are complex and diverse reasons for its cultivation which challenge formulaic responses;
- The concept of 'alternative livelihoods' which emerged out of the limitations of alternative development seeks to mainstream counter-narcotic objectives rather than compartmentalise them; however at present this is an ideal rather than representative of practice;
- Emerging practice around alternative livelihoods tends to view 'alternative livelihoods' as a means rather than a goal to be achieved and focuses simplistically on income generating activities; there has been a tendency to badge projects as alternative livelihoods for often not very sound reasons and neglect others that have 'alternative livelihood' potential; there is a danger of conditionality emerging but alternative livelihoods cannot be quickly built and most programmes are not built on robust understanding of contexts or drivers of the opium economy. The

result is formulaic short-term programming that is unrealistic in terms of what can be achieved.

The paper concludes by drawing attention to comparative evidence that shows that linking alternative livelihoods to law enforcement, using conditionality, isolating counter-narcotic measures from general development planning and limiting use of participatory processes have all been found not to work. It proposes that greater attention has to be given to address the governance context, developing more location specific programming, paying particular attention to the needs of the poor and developing effective monitoring systems that emphasize programme learning rather than delivery.

Mellor, J., 2005

***Poppies and Agricultural Development in Afghanistan.* USAID/RAMP Project, Afghanistan presentation at the World Bank South Asia Rural Development Forum**

This seminar paper develops an outline set of arguments with respect to the opportunities and challenges for replacing opium. It draws attention in particular to the multiplier effects that opium has on the rural non-farm economy and the potential for high value horticultural crops to replace opium.

Key points made in the seminar include:

- Afghanistan has a large potential for high value commodities
- About two hectares of high value commodities can substitute for one hectare of opium poppies;
- Perennial horticulture has the greatest potential to fulfil this role
- Classic rural development and support for agri-services (physical infrastructure, credit, research and extension and support for agribusiness) is required.

The arguments pay little attention to the relational nature of Afghan society and how such a strategy, which is basically a high growth approach in areas of high potential, will marginalize the poor and fail to address the need of current opium poppy sharecroppers.

Ministry of Counter-Narcotics, Islamic Republic of Afghanistan, 2006

National Drug Control Strategy. An Updated Five-Year Strategy for Tackling the Illicit Drug Problem. Kabul, Ministry of Counter-Narcotics

The National Drug Control Strategy (NDCS) is a revised version of the draft NDCS of 2003. It seeks to secure a sustainable decrease in cultivation, production and trafficking and consumption of illegal drugs with four priority objectives:

- Disrupting the drugs trade by targeting traffickers and their backers;
- Strengthening and diversifying legal rural livelihoods;
- Reducing the Demand for illicit drugs and treatment of problem drug users and;
- Developing State Institutions at the central and provincial level vital to the delivery of the strategy

Pain, A. 2004

The Impact of the Opium Poppy Economy on Household Livelihoods: Evidence from the Wakhan Corridor and Khustak Valley in Badakhshan. A study for the AKDN Badakhshan Programme funded by GTZ, Kabul, AKDN. (pp. 59)

This paper was based on fieldwork in two districts of Badakhshan. It was designed to assess the impact of the opium economy on household livelihoods in an area of where opium has traditionally been consumed (the Wakhan corridor) and an area where it is produced (Khustak valley in Jurm district). The research was based on a series of

household interviews, interviews with traders of other commodities and with other key informants. The summary lessons from the research were:

- The Wakhan corridor is essentially a grain deficit economy with a long history of seasonal migration; however the traditional opium addiction which has a complex historical cause has led to extreme impoverishment due to the extractive behaviour of external opium traders leading to the accumulation of debt; however the amount of opium traded in the Wakhan is a very small part of the overall Badakhshan opium economy.
- Although the Khustak villages have similar economies to those of the Wakhan drought and war have left their legacy but the history of opium production depends on place and households. In part this depends on the exacting demands on household resources for its cultivation..
- However households have clearly benefited from the opium income allowing accumulated debts to be reduced, assets recovered, improving food security and quality of life. However for many debts still remain.

The paper concludes that more needs to be understood about the working of the opium market and greater attention needs to be paid in programming to the role of seasonal migration, how existing credit systems function and the influence of the opium economy and market on these.

Pain, A. 2006

Opium Trading Systems in Helmand and Ghor. Issues Paper, Kabul, Afghanistan
Research and Evaluation Unit (pp 25)

This report analyses the opium market at district and provincial levels in Helmand and Ghor. Based on field interviews of opium traders largely at the small and medium level it research investigated the structure of the opium trade and the working of the opium markets in these two areas. Major points raised by the research include:

- The importance of recognizing the historically dominant position of Helmand, by virtue of its location compared to Ghor which has the classic features of a remote mountain economy;
- On the basis of a review of cultivated area, production figures and assumptions about cross-province trade, arguments about the size of the total opium trade through Helmand are developed. They propose that the trade could be up to 2000 tons a year but this needs further analysis.
- Ghor on the other hand supports a more modest transit trade with small scale production but the development of the transit trade offers insight into the expansion of Helmand-based trading networks and the role they might have played in shifting opium production;
- It was difficult to collect quantitative data on value chains but evidence emerged in relation to market risks, particularly in relation to short term price fluctuations driven by the periodic nature of demand from cross-border traders and collusion by larger traders in the main trading centres;
- A common thread running through the study is the engagement of key provincial authorities in the opium economy and how both interdiction and eradication measures may have contributed to these actors gaining tighter control over distribution and trade.

The study major conclusions noted that evidence of historical continuity of trading systems and the need to address informal regulation in markets in general. A thread that runs through the study is evidence of a fragmented and regional market and the critical role that kinship and ethnic identity play in trading systems.

Rubin, B., 2004

Road to Ruin: Afghanistan's Booming Opium Industry. Centre on International Cooperation, New York University, (pp. 26)

This report written as a response to the evidence of the expansion of opium poppy cultivation in 2004 essentially argues that the growth of the opium economy is threatening the state building project. It sees the grounds for this expansion in a failure of international efforts to control drugs, the lack of adequate security and reconstruction assistance and the US cooperation with warlords and militia commanders who are involved in trafficking in the war on terrorism.

Key aspects of the paper include

- An historical analysis of the opium economy and the poor response by the international community
- Recommendations for a more effective strategy based on a counter narcotics policy linked to international efforts, increased security and reconstruction assistance over the long term.
- A more balanced counter- narcotics strategy that reduces the use of crop eradication and focuses more on law enforcement in relation to trafficking, processing and trading

Of particular interest in this paper are the arguments that are made with respect to the US cooperation with warlords for the war on terror being counterproductive for the counter-narcotics agenda and the need to de-emphasise the crop eradication campaign.

The Senlis Council, 2005.

Feasibility Study on Opium Licensing in Afghanistan for the Production of Morphine and Other Essential Medicines. Initial Findings, September 2005. Kabul, Afghanistan. , MF Publishing Ltd, London (pp. 670)

This massive document aims to provide a comprehensive perspective on opium poppy but written with the specific objective of making the case for the legalisation of opium poppy cultivation in Afghanistan. The essential argument is that there is a world shortage of opium derived morphine, the existing drug policy framework in Afghanistan is unlikely to work and has neglected the option of legalising its production opium, and that the legalisation of opium poppy cultivation could make a major contribution to controlling opium production. Drawn largely from secondary sources and written by a range of authors many of whom have had no direct experience of Afghanistan its coverage includes the following dimensions:

- An assessment of the Global Opium for medicine market including a description of the pharmacological aspects of the opium poppy, a mapping of global supply, demand and needs of opium based medicines and lessons from Licensed opium cultivation and production in the main opium producing countries (India, Australia, Turkey and France);
- A description of the opium economy in Afghanistan based on an assessment of the agronomy of opium poppy, its diffusion and spread, a market analysis, an analysis of the linkages with international crime and terrorism;
- An assessment of International and National legal frameworks including the UN Drug convention and Afghanistan's domestic legal framework;
- An analysis of the social and economic implications of the implementation of an opium license system in Afghanistan and the requirements for political support to develop such an approach in Afghanistan;

- An assessment of the issues that would arise for the implementation of an opium licensing system including law enforcement, a proposal for an amnesty scheme and guidelines for policy options for implementation

The recommendations have essentially been rejected by both the Government of Afghanistan and key donors as unworkable. While there is comparative evidence that shows that legal production can occur even in India a significant proportion of production leaks out of the licensing system for the higher prices of the non-legal economy. The feasibility of such a system at a time when Afghanistan essentially has a shadow state structured around opium trade must also be questioned.

Transnational Institute, 2001.

Afghanistan, Drugs and Terrorism. Merging Wars, Drugs & Conflict Debate Papers No 3, Amsterdam, TNI, (pp. 21)

This 2001 paper written in the immediate aftermath of 9/11 raises concerns that the claims for the linkage between drugs and terrorism might be used counterproductively to justify an escalation of the war on drugs as a proxy in the one against terrorism. The paper questions the evidence on the claimed linkages between drugs and terrorism and explores contrasts between Colombia and Afghanistan. It is particularly critical of UNODC projects designed to stem the flow of illicit drugs from Afghanistan claiming that they fail to draw on their own accumulated wisdom on the reasons behind the expansion of opium poppy cultivation. They claim that in practice the AD projects linking unsound AD strategies with a repressive ban and seeking to strengthen the control in neighbouring authoritarian regimes will be counterproductive. The paper argues that there is a need to look beyond applying the blunt instrument of a 'conditionality principle'.

Transnational Institute, 2005

Drug Policy Briefing: Plan Afghanistan. Drug Policy Briefing No 10. Amsterdam, TNI (pp. 4)

This short paper was probably written as a response to the reported aerial spraying of opium poppy in Nangarhar and at a time when the USA had announced its plan Afghanistan modelled on its Plan Colombia, a key element of which was aerial spraying. The paper is critical of the claims made for the success on Plan Colombia and in particular of the success of the spray programme. In TNI's view in terms of the one key measure of success, - the price, purity and availability of cocaine in the US - the spraying policy has completely failed. While the spraying has achieved some reduction in area, TNI claims that for every 11 ha sprayed there has been only 1 ha reduction in cultivated area It concludes that Plan Colombia does not support in any way what it terms as 'an aggressive opium eradication policy for Afghanistan' which it sees as UNODC being complicit in.

United Nations Office on Drugs and Crime (UNODC) and Ministry of Counter Narcotics. Annual from 1994. Afghanistan: Opium Survey, Vienna, UNODC.

This series of annual publications since 1994 have provided the key times series data on the location and cultivated area of opium poppy and on the basis of estimates of yield assessed the total opium production in Afghanistan. They have fulfilled a primary role with respect to the importance of the opium economy and how it has grown and shifted. They primarily provide evidence of the incidence of opium poppy cultivation but are not based on analysis of how or why opium poppy cultivation has spread. A number of points need to be made which raises questions about how fully they can be used as times series data.

- The survey methods used for the collection of data have changed considerably over time shifting from field assessments to remote sensing. In part this reflects the evolution of new tools and better means of assessment. Questions of sample frames, margins of error and so forth are not always clear from the reports and it is unlikely that these are robust time series data. Districts have not been systematically covered in the annual surveys
- Initially the surveys were limited in their scope and only the key provinces were covered; full national coverage did not take place until after 2002 and it is not always clear how to separate out statements of 'no data' from provinces with 'no poppy'.
- The methods for estimation of yield have also changed and given the responsiveness of opium yield to harvest management and growing conditions some caution is needed in interpreting the production figures.
- Estimates of area undertaken by the Americans through remote sensing and have provided some sharply different figures from those of UNODC. These differences have not, at least in public, led to any debate on the robustness of area and production estimates of opium poppy production

United Nations International Drug Control Programme (UNDCP), 1998a
Strategic Study No. 1. *An Analysis of the Process of Expansion of Opium Poppy Cultivation to New Districts in Afghanistan*. Islamabad, UNDCP. (pp. 19)

This is the first of three reports (see UNDCP strategic studies 5 and 7) looking at the motivation and factors that influence the expansion of opium poppy cultivation into new districts in Afghanistan. This report covers three districts, two in Laghman and one in Logar. Preliminary findings indicated that:

- In the initial year of cultivation in these districts opium poppy was cultivated by owner-cultivators on a small scale experimental basis;
- Cross-district connection with other opium poppy cultivating districts in the provinces promoted by labour markets and commercial trade had led to exposure to opium poppy cultivation and movement of itinerant labour had contributed to the diffusion of cultivation into new areas;
- As found in classic peasant studies, households did not attribute value to the cost of their household labour in cultivating opium;
- In the initial year, traders do not appear to have played a major role in the diffusion of the crop to new areas of cultivation

United Nations International Drug Control Programme (UNDCP), 1998b
Strategic Study No. 2. *The Dynamics of the Farmgate Opium Trade and the Coping Strategies of Opium Traders*, Islamabad, UNDCP. (pp. 27)

This report is based on interviews with drug traders in Nangarhar, Kandahar and Helmand in 1998. Key findings from the study on the opium trade were that:

- The structure of the opium trade differs markedly between the eastern and southern regions with a more informally regulated market in the east and short-term price differentials between the provincial trading centres and outlying districts. In the south the market appears to be less controlled, more decentralised and relatively 'free';
- The opium trade in the eastern region showed evidence of vertical integration based on tribal networks and with a growing incidence of heroin processing;
- The opium trade appears to be integral to the livelihood strategies of a variety of stakeholders although the profit for the farmgate trade were not substantial in

absolute terms; although there was room to increase profit margins through offering credit, there was a cautious approach to doing this;

- While there were not explicit barriers to entering the trade, access to capital and networks of trust were essential for effective participation in the trade

Many of the traders at this time and scale saw opium trade as possibly the only opportunity open to them in the current conditions of drought and uncertain political climate.

United Nations International Drug Control Programme (UNDCP), 1999a

Community Drug Profile No. 1 Problem Drug Use in Afghan Communities: An Initial Assessment. Islamabad, UNDCP. (pp. 18)

This report is an initial assessment of the extent of the drug consumption problem in Afghanistan based on field interviews in the major urban centres and in refugee communities in Peshawar and Quetta. It draws attention to the traditional use of opium by Turkmen and Tajik Ishmailis, and also of hashish. The report concludes that:

- There is evidence of increased levels of drug use in particular of opium, heroin and pharmaceuticals;
- There is a lack of appropriate information on the drugs, their harmful effects and risks of dependency and addiction
- That the conditions for an expansion of drug use exist, citing in particular continuing poverty, unemployment, social displacement and conflict related stress problems

United Nations International Drug Control Programme (UNDCP), 1999b

Community Drug Profile No. 2 Opium and other problem drug use in a group of Afghan refugee women, Islamabad, UNDCP. (pp. 26)

This report has not been abstracted since it relates to women in refugee camps in Pakistan.

United Nations International Drug Control Programme (UNDCP), 1999c

Strategic Study No. 3. The Role of Opium as a Source of Informal Credit. Islamabad, UNDCP. (pp. 23)

This study was undertaken in 1998 in four districts across Kandahar and Nangarhar provinces and was seen as an initial phase. Preliminary findings derived from household interviews indicated the following:

- Gaining credit was an integral part of household strategies, particularly of the landless who were found to have a relatively higher level of household debt in contrast to those who owned land;
- There are a diverse range of credit mechanisms which allows households to spread liabilities across a range of lenders; credit can be obtained as an advance on a fixed amount of agricultural production (salaam) which is notionally interest free but in practice the cost of borrowing greatly exceeds the amount of the initial loan;
- The Salaam system allows traders to acquire crops, including opium, wheat and black cumin at prices significantly less than their harvest price; shopkeepers and traders are the major sources of credit;
- A decline in yield since 1998 has led many households in debt and caused them to seek means of rescheduling repayments through land sales, wages labour and other means according to resources.

The evidence from the fieldwork suggested that opium poppy cultivation should be seen not just as a means of profit making but more a means to access credit in difficult times. Appropriate formal credit mechanisms would need to respond to these issues.

United Nations International Drug Control Programme (UNDCP), 1999d
Strategic Study No. 4. *Access to Labour: The Role of Opium in the Livelihood Strategies of Itinerant Harvesters Working in Helmand Province, Afghanistan.* Islamabad, UNDCP. (pp. 30)

The fieldwork for this study was undertaken during the harvest of opium poppy in Helmand province in 1999, exploring contrasts between upper and lower Helmand.

The key findings, which were seen to be indicative, given the sensitive nature of the fieldwork were:

- The majority of the itinerant harvesters came from Ghor and Helmand, many of whom had land holdings which provided insufficient production for their needs;
- Given the different altitude of the opium cultivation the labour was complementary to work on their own land and therefore allowed them to combine seasonal labour work with their own on-farm work; availability for their own farm work took priority
- Employment was based more on local supply and demand factors rather than other informal links and harvesters worked their way from the south to the north of Helmand as the opium poppy crop ripened for harvest;
- Labourers were paid in kind and received from one fifth to one quarter of the opium production; most sold this payment in kind in the local market

Broader lessons to be derived from this study include taking account of the diverse portfolio of income sources of the rural poor and the availability of farm, on-farm and off farm work

United Nations International Drug Control Programme (UNDCP), 1999e
Strategic Study No. 5. *An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan,* UNDCP. (pp. 32)

This is the second of three reports (see UNDCP Strategic Studies 1 and 7) on the expansion of opium poppy cultivation to new districts. Fieldwork was undertaken in 13 districts in eastern and central Afghanistan (Kabul, Kapisa, Kunar and Laghman) and in Farah and Zabul in eastern Afghanistan. The conclusions reported here develop the earlier findings (Strategic Study 1) and are further developed in the third report.

United Nations International Drug Control Programme (UNDCP), 2000a
Community Drug Profile No. 3 *A comparative study of Afghan Street Drug Addicts in Quetta and Peshawar.* Islamabad, UNDCP. (pp. 18)

This report has not been abstracted since it relates to drug use in Pakistan.

United Nations International Drug Control Programme (UNDCP), 2000b
Strategic Study No. 6 *The Role of Women in Opium Poppy Cultivation in Afghanistan.* Islamabad, UNDCP. (pp. 38)

This study was based on interviews with women in 1999 in the northern (Takhar, Badakhshan) and eastern (Laghman, Kabul and Nangarhar) provinces of Afghanistan in 1999. Major findings from the study include:

- The fact that women play a major role in opium poppy cultivation in all provinces at all stages of its cultivation and harvest; this included exchange labour relations between households;
- However the scale and nature of women's involvement in opium poppy cultivation varied between and within areas, according to the local practice of purdah and depended in part on available household labour and the distance of the opium fields from the house;
- Although women's involvement in agriculture extended beyond working on the opium crops they appeared to have limited decision-making powers over household cropping patterns.

United Nations International Drug Control Programme (UNDCP), 2000c
Strategic Study No. 7. *An Analysis of the Process of Expansion of Opium Poppy to New Districts in Afghanistan*, Islamabad, UNDCP. (pp. 40)

This is the third report into the factors that explore the factors that influence the expansion of opium poppy into new districts and focussed on districts that had been identified as newly cultivating districts in the 1998 and 1999 Annual Opium Poppy Surveys. These included districts in Takhar and Kunduz in the north as well as new districts of cultivation in Logar and Kapisa provinces.

Findings included the following

- That the expansion of opium poppy cultivation was a symptom of wider state failure and that the breakdown of formal governance in Afghanistan had resulted in a weakening of social and legal constraints to its cultivation;
- That in new areas of cultivation initially production was small scale by a few households but quickly comes to scale; however the drought was a significant brake to expansion; first time cultivators are often uncertain as to the returns from the crop given its labour demands but once established can gradually displace wheat;
- However the interdependent nature of Afghanistan's labour markets and limiting land resources were factors that favoured the expansion of opium poppy cultivation into new districts

The report presents evidence that opium poppy provides a multi-functional role in complex livelihood strategies and that it represents a low-risk strategy for an increasing number of households.

United Nations International Drug Control Programme (UNDCP), 2001
Community Drug Profile No. 4 *An assessment of problem drug use in rural Afghanistan: the GAI target districts*. Islamabad, UNDCP. (pp. 30)

This report focuses on rural drug use in two districts in Paktia province under a Greater Azro Initiative (GAI). These two districts were chosen on the basis the size of the displaced population and the issues of reintegration of returning refugee populations. It notes the particular problems of collecting data on addiction but concludes that just less than 50% of households surveyed have a hashish user with much lower levels using opium, which are often used for self-medication. Key points made include:

- At least 40% of the drug users started drug use in neighbouring countries where they were staying as refugees or economic migrants;
- A punitive environment against drug use has made drug use increasingly hidden and secretive and difficult for drug users to seek help' this is also hindering the effective planning of drug use prevention programmes;
- The use of drugs has reportedly led to a wide range of social, financial and health-related problems.

**United Nations Office on Drugs and Crime (UNODC), 2003a
Community Drug Profile No. 5 An assessment of problem drug use in Kabul City.
Islamabad, UNDCP. (pp. 37)**

Drawing from interviews with 100 key respondents and 200 drug users living in Kabul in 2003 this report provides an assessment of the extent of drug use and its nature in Kabul. A wide range of drug use is reported from hashish (the most widespread) to users of pharmaceutical drugs, opium and heroin. Estimates of number of users are provided although it is not clear what precision can be attached to these figures.

The general conclusions do not differ substantively from the earlier assessment of the earlier Community Drug Profile reports.

**United Nations Office on Drugs and Crime, (UNODC) 2003b
Strategic Study No. 9. Opium Poppy Cultivation in a Changing Policy Environment:
Farmers' Intentions for the 2002/03 Growing Season, Islamabad, UNODC. (pp. 28)**

This is the first of the farmers' 'intention' studies and was undertaken in 2002 at a time of a significant increase in the price of opium and at a time of a developing policy environment around counter-narcotics. The study was based on household interviews across 13 districts. Major findings included the following:

- Despite the price increases levels of cultivation were likely to remain comparable to those of the previous season and wheat remains the dominant crop even where opium poppy is entrenched;
- The increase in price has had a negative effect on those holding opium denominated debt and has wider inflationary effects that will keep households in opium poppy cultivation for a number of years; however the inability to repay debts is causing both increasing hardship and causing conflict and may tighten credit availability;
- Cultivators are aware of the government's ban on opium poppy cultivation but the critical role of opium as a means to access credit and the lack of alternatives will keep most cultivating the crop

Key recommendations include the need for broad based long term development initiatives to address the wider context within which opium cultivation takes place

**United Nations Office on Drugs and Crime, 2003c
The Opium Economy in Afghanistan: An International Problem, (2nd Edition)Vienna,
UNODC, (pp 222)**

This volume written by UNODC brings together a set of data and arguments that seek to examine the dynamics of Afghanistan's opium economy, the reasons for its success, its actors and the problems it has caused domestically and abroad. The purpose of the study is to assist in the elimination of illicit drugs and push the international community towards that end, and uses language and terminology that reinforces that objective. Much of the tone and material used in the report is oriented towards that objective. The report is structured in four major sections.

- A portrait of the opium economy looking at its size and shape emphasising the significance of Afghanistan's contribution to the global market, the contribution of the six provinces that had not responded to President's Karzai's ban, market structures and drug abuse;
- The historical origins of the opium economy, farmers motivations for growing poppy; the role of the opium trade and what it sees as the links between greed, warlords and the opium trade;

- The effect of Afghanistan's opium economy on neighbouring countries through trafficking, illegal profits and claims that this has affect economic growth in these countries and caused increasing levels of abuse and can be linked to the increase in HIV infections.

It concludes that the problem can be solved through alternative crops, alternative sources of income, regulation of macro-economic structures, new informal micro credit and law enforcement measures.

It must be said that the terminology and argument of this report is emotive and debatable and one might wonder at some of the evidence for causalities and linkages that are claimed.

Ward, C. and W. Byrd. , 2004.

Afghanistan's Opium Drug Economy. South Asia Region. PREM Working Paper Series, Report No SASPR-5, Washington, World Bank. (pp.127)

The paper directly addresses the two faced nature of opium production in Afghanistan - a desperate poverty coping strategy adopted for lack of an alternative and a fast growing and lucrative business. It argues that this dilemma is not easily resolved at the best of times and the very limited capacity of the Afghan government combined with widespread insecurity in many of the key areas where opium poppy is cultivated raises enormous challenges of implementation of any counter-narcotics policy. There are no easy solutions available and the paper explores what the choices might be.

The paper is structured as follows:

- A summary of the Afghan opium boom and an exploration of why it happened;
- A review of the evidence in relation to production, who is producing it, what limits there might be to the boom and attempts to combat it;
- A summary of the evidence in relation to processing, trafficking and interdiction;
- An economic analysis of what is known about the structure of the opium industry and its economic consequences
- The location of the Afghan opium economy in its regional and international context;
- A review of the Afghan government's counter narcotic strategy
- An assessment of options and choices for implementing the strategy
- A summary of the key issues and what the next steps might be.

The next steps proposed included building the institutional structures around strategy implementation, building and implementing a coherent alternative livelihoods programme, developing processes in parallel for law enforcement and judicial reform and pursuing the existing programme designed to influence public opinion.

6. Land Tenure, Common Property Management

6.1 Literature review

Foley, C. 2005

***A Guide to Property Law in Afghanistan* (220 pp)**

This extensive and comprehensive manual comprises a basic textbook for property law issues in Afghanistan. Further, it goes beyond the legal questions to address the role of the informal legal sector and practical indications to how legal matters are conducted in practice in Afghanistan. The manual provides analysis of the following topics:

- The general legal context of Afghanistan, including the Constitution, source of laws and the court system. IT considers briefly the role of land in the Constitution,
- An overview of the current historical context and legal history of land rights in Afghanistan follows, specifically considering land registration, proof of ownership, land allocation and the role of the master plans.
- Recent government policy towards land and property rights, as expressed through the suite of provisions and Edicts attempting to consolidate government land, the restitution of all appropriated land, property tax and policies towards topics such as rangeland and water rights. The overview primarily addresses the legal provisions.
- Transfer rights, through all forms of transfer including inheritance, marriage, donation, sale. Lease arrangements and sharecropping are two subordinate rights considered in this section. This section looks mainly at the rules needed to transfer rather than the administrative system in place to record such transfers.
- Chapter 5 considers dispute resolution, the court system (including the provisions of civil procedure), the rules relating to a trial, rules of evidence as found in the Civil Code and the Civil Procedure Code. Appeals are also considered in this section. Informal dispute resolution procedures are not covered in this section, but rather are dealt with in Chapter 6, which looks at customary law's substantive provisions and its procedures. The overview addresses the central concepts of customary law in Afghanistan, the make-up of jirgas, the concept of justice adopted. It also relates the customary law, legally and practically, to the existing legal system.
- The right to property and Afghan land law in the context of international law in general. There is also a chapter dealing with taking a case to international human rights mechanisms.

This work is essentially a land law textbook for those working on land law issues in Afghanistan. It forms a very useful first-stop, with thorough analyses covering both the legal and practical questions of land tenure practice in Afghanistan.

Foley, C. 2004

Land and property disputes in Eastern Afghanistan. Oslo: Norwegian Refugee Council. (19 pp)

This article outlines the kind of disputes that occur in Eastern Afghanistan, through the medium of nineteen case studies drawn from actual cases where the NRC represented one of the parties, and which the article argues are representative. The case studies are themselves presented with little analysis, but with "headers and footers".

- The header elaborates briefly the causes of land and property disputes: conflict, multiple regime changes, reliance on customary documents and mechanisms, unclear ownership of land (caused largely by the two previous). Added to this is the inequitable land distribution and land shortage, caused by appropriation of land and the problem of returnees. Landlessness is rife. All these are compounded by corruption, ethnic disputes and the lack of rule of law.
- In the introduction, the author notes that jirgas are useful mechanisms. They put emphasis on private solution of affair, they have authority, are speedy and cheap(er), and it is the practice of judges already to recommend that parties go to a jirga - like an arbitration proceeding. A dispute is not formally *res judicata* however, at this stage, and can be brought before the courts. Further, there are remedies - particularly the handing over of a female member of the defendant's household - that are in breach of human rights.
- What follows are nineteen un-annotated case studies. Often the same issues are repeated, but some points coming up from a reading of them: frequently there are

conflicting claims of rightful ownership, based on conflicting documents which fall on a spectrum of formality. Often the case is marred by power struggles - commanders occupying land. Legal issues raised repeatedly included the Civil Code 15-year prescription period; the legitimacy and lawfulness of deeds from different periods; the relevance of the IMLAC records; the adherence of obligations to the family (case 4).

- The article concludes with a brief section on observations and recommendations: that land disputes are a “huge cause of tension and instability”; that (encouragingly) the authorities are making genuine efforts to solve matters but they are plagued by a lack of capacity, a lack of resources and are consistently confronted with corruption and officials using their power to legitimize their land-grab moves; that the substantive rules and procedural mechanisms are “woefully inadequate”; that jirgas are considered the best mechanisms but such mechanisms have been weakened by “conflict and displacement”.
- The article terminates by making policy recommendations.

While lacking systematic analysis somewhat, the case studies are well chosen and illustrate the challenges faced by Afghanistan.

Gebremedhin, Y. 2006

Legal issues pertaining to land titling and registration in Afghanistan. LTERA-USAID. (pp. 18)

Both reports are substantially the same. The report analyses the legal provisions governing informal settlements, land adjudication, registration and related areas. Built around a division between formal and informal norms, the article constructs a picture of the land tenure situation in Afghanistan.

- The author analyses the black-letter provisions, noting the rules relating to public property and private property; the acquisition of urban land and the requirements necessary to “legalize ownership”.
- The author considers in some depth the technical and administrative steps necessary to acquire land, significantly giving as much space to the allocation of land from state owned to private laws as he does to formal transfer of land or to the acquisition of *zameen-e-mawat* (barren land). Interestingly, the author does not give more than a passing glance to the difference between private transfers by contract versus by inheritance.
- The author also classifies informal “property ownership” - this is not a contradiction in terms for the author, because “ownership” on the basis of a customary document is a form of ownership, and such documents are rife. He proceeds to classify the types of ownership into four, by a combination of factual circumstances of ownership (squatter, devolved from land-grab) and the legal nature of the land - private and public (although this distinction in classifying factors is not expressed).
- The article moves on to address the land registration regime being implemented. He emphasizes its nature as an adjudication *process*.
- The author concludes with recommendations, approving the use of the concepts “adverse possession” (prescription) and anti-eviction (protection of bare possession, even without ownership, unless a better right is proven).
- While constructed on the formal/informal divide, the conclusion appears to be that there is a chaotic spectrum of formality, so to speak, with title deeds meeting devolving from different authorities and with differing standards of legitimacy. This is the challenge faced by land titling: land registration must deal with competing rights to the same piece of land, and must therefore include a major adjudication process.

This paper outlines a possible way forward for land registration in urban areas. It is limited to urban areas, but proposes a carefully thought through implementation strategy.

Grace, J. 2005

Who owns the farm? Rural Women's Access to Land and Livestock. Kabul: AREU. (35pp)

The author examines the rules and practices that surround the ownership of and access to land and livestock in three areas: Badakhshan, Bamyán and North Kabul (the Shamali Plains).

- After an initial discussion about the methodology used and its limitations, she describes the villages' basic characteristics and the respective roles and responsibilities of the inhabitants. The conclusion drawn is that women are involved in and knowledgeable about both animal husbandry and in agricultural roles, that this involvement is both commonplace and long-established. Of course, that women work on the land is far from the same as them owning the land, or accessing to the proceeds of their work.
- The author elaborates the factors that affect women's roles: number of men in the household, land owned by household, common property (village specific)
- She continues by analyzing women's ownership of land/livestock. It seems that while the shari'at rules and practices specify women's rights to inherit, these are rarely claimed for a number of reasons, mainly cultural. Claiming their "right" would be disapproved of, and ties to their brothers may well be cut (losing a safety net); it is "not in our culture"; it is a derogation from the perception of a husband's responsibility to care for the woman; a specific rule in Badakhshan that widows only inherit moveable property.
- The article concludes with ways forward and notes the benefits that ownership provides women.

This forms an useful starting point for the analysis of women's role in owning and managing land.

Koehler, J. 2005

Conflict processing and the opium economy in Afghanistan. Eschborn: GTZ (101 pp)

As the title of this article suggests, the article deals primarily with the conflict-opium nexus, *however*, since natural resource management (and particular land allocation) is the main source of conflicts arising in the area studied, since such conflicts are likewise linked very closely to opium, and - finally - since the author deals with land as central to his argument.

- The bedrock of the article is the relationship between the processes of state-building and social transformation. His key contention is that the opium poppy economy (OPE) is not (as is often argued) the cause of disorder and state failure, but rather that state failure causes the opium economy. The OPE is a symptom of the social structure.
- The author sets out his stall by analysing key conflict-related concepts and his methodology in exploring the conflicts (fieldwork took place in Laghman and Nangarhar).
- The author's notes the arguments developed by the likes of Mansfield regarding debt dependency and poverty: the salaam trap and the risk of sudden poverty caused by shocks, but he notes that this approach has limits. It does not consider, first, the economic dynamics of the OPE higher up the value chain - the landlords,

traders, refiners and political poppy patrons, or second, the political (conflict) context which determines such actors' strategies.

- The author then develops a "risk scenario" whereby "land shortage is exacerbated by elites that have the resources not to play by existing rules". This is the nub of the argument - natural resource scarcity where the resources are appropriated by elites (commanders, sometimes in government positions) contrary to the customary and legitimate rules. And the role of opium? The author appears to perceive this as something in the nature of a multiplier - something that serves to reinforce the process of land concentration and increased opium cultivation (by reinforcing the incentives of the elites).
- Considering the local norms (the pashtunwali) and the "conflict processing" mechanisms (jirgas and shuras), the author notes that the former has elements which tend to encourage violent conflict (feud, self-help in particular) while the latter are in general too weak to enforce their rulings.
- In elaborating the fieldwork results, the author tabulates the conflicts discovered, noting that natural resource management was (by far) the most significant cause of conflict, rather than the OPE, although the OPE was often linked. Often the conflicts were violent.
- The author then goes through a series of case studies, presenting and grouping conflicts and analyzing them: conflict between actors involved in the OPE and the impact on communities; conflict over scarce land with misuse of power and appropriation of land (importantly, the link between this and the OPE remains unclear - the author recommends investigation); the weakness of institutional processing.
- Together, the insecurity of land tenure, the increasing dependency on OPE and the land concentration form a vicious circle resulting in dependency, poverty, a breakdown of local institutions, an entrenchment of the OPE and conflict within elites and between groups.
- Less importantly for this particular topic, the author continues by analyzing the manner in which current anti-narcotic practices are counter-productive and serve to entrench the real problem - local strongmen and bad/no governance practices.

This is a useful article expressing the opium phenomenon from the perspective of governance rather than individual farmers' decision-making, which is the focus of much of the literature. One point to note is that the author isolates the nexus between land use, opium and conflict as remaining unclear and being an area worthy of study. It talks about land tenure in this context.

Norwegian Refugee Council, 2006

***Land and Property Disputes in Northern Afghanistan.* Oslo: NRC (24 pp)**

Through the analysis of a series of case studies, this work offers observations and recommendations for land policy in rural Afghanistan. The case studies are used to indicate the causes of land conflict.

- The analysis starts with a brief overview of recent Afghan history and conflict, and the consequences of this for the land relations between communities. They highlight the distribution of the Soviet times, the duplication of deeds and the appropriation of land.
- The research paper notes similarity with the previous paper addressing similar issues in Eastern Afghanistan. It states as its intention the identification of legal hindrances and the problems relating to property law and (consistent with the NRC mandate) refugee return.

- 19 annotated cases studies are presented from Balkh, Faryab, Baghlan and Jawzjan Provinces. They deal with conflicts between a variety of different parties. Each presents the facts, the NRC involvement, and the result of the intervention.

This again provides interesting case studies, but analysis is limited and consists largely of the identification of a list of factors.

McEwen, A. and Whitty, B. 2006.

Water Management, Livestock and the Opium Economy: Land Tenure. Kabul: AREU. (59 pp)

www.areu.org.af/index.php?option=com_docman&Itemid=&task=doc_download&gid=362

The paper sets out to describe the land tenure systems that are in operation in the villages.

- The paper starts with an analysis of the current substantive legal system, breaking the law into a typology of land types and then a typology of land rights. It then links the two, providing an analysis of what rights are possible
- The next step is an analysis of the policy landscape, outlining where the Ministry of Agriculture in particular wants to take land tenure in rural Afghanistan, but also considering the main policy documents such as the Afghan Compact.
- Having considered the legal and policy context, the paper continues to describe the land tenure picture in a series of research sites located in Herat, Kunduz, Nangarhar and Ghazni. Each considers the framework of customary norms and the land administration practices and perceptions that exist in each of the research sites. It considers public land and private land, sharecropping, lease, mortgage and access rights.
- The paper continues by drawing together and discussing the conclusions from the field studies, noting the form and role of the different roles, and how the formal interplays with the informal. Again, all forms of rights and land-types are discussed. The paper includes an analysis of conflicts using the Norwegian Refugee Council's database as the source of the information.
- Finally, the paper proposes a list of recommendations addressing policy options in rural Afghanistan.

This paper provides a useful overview of the way land tenure systems work in practice in rural Afghanistan, and evaluating the legal and policy norms against this background.

Afghanistan Land Ownership. Nathan Associates Inc. and Louis Berger International. Arlington VA: Nathan Berger Afghanistan Studies Project. (55 pp)

This paper considers the nature and division of productive land in Afghanistan as of 1991. including the rules allocating use and ownership both with regard to private and to common and state property (pasture, forests etc.)

- The analysis of rules governing land starts by considering the nature and distribution of the productive land in the area, and how these figures changed since before the war.
- Factors considered included the area of irrigated and rainfed land, the percentage of this area actually cultivated. The distribution and nature of cropping patterns were described.
- Trends noted included the decrease in irrigated land since before the war, the reduction in land cultivated (changes in the cultivation area of each crop is treated separately),
- The article examines the "principal forms of land tenure" and characterizes them (none, state, communal, private). It also examines the distribution

between large and small landowners, by region and province. Interestingly it looks at the use of land as security of debt, focusing (almost exclusively) on formal rules and formal institutions like the Agricultural Development Bank of Afghanistan and as lenders and mortgagors.

- The means/mechanisms of adjudicating and enforcing rights to land are classified into four: local consensus (customary rules, essentially); *sharia*; self-help; and government legislation. All, the author is quick to note, “operate in the context of local power structures and the context that legitimizes them”. The subsequent analysis focuses on the formalities of documents and proofs of ownership, including a lengthy discourse on the tax system in place. Coverage of *sharia* or customary law is minimal or non-existent.
- The author addresses the land reform of 1978.
- He also considers the geographic distribution of particular types of ownership, and particularly the increase in sharecropping and decrease in owner-occupation (enumerated by region, drawing from an SCA study).
- Leaving private tenure relationships, the article considers state-owned, communal and common lands. Analysis is cursory, but they do address the (lack of) environmental protection of public and common lands. The article notes and classifies the nature of state land holdings (*waqf*, floodplain of Amu Darya, all wasteland, forests and pastures - the last in accordance with *sharia* rules stating that all non-privately owned and cultivated land belongs to the state).
- The paper, as called upon by its terms of reference, then considers how the return of refugees will put extra pressure on the areas. It is in this context that they address the phenomena of commander land-grab, squatter occupation and the deterioration of dispute resolution mechanisms. The authors briefly address the (key) relationship between water and land rights.
- The article concludes with recommendations for USAID.

This article analyses the nature of property law in land at 1991. While a lot of water has passed under the bridge since then, it provides an interesting snapshot at another breathing spot in the history of Afghanistan, characterized by unsteady peace and a Kabul-Province divide.

Ostrom, E., Schroeder, L., and Wynne, S. 1993

Analysing the Performance of Alternative Institutional Arrangements for Sustaining Rural Infrastructure in Developing Countries. J-PART, 3(1993):1 (34pp)

The authors consider which institutional arrangement performs “best” - according to a set of criteria elaborated within the article and the theoretical field - in the construction of sustainable rural infrastructure in developing countries. Drawing on the principles developed in the field of new institutional economics, the authors note that existing institutional structures are flawed by perverse incentives. The article seeks to analyse the “intermediate” costs of institutions providing public goods that transact in an uncertain environment:

- First, the authors discuss the characteristics of rural infrastructure projects (use of which is non-exclusive and joint) which forms the framework within which the ensuing discussion occurs. They also describe the parameters for the analysis: that the activities are provided by the public sector where decision makers face a variety of incentives in an uncertain environment.
- For the purposes of analysis Ostrom *et al.* divide production of public goods from the provision of public goods (often neglected in the private domain, but vital in the public since the providing institution rather than the consumer is the decision-maker).

- They note the tendency to centralize the public centre and the common justifications.
- The first leg of the authors' argument is to outline a more complete set of intermediate and overall performance criteria, by which an institution's performance can be more adequately measured. This splits into production and provision. Both can in turn be split into "transformation" and "transaction" (= coordination + information + strategic) costs.
- The article continues by using these elaborated criteria to analyse possible institutional arrangements for infrastructure development: a simple market, a differentiated market, and a user-group organization (essentially, a cooperative).
- The author then considers different governmental infrastructures. He analyses first centralized structures, and notes their benefits and costs, contrasting polycentric governmental structures with centralized governments. As described the two appear not to be significantly *structurally* distinct, but rather the polycentric governmental model represents a principle of decentralization, ensuring that public decision making is as close to the beneficiaries of the decisions as possible, while retaining the advantages of democratic roots, the ability to capitalize on scientific expertise and economies of scale.
- The article briefly considers donor incentive structures.

The article concludes by restating its premise: that the use of new institutional economics' analytical tools provides an improved means of analyzing institutions. The main conclusion is that the methodology adopted by the authors is of use, and that it is a worthwhile exercise to consider a wider array of transaction costs and a more diverse set of institutional arrangements (that simply "free-market economy" and "decentralized government") The normative conclusions addressing which of the five institutional arrangements considered is to be preferred are left in the body of the article - polycentric superior to centralized government; both differentiated market and user-group superior to simple market, with the latter preferable to the former. Little real comparison was made between the government and private options.

Patterson, M. 2004.

The Shiwa Pastures, 1978-2003: Land Tenure Changes and Conflict in Northeastern Badakhshan. Kabul: AREU. (46 pp)

The author describes the trends that have occurred in the Shiwa pasture area of Badakhshan from a land tenure perspective. He follows the struggle for "ailoq" access between the ethnic groups, and in particular the Shiwachi agriculturalists and the Kuchi pastoralists.

- He starts by a description of the main ethnic groups, the kuchis (pastoral nomads, often with substantial prime agricultural land holdings in the Kunduz River Basin), the Shiwachis (eking a meagre living out on precarious mountainous arable land) and the Badakhshis (pastoralists from neighbouring areas).
- The article examines the history of Kuchi expansion until the *jihad*, encouraged by Kabul
- The author examines the dynamics that occurred in land use and tenure systems during the *jihad*. He describes the interesting case of the allocation of the pasture lands to individuals through legal deeds called *qawwallas*, by the local *jihadi* commander, apparently on an equitable non-partisan basis. As the livestock herds of the Kuchi pastoralists fell, the Shiwachis expanded agriculturally into the ailos.

- The author then overviews the *ailoqs* in some detail, elaborating in each case the history of the mode of use of the *ailoq*, the ethnicity/type of community using the *ailoq* over time, and the legitimacy of the respective claims.
- The article continues by elaborating on the causes behind the dynamics in the *ailoq*-tenure and use, treating each *ailoq* separately (since each has a separate history). Among other factors, he notes, the political attitude (including, importantly, taxation), inheritance fragmentation, change in livestock numbers, shocks, the fortunes of war.
- He concludes by isolating a set of key issues for land tenure policy makers. These must be understood as being largely geographically limited to the problems raised in the context of the *Shiwa* pastures.

This is a thorough and useful analysis of the complex context surrounding one of the most contentious pastures in Afghanistan. As such it forms a useful case study.

Reydon, B. 2006

Assessment of Department of Land Administration and Land Affairs Management of the Ministry of Agriculture and Livestock and Food (AMLAK)² as a Land Administration and Management Institution. Kabul: LTERA/USAID. (31 pp)

This paper gives an overview of the history, functions, and administration of the Amlak department of the MAAHF.

- The initial historical background to the Amlak department considers the details of the land tax collection mechanisms, the creation of the Cadastral Survey Organisation, its merger with the Afghan Geodetic and Cartographic Head Office, its migration from the Ministry of Finance to the MAAH and its subsequent implementation of land classification and redistribution schemes.
- The paper then very briefly addresses the present structure of the department, including its structure, budget and staffing.
- The activities of the Amlak division are set out. Specifically, the division is described as maintaining the archives, managing state-owned land, leasing of state-owned land, clarifying landownership and the issue of “circular forms” certifying ownership.
- The paper briefly overviews the Land Management Law (2000) as promulgated by the Taliban with respect to the roles allocated to the Amlak Department.
- The author then puts forward a proposal for the modernization of the Imlak Department including its reconstruction in the light of existing goals, the actions and processes needed to complete this reconstruction and possible ways to improve the current land administration situation.

This paper provides a brief overview of the institutional set-up of the *imlak* department.

Safar, M. Y. 2004

Property rights administration. Unpublished. (29 pp)

The stated aim of the paper is to provide as complete an overview as possible of the property title administration including the courts' systems for handling and filing the deeds and the organizational structures and purposes of the cadastral survey, the Land office of the MAAH, the primary courts and the courts of appeal.

- The paper starts with an overview of the processes, documents, and purpose of the Cadastral Survey Department (which subsequently moved from the Ministry of

² “Amlak” is in fact a word meaning “properties”, the plural of “mulk” which means “property” in Arabic. It is therefore not an acronym.

Finance, then to the Ministry of Interior, then to the Prime Minister's Office). The paper also outlines the "cadastral survey services fee rules".

- The paper continues by describing the "land office (*imlak*) and overviews the land transfer processes between government institutions and the process for the private acquisition of government land. The paper also shows the organizational chart of the *imlak* department and the relevant forms for such transfers.
- The land-functions of the municipality are then considered, specifically with regard to the dealing of the problem of expropriation and the urban property distribution.
- The duties of the individual members of staff of the different courts are then considered, and their organigrammes are laid out. The Kabul Appeals Court, the Primary Courts and the Kabul City District Primary Court are all laid out.
- The paper finishes by describing the steps necessary to purchase a piece of property and the deed circular form.

This paper provides some very useful and unique insights into the workings of the *imlak* department and the other institutional bodies responsible for the administration of land in Afghanistan. In particular the annexes describing the manner by which transfers of property are conducted are repeatedly cited in the literature.

Sait, M. Siraj. 2005

Islamic land law in Afghanistan: Innovative land tools and strategies UN-Habitat. (8 pp)

This short paper calls for the recognition of the relevance of Islamic land law in the context of land law in Afghanistan.

- It discusses the role of Islam in the land law, and draws out shari'a with state and customary law, emphasizing the importance of state law. It also considers the role of Islamic law in the context of the policy debate.
- The paper takes two particular examples - *waqf* land and women's rights to land - as examples of the lack of depth in the consideration of land tenure and the gap between the reality and the theoretical debate.

Stanfield, D. 2005

Upgrading of the property registration system of Afghanistan. Draft for discussion. (9 pp)

The paper considers the existing land administration and property registration system with a view to recommending ways to improve it.

- The author considers, first, how to improve the existing system. He looks at improvements in the transaction costs for transfers, the standard transfer deed format, and the maintenance of the registration systems including filing and the minimization of fraudulent deeds. Several recommendations are made as a consequence.
- The paper moves on to consider the broader strategic options for redesigning the existing systems. He considers whether an "integrated registration information system" (including in particular the addition on deeds of a "tract number") should be introduced; whether the registration function should be taken away from the courts; whether land titling should be introduced; how to correct the perception of the courts as corrupt; whether to centralize the system from its current decentralized method; and how to make the registers open to the public to preclude rent-seeking.
- Finally, two annexes are attached which outline the steps needed to transfer property to urban and to rural land.

Barfield, T. 2004

Problems in establishing legitimacy in Afghanistan, *Iranian Studies*, 2004, 37:2, 263, (30 pp)

Barfield looks at the legitimacy of central and invading governments in Afghanistan from a historical perspective.

- The paper provides context to the current situation by looking at the pre-modern Afghanistan, characterized by invading armies taking and controlling the cities and the conflicting model of the “tribal warriors” at the margins. He moves on to consider the rise of the Pashtuns and the Durrani dynasty. Throughout the pre-modern history of Afghanistan, the author postulates that power was contested amongst ruling elites, and legitimacy was rooted at that level.
- He asks why the British invasion (1839) was different, in that it sparked a revolution driven by the margins. He notes that the first Anglo-Afghan “marked a military watershed”, whereby cavalry (the forces of the elite) lost their overwhelming superiority on the battlefield and irregular forces armed with rifles became effective opponents. The introduction of firearms allowed “wider (and more effective) participation in warfare by larger numbers of people. The author elaborates the different interpretations the actors at the time put on this programme, and notes what he calls later a “shibboleth” of foreign control of Afghan soil.
- After discussing the second Anglo-Afghan war and the succession of Amir Abdur Rahman to the throne, he analyses: the process of centralization in Kabul; the broadening of involvement in the Amir’s wars beyond the elites; the redistribution of the Pashtuns to the territories of defeated tribes of other ethnicities.
- Discussion then jumps to the Soviet invasion, where he notes that its eventual defeat was characterized by a decentralization of power to local commanders combined with a casting of the war as a holy war. He goes on to discuss the mujahideen *interregnum* and the rise of the Taliban, the respective legitimacy of the different political parties at that time, and the orientation of the international players with only Pakistan retaining a level of involvement in their support to the Taliban.

Barfield, T. 2003

Afghan Customary Law and its Relationship to Formal Judicial Institutions (47 pp)

A comparison with the legitimacy of customary law.

- The author starts by introducing the three forms of law that exist in Afghanistan, shari’a, formal/state law and customary law. He concludes that at least in the tribal areas the Hobbesian motivation for creating a government does not pertain.
- Barfield identifies the main abstract principles the *pashtunwali*: revenge, hospitality and sanctuary and, that which underpins them all, personal honour.
- The author then engages in a discussion of the nature and rules underpinning *jirga* proceedings, and addresses some of the strains under which it is placed by the fact that there is no “backstopping” enforcement mechanism.
- Types of disputes are introduced and discussed through the presentation of case studies which overview the basic facts of the dispute and the manner in which it was resolved (or, at least, was attempted to be resolved). The case studies are grouped under the following categories: “revenge homicide”, theft, “illicit sex, rape and abduction”, “marriage and engagement disputes”, “land and water claims”, “personal injury” and property. The author addresses very briefly other customary law systems than the *pashtunwali*.
- The paper considers the interaction between customary law and State and Islamic law, and in particular the use of Islamic law in attempt to impose state rule in the

rural areas, a process which included the co-option of Islamic clergy into the central government.

- The author then addresses the law as implemented and understood by the Taliban, and the interface between this interpretation of shari'a, mainstream shari'a and the customary law norms and forms of reasoning.
- Finally, the author addresses the current situation, the rise of regional power centres and the impact of the law on central government and the administration.

Barfield, T.

Weak links on a rusty chain: Structural weaknesses in Afghanistan's provincial government administration, in Shahrani, M. Nazif & Canfield, Robert L. (eds.) *Revolutions and Rebellions in Afghanistan* (13 pp)

The author presents an analysis of the PDPA's seizure of power and their (mistaken, so says the author) attempt to use the pre-existing political and government structures to implement radical changes.

- Using Kunduz as the case study, the author describes the dislocation between local government and the population, and the lack of an "organic connection". Several reasons for this were mentioned: the local government was dominated by Pashtuns, ruling over Turkic speakers; District level decision-making seldom happened; a psychological gap rooted in an urban/rural divide and mutual suspicion and dislike;
- The role of the village intermediary, the *arbab*, was noted as the "weakest link", the one between village and government. The position, as described, is either one commanding no respect being more of a government agent, or, commanding respect only insofar as the *arbab* puts the community interests before the government (thus undermining the government). The author under the pre-PDPA government, the institution was equal to the limited tasks asked of it, but when the PDPA launched their ambitious plans the situation changed.
- The author then considers the history behind the collapse of the Amanullah government, noting in particular its roots in policy reform attempts. In the light of this, he notes the Musahiban dynasty's strategy: rebuild the army, reduce its dependence on the rural economy, make social and economic reforms gradually.
- The PDPA's victory was at a Kabul level, and gave them no legitimacy in the Provinces. Its reforms failed because it could not win the ideological battle; the existing government structure was ill-suited to positive action; at the local level religious and tribal leaderships were better organized than the government. The reforms failed to take into account the complexity of rural Afghan lives and resource use.

Carter, L. and Connor, K. 1989

A Preliminary Investigation of Contemporary Afghan Councils (52 pp)

The purpose of the study was to evaluate whether any of the traditional Afghan council "institutions" would be appropriate as entities through which development aid and assistance could be channelled (note the year of writing, above). While the resulting analysis of the different councils is a product of the time of writing and the purpose, nevertheless the analysis remains relevant:

- The authors start by defining the problems - how to channel aid to communities in the light of a complete failure of central government. Can a form of council be used? How would such a council interact with the commander?
- They define some key words: in Dari a "shura" (from an Arabic word) is "an advisory council that does not have decision-making powers", and which has connotations in Islam of a "consultative process that is the ideal form of Islamic

government". They note that in Pashtun areas, *shura* has "no real currency", and that a *jirga* only exists, which they describe as being a very strong institution.

- The article classifies different types of local consultative bodies - government initiated and locally initiated (which includes traditional). They insist on a division between tribal and non-tribal areas, the typology being dominated by the *jirga* institution, itself a product of the rigid and well-defined "ritualised" Pashtunwali code of conduct.
- The "locally initiated" bodies are sub-divided into: Maliks, which tend to be a single person acting as go-between between government and community; councils, a definition which includes *shuras* and *jirgas*; and specific issue-bodies.
- Of these, the authors spend the majority of their time on a description of councils. They assess in some depth the composition, roles, distinction between Pashtun and non-Pashtun councils, and authority.
- After this discussion, the authors treat in some depth the impact of the war on the traditional leadership structures, the reaction to the power of the commanders and the likelihood of post-war reinstatement of the *status quo ante*. In the light of this, the article then considers the contemporary councils.
- They note, among the other roles of the councils, the dispute resolution functions of the *shuras* a function which to some extent has devolved to the commanders. The article continues to outline the format of councils in areas run by commanders rather than a central government.
- The article also addresses descriptively and normatively the interaction between NGOs and *shura* members.

Checchi and Company Consulting, AROLP, 2005

Field study of informal and customary justice in Afghanistan and recommendations on improving access to justice and relations between formal courts and informal bodies (67 pp)

- The paper starts with a standard overview of the "informal justice sector", which the author also describes as the "customary law sector". The paper considers the *formal* recognition given to the informal sector, and the manner in which the construction of this link might afford legitimacy to the formal system. The geographic and social variance, tribal orientation and secularity of the "customary codes" are remarked upon. The reward and punishment conceptual foundation of the *pashtunwali* are addressed, but the paper does not go into detail.
- The paper notes that disputants are given the choice to decide according to *shari'a* or the *pashtunwali*.
- The paper overviews the existing literature.
- The paper then considers the *jirga* and the *shura* as institutions. Distinctions are made between *islahi jirga/shura*, which are "judiciary *jirgas*" acting as dispute resolution mechanisms, and a *mashwarati jirga/shura* which acts either (1) to manage everyday affairs, such as marriages, credit, sale and purchase of property etc. or (2) as a means to build social or political consensus within a community, for mutual actions ranging from declaring war to constructing a road. The authors then address, briefly, the nature of a *loya jirga*. The authors draw a conceptual difference between an arbitrator and the judiciary *jirga/shura* where the concept is *hakam*. *Hakam*, it is said, relies on trust, whereas an arbitration is underpinned by a pre-existing contract.
- This is followed by a summary of findings and conclusions, which looks at the results of their fieldwork specifically and the nature of the institutions that were visited, both formal and informal. The role and status of women and the extent of the political/military interference in the administration of justice were briefly

touched upon. The paper concludes with recommendations for future project activities.

- What follows is a series of annexes, which make up 75% of the paper. They covered methodological questions, profiles of the research sites, findings on the formal justice primary court system, detailed findings on the informal justice system and relations between the government and the non-governmental systems of justice; findings concerning property issues; findings relating to specific systems for repatriated refugees and returned IDPs; findings concerning women's rights and access to justice; criminal law and jurisdiction; findings on *bad badal* and *alishuni*; findings on access to justice and the rule of law; an account of the evolution of *shura* and *jirgas* in modern Afghanistan (largely post 1970).

Glatzer, B. 2001

Is Afghanistan on the brink of ethnic and tribal disintegration? In William Maley (ed.) *Fundamentalism Reborn? Afghanistan and the Taliban*.

- Postulating a thesis whereby a "tribal" society can be a force for cohesion as well as division, the author considers the constitution and relationships within and between tribes, concepts of segmentary solidarity and segmentary division, the notion of leadership the *jirga* institution as one expression of a cohesive geographic locality. Leadership he notes is a transitory phenomenon in a fundamentally stable overarching structure.
- During the war with the Soviets, almost all tribes were split down the middle regarding who they should support, with families making strategic decisions on this basis. In the context of the war and the mujahideen parties in Pakistan and Iran, the author notes that it is not necessarily the case that just because the parties were dominated by one ethnicity or another that need not have meant that the split was ethnically based.

International Legal Foundation, 2004

"The customary laws of Afghanistan" (64 pp)

This paper gives a very brief overview of the "customary laws". It divides its analysis, first, geographically; and second, into procedural and substantive concepts. When considering the substantive rules, the paper divides the "crimes", (using criminal law rather than civil law terminology). As a general rule, the paper employs terms used in Western systems, such as "appeal", "crime" etc.

- The paper considers first the Pashtun tribal areas of the Southern and Eastern regions, and examines primarily the Pashtunwali which have "quasi-legal status", the disobedience of which marks the offended as a "criminal" in the eyes of the community.
 - Procedurally, the author notes that parties have a choice to solve a conflict by sharia or the Pashto norms. He then proceeds to describe the jirgas, including the etymology of the word, a (very brief) history, the composition of the court and the qualifications of those who sit in judgement, the nature of the proceedings, the need for a security (*machilgha* or *baramta*). He also notes word such as precedent (*tseley*) and (*nerkh*) without going into any detail regarding their precise meaning or significance. The author deals at greater length with *res judicata* and appeals (*takhm*).
 - Substantive concepts: despite the consistent use of criminal law terminology in the article, the author notes that Pashtun norms of criminal law are based on the notion of restorative rather than retributive justice. He briefly notes the terms *poar* and *nanawati*, which may roughly be translated as blood money and forgiveness, respectively.

- The author continues to describe crimes against the person then crimes against property. The latter (p. 16) is more interesting for the present study. It notes that above and beyond *poar* the “perpetrator” must pay additional “damages” known as *sharm*. The author also notes a concept called *badann* which allows for a fine *paid to the tribe* where a tree is cut down.
- The paper moves on to considering the laws of the Hazarajat. He proceeds by describing very briefly the procedural aspects used in customary law - the composition, authority and process of their *maraka* (court assembly) and the process of forgiveness (*ozrana* or *nanawati*). The decision of the *maraka* is binding. The author moves on to substantive rules. One interesting point of variation is that the substantive rules recognize exclusive state jurisdiction for crimes such as murder.
 - Crimes against property, including concepts of theft, debt, trespass and conflicts arising from inheritance problems, pre-emption rights and the return of occupied land (p. 30). The author notes that there are few conflicts over grazing land in the Hazarajat. The author also notes the problem of conflicts between Pashto and Hazara peoples, and the option of convening joint assemblies.
- The paper then considers the laws of Nuristan, going through the same pattern: first, the description of the *jirga*, then the concepts such as guarantees, decisions, apology and fine (a woman cannot be given as a fine). The substantive rules on property rules throw up some interesting differences, particularly in the concept of trespass and the identification of ownership. The author notes the operation of a concept of “pre-emption” seemingly identical to the concept of “prescription”.
- Finally, the paper considers the customary laws of the North. It looks at the different forms of dispute resolution mechanism - *shura-e-eslahi*, *jirgas* and *mookee khans*. The paper recognizes the rise in importance of local Commanders outside the authority of the government and their increasing role in the resolution of disputes. For this region discussion of substantive rule is rather cursory.

Kamali, M.H. 1985

Law in Afghanistan: a study of the constitution, matrimonial law and the judiciary (265 pp)

- Addresses several key elements of the formal adoption of Shari’a law into the state legislation: considers how sovereignty is treated in Shari’a jurisprudence and in the constitutions; the “state religion” and the extent to which it specifies the school to be followed (relevant particularly for the inclusion of the *shi’a* belief); the attempt of the PDPA to portray themselves as governing according to the tenets of Islam; the evolution of statutory law and the professed authority for individual pieces of legislation;
- Describes the development of a network of administrative courts alongside the *shari’a* courts and the tension between the two schools, in terms of competing jurisdiction, authority and legitimacy.
- Comments on the enactment of the principle of legality follow, and the tension between this and the rules of Hanafi law in the absence of a precise specification of its rules: *ta’zir* penalties; the “repugnancy clause” stating that no rule will be contrary to the “basic principles of Islam”; the Hadd penalties; a prohibition of punishments contrary to “human dignity”.
- The author goes on to describe the onset of instability between the reformist and the traditionalist factions after the 1964 constitution, and the recognition of communist principles in the 1977 Constitution.
- In the third chapter of the first Part, named “lip service to Islam” the author considers the legislation enacted under the PDPA.

- The second part (which addresses matrimonial law) is not interesting for our purposes. We jump therefore to the third part, on the judiciary, where the author examines the two main attempts at modernizing the judiciary, in the 1920s and after the 1964 constitution.
- He looks at the court structure between 1920 and 1964, and overviews specifically the *shari'a* courts and the administrative courts, consisting of the reconciliation courts, civil servants' courts, high court for the trial of ministers, military courts and commercial courts.
- The next chapter addresses the judiciary after the 1964 Constitution. He teases out some of the issues of interest, including the constitutional authority and composition of the court, the relevance of the *hanafi fiqh*, and the tensions in jurisdiction between the statutory courts and the *shari'a* courts.

Nojumi, N., Mazurama, D. & Stites, E. 2004

Afghanistan's systems of justice: formal, traditional and customary

This paper evaluates the totality of the justice system in Afghanistan. The authors present an overview of the current capacity of different elements of the justice system, and international commitments to reform the legal system, overhaul the judiciary, provide legal aid and increase the physical and human capacity of the sector.

- Part 1 looks in turn at: the Afghan Independent Human Rights Commission; the process of educating judicial personnel (and the distinction between law schools, *shari'a* school and local religious schools); access to - and indeed, the existence of - legal texts; the interaction and tension between the executive (the Attorney General) and the Supreme Court; the staffing of Provincial and District courts; political and military influences on the judiciary, channelled along ideological lines expressed in the divide between *shari'a* school and the secular law school; challenges facing the legal system in urban centres, revolving primarily around property disputes; the need for family courts, female judges and female attorneys, and the constraints (primarily cultural) to forming such entities; the absence of defence attorneys linked to the lack of such a role in customary law
- The author addresses a number of the challenges facing the formal justice system in rural Afghanistan. The court and its duties are not clearly separated from the activities of the Chief of Police or the Head of the District, corruption tends to be rife and court officials susceptible to threats by local strongmen. In rural areas education is particularly lacking, both in the context of the courts and amongst the populace. The authors also note the impunity of powerful local actors against the formal system, and the extent of government involvement in illegal activities, including the drug trade.
- Police: the authors evaluate the police, their lack of training and professionalism, vehicles, uniforms. Weapons were personally owned weapons.
- Detention centres: the authors comment on the poor condition of the centres and the mistreatment of those detained.
- Part 2 considers the traditional and customary systems of justice, in the context of a post-war "segmented" society, divided into ethnicities and tribes. The analysis commences with a consideration of the tribal structure and the extent of its autonomy from the central government in Kabul. The authors develop the analysis of the *jirga* and specifically emphasized the military commanders' ability to undermine the *jirga* and the Taliban's effect on the interpretation of the rules. In short, the *jirgas* lost their political independence.
- The authors then describe the efforts to re-establish their co-opted or altered tribal *jirgas*. These attempts are addressed at a largely regional level, with examples chosen from the Districts in which the field-work occurred. They also

consider at some length the role of leadership and legitimacy in non-tribal communities.

- The paper concludes with recommendations for the improvement of the justice sector in Afghanistan.

Mahdi, N.Q. 1986

Pukhtunwali: ostracism and honour among the Pathan hill tribes. Oxford University.

The author elaborates on the nature and use of ostracism as a key element in the *Pukhtunwali* of the Pakistani Pathan (or Pashtun) hill tribes. It is described as a means of punishment and related to other central concepts within the normative structure.

- The author considers first the geographic location and basic (lack of) governance structures in the Pathan areas. Against this governance vacuum, and what the author describes as the "fierce independence" of the Pathans, the author sets out to describe the *pukhtunwali* and the concept of honour, *izzat*.
- Using these tools, the author traces why the concepts of *badal* (revenge), the methods of mediation and punishment, the use of ostracism, exile and refuge (*nanawaty*) as part of a utilitarian means of social regulation, essential given the context and the people involved.
- The author also addresses the use of lesser forms of "social disapproval", short of exile or house-burning or exile. Specifically, she states that there is none, that the code is binary: the *pukhtunwali* encompasses the entire code - if an act is not condemned in the Code, then it is not condemned. If it is condemned in the *pukhtunwali*, then there will be a punishment/remedy which is specified and, generally, will be hard.

Wardak, A. 2004

Building a post-war justice system in Afghanistan, Crime, Law and Social Change (24 pp)

The paper examines the elements of justice in post-war Afghanistan, focusing on the *jirga* institution and customary law, *shari'a* and the interim legal system.

- The author starts by introducing the "Afghan context" in terms of ethnography, social situation and the recent history, before going on to discuss "dimensions of post-war justice in Afghanistan".
- He describes *shari'a* and overviews some of the fundamental concepts in Islamic legal theory: the sources of law, the schools and actors, and the process of centralization and secularization of the Afghan legal system.
- The article then considers "customary law and *jirga*" and their role in solving "public" problems (which he is careful to distinguish from private problems, which will be solved within the family). A smattering of the key concepts is addressed: *nanawate* (forgiveness), *rogha* (reconciliation) and *badal* (revenge).
- The author goes on to consider the interim formal legal framework, which he describes as representing a "mixture of *shari'a* and positive laws that were enforced until the Marxist coup data in 1978." He describes the current weaknesses in the system including the prisons, the judiciary, the police and the prosecution.
- As the final form of law to be considered he examines the human rights rules and the transitional justice and its application to Afghanistan.
- The author then locates each type of law in relation to the others, through a series of concentric rings. He notes the symbiotic relationship between the "non-sectarian popular version of *shari'a*" and the customary law institutions and the futility of imposing top-down laws that are not in keeping with the Afghan legal traditions. At the moment he notes that it is the interim legal framework that is

the “centre of gravity” between the Afghan traditional norms and international human rights rules.

- Finally, the author proposes an “integrated model of a post-war justice system.”

Wardak, A.J.

A Traditional Mechanism of Conflict Resolution in Afghanistan

The paper explores the institution of the Pashtun *jirga* and of analogous institutions in other ethnicities. After covering the etymology of the word *jirga*, and the similarities between *jirgas* and other Afghan institutions, the author then considers in some depth the nature of the different forms of *jirga*, which can be categorized by their level of relevance:

- A *Maraka* is defined as a local *jirga*. The author grounds the conflict-resolution mechanism at the level of the *khel* and the *kalay*, which form the socio-economic context for the institution. He lists as fundamental characteristics of the institutions: a dispute-resolution mandate; institutionalized “rituals” (or procedures); *narkh* representing the substantive unwritten “customary laws” or norms; and the authority of the decision (*pirkra*) of the arbitrators (*marakachian*). He also notes that *maraka* deal more frequently with civil than with serious criminal cases.
- The *narkhs* is discussed in the context of the *maraka*. The substance of the different *narkhs* differs.
- The tribal *jirga* or *qawmi jirga* is linked by the author to the *qawm* or tribal level. This forms a wider socio-economic context than the *maraka*, although the author notes that the other characteristics are not different from the *maraka*. He notes that the *narkh* is more closely applied following the tenets of the *pashtunwali* and discusses some of the fundamental processes and rules followed, and the source of authority of the *pirkra*.
- Finally, the author considers the *loya jirga*, or “grand assembly”. He discusses its legitimacy (traditional and charismatic) and also notes some of the significant past *loya jirgas*, before discussing at some length the membership and legitimacy of the 2002 emergency *loya jirga*.

7. Rural Livelihoods

7.1 Literature review

AREU 2004

Livelihoods in Afghanistan: A selected Annotated Bibliography

http://www.areu.org.af/index.php?option=com_content&task=view&id=41&Itemid=86

An extensive annotated bibliography of livelihood related publications and documents, encompassing both rural and urban livelihoods as well as aspects of primary production and natural resources as they relate to livelihoods.

A total of 95 bibliographic references, (some overlap with this bibliography). Full Publication details are given which each reference, as well as catalogue number and shelving location for the document in hardcopy at the AREU library.

Christoplos, I. 2004

Agricultural Rehabilitation in Afghanistan: Linking Relief (29 pp)

http://www.odi.org.uk/hpg/papers/ECPREP_Afghan_case_study.pdf

This paper investigates the relationship between agricultural rehabilitation efforts and the livelihoods of rural Afghans. It begins with the contention that the State has been stricken by violence, weakness of institutions, unclear political legitimacy, population

displacement and crises. Re-establishing a licit and viable rural economy has been viewed as a basis for stabilizing the fledgling state. There have also been concerns that the country may be slipping into the status of a narco-state. A licit economy is seen as a bulwark against Afghanistan degenerating into a rogue and dangerous state.

- The wide perception of Afghan agriculture is as traditional, unchanging and static; these may be misperceptions, failing to take account of recent historic and political events leading to current conditions.
- The major impact of conflict on agriculture has been to erode institutions and disrupt markets. This has been compounded by drought and chronically weak governance
- The author argues much programming in Afghanistan has been driven by donor needs for simple messages and discrete problems over short timeframes
- Seed distribution has been prominent in development/relief efforts. There was speculation about seed shortages when Taliban collapsed, and led to exaggerated 'crisis narratives' without clear information on the causes of this. Afghanistan was flooded with seeds. Today it is realized that problems are more to do with access to credit to buy seed, rather than seed shortages as such.
- Limited efforts have been undertaken to establish how farmers access seeds or wider agricultural services and the roles that these play in stimulating agricultural production.
- Insecurity and instability have prevented the emergence of a sufficient array of agricultural service providers. Weak public institution and other obstacles prevent the flow of market and other information
- There is a state commitment to support private sector initiatives in agricultural services. There are few ideas and incentives for how this should be encouraged or stimulated. Public private and NGO services are all of questionable quality. Furthermore, the role of the private sector is contingent on the developing role of the public sector in agriculture, and this latter sector is not yet mature.
- Information systems, market infrastructure and agricultural research capacity all need to be established for agricultural rehabilitation, even though political structures and bureaucracies are not yet mature or fully legitimate.
- Rehabilitation efforts directed through 'implementing partners', formal organizations to be recipient of Aid flows. This may obscure the value of wider informal institutions which farmers generally rely upon to access credit, inputs capital markets and knowledge.
- Rehabilitation remains anchored in supply driven service provision (such as in the case of seed), unresponsive to farmer needs. This may be unlikely to stimulate a sustainable market led innovations
- Current programming seems without clear exit strategies. Agricultural rehabilitation is hampered by small scale short timeframes and irrelevance to broader market imperatives.

The paper concludes that effective rehabilitation will only come when it is understood how rural vulnerability has changed owing to conflict, changing international markets, demographic trends, environmental degradation and other factors. It cites development assistance as a blunt tool to effect agricultural rehabilitation. The paper is particularly useful at identifying some of the current policy shortcomings of programming in Afghanistan and identifying areas where a better understanding of agricultural systems is required. The paper clearly frames the need for additional targeted research.

Deutsche Welthungerhilfe 2003

Livelihood Systems Analysis I: Selected Villages in the provinces of Sar-e-Pul and Jawzjan in North Afghanistan Final Report. Working paper, Bonn (77pp)

One of two reports commissioned to provide a structure for future development interventions by DWHH and development approaches to the monitoring of and evaluation of project performance. Based upon a two week field mission of two researchers (1-2 days per village.) The paper sets off with a review of the DFID livelihoods framework which is here adopted as an analytical tool for understanding rural livelihood contexts and processes.

The report findings describe the general physical and social contexts of the various studied villages (Say-eh Toot Zairi Kamar, Belanghor, Bazar Kami, Khaval, Darzab) : beginning with the first village, the report addresses a range of different livelihood factors, including the agricultural context, infrastructural resources, ethnic composition, conflict history and the presence of relief organizations. Examination is also made of village institutions and processes, including access to land and management of water resources, examples of sharecropping agreements, farm and external incomes. The report provides basic assessment of land ownership in the village, wheat cultivation yields on different types of land, livestock products, and a description of market access as well as household expenses and incomes. Prices are given for various commodities.

Overall, the approach adopted in the paper is rather unsatisfying; The livelihoods framework is only utilized to establish various categories of information for questioning. The other problem is that different unrelated observations and drawn in different villages, therefore the overall conclusions of the study are based upon composite information and various bits of 'data' reported from different villages. This is clearly a limitation of how the research was unsystematically conducted (with only a day at each site). On the basis of this 'data', a typology of livelihoods is given in the form of a table. A list of 'vulnerabilities' is cited. The study found that most of the study villages were lacking in natural assets, namely water, seeds and livestock: human assets, education, healthcare and agricultural knowledge and physical assets including tools.

Deutsche Welthungerhilfe, 2004

Livelihood Systems Analysis II: Selected Villages in the provinces of Sar-e-Pul and Jawzjan in North Afghanistan Final Report. Working paper, Bonn (76 pp)

Companion volume to the Livelihood Systems Analysis 1. Adding additional levels of information from new villages although some are the same from the previous years study, consideration of additional contextual factors plus some pie charts and seasonal calendars.

Favre, R. 2002

Discussion of some key aspects of the Rural Economy and staple food production in Afghanistan Kabul, FAO (55 pp)

The objective of this paper was to support the development of understanding of Afghan Rural agriculture and livelihoods through identification and discussion of a range of key issues, presented in the form of individual sections. This format keeps the discussion lively and topical. Specific discussions include:

- The Dependence of the Afghan economy in Agriculture; this is challenged pointing to evidence for diversification during the years of war....discussion is made of a 'war economy'
- Drought and Land Tenure; Discussion of the relationship between debt, land tenure and drought.
- Food deficiency; data is presented to describe cultivated area and production rates. It demonstrates that there is considerable food deficiency in the country and a growing reliance on food imports. This deficit has been exacerbated by war and drought

- Data showing the decline of production through the war years and growing food deficit.
- The role of rainfed farming; In good years this an account for up to 30% of all cereal production. This form of production is most susceptible to drought
- Factors influencing the availability of irrigation water and seeds
- End material includes land cover statistics by province and extent of indebtedness; also estimated seed requirements for Afghanistan

Overall, the paper argues that a reappraisal of the agricultural sector is needed, owing to its dynamism and that notions of supporting agricultural development to achieve food self sufficiency in Afghanistan are unrealistic. Water is recognised as a major limiting factor, but also failures of extension and program management . The document has a useful and extensive bibliography.

Ministry of Agriculture and Food, 2005

Agricultural Prospects Report 2005, Kabul: MAAH (29 pp)

Drawing from its own data and additional sources, the report sets out to provide an up-to-date overview of the supply and demand prospects for cereal crops in 2006, in order to plan development efforts in a timely manner.

- The report commences by describing the methodology and the Information collected by the MAF
- It continues by overviewing, briefly, the weather conditions for standing crops, the supply of inputs and the irrigation situation
- The report continues in more depth by examining the probable output of wheat (rainfed and irrigated), the breakdown between different types of wheat, and the factors contributing to the “good harvest prospects” brought up in the
- Crop diseases and pest management,
- The paper then considers the relative costs and prices, where possible using a comparison across regional centres. The paper covers the price of key consumables, agricultural commodities and inputs (in the major centres); the prices of livestock and livestock products; labour costs;

The paper concludes with a series of annexes, including projections of wheat “balance” per Province, in terms of demand and supply; the normalized difference vegetation index; evapo-transpiration data in selected major Provinces; and a wheat indicating wheat supply status.

Grace, J and Pain, A. 2004

***Rethinking Rural Livelihoods in Afghanistan* Kabul: AREU (86 pp)**

Findings and implications of a 18 month rural livelihoods research project. The project involved monitoring of 390 households in 21 villages through seven provinces, undertaken in collaboration with seven partner NGOs.

- The research suggests that most rural households have diversified economies, drawing upon multiple sources of income. Among the poorest households this tended to be a coping strategy, while wealthier households diversified to accumulate assets
- Off-farm incomes (including from migrant labour), are particularly important to many rural households, with implications for Rural Development programming which tends to be agriculturally focused
- There is great diversity in household grain budgets; many rural households obtain some or all of their grain staples from markets rather than by cultivation. As a very general trend data suggests that wealthier households tend to consume more of

their own grain, while poorer households obtain a higher proportion from markets. Location and soil quality may also be a factor.

- The study revealed complexity in land ownership; several different categories of access and use existed in the study areas
- Share cropping practices, both (in and out), are not restricted to any particular wealth group but occurs across all wealth groups. Motivations for this behaviour may differ widely between households
- There is wide deviation in land ownership by area across all wealth groups and locations, but wealthier households tend to hold more land than poorer ones
- There is considerable geographic variation in livestock ownership reflecting the traditional importance of livestock in certain provinces. However, across the whole study group, livestock ownership (herd population) also generally correlates to household wealth
- Data demonstrates that that households of all wealth groups and across most locations incur debts. However, there is evidence that different wealth groups may incur expenses for different types of reasons

This study is particularly useful in challenging the view widely taken in development programming and policy that rural people are wholly dependent upon agricultural incomes. The study takes an initial step to indicating the complexity of rural livelihoods and challenges widely held assumptions about wealth differentiation and consumption, asset ownership, sharecropping and accumulation of debt. However, it does not go very far in exploring production systems themselves or measuring to what extent these do contribute to household livelihoods. Given the short time frame of the study there is not much empirical evidence for dynamism or temporal change in livelihood choices.

Maletta, H. and Favre, R. 2003

Agriculture and Food Production in Postwar Afghanistan: A report on the winter survey 2002-2003, Kabul: MAAH/FAO (111 pp)

This report details the findings of a large scale survey of agriculture (approx 5000 households), intended to provide information on national food production and structural data on livestock, land ownership and livelihoods and other indicators. The report also utilizes data taken from direct crop measurements and satellite imagery. The objectives of the report were to establish the food security status of the country during the winter season of 2002-2003 and the prospects for successive seasons. Major findings included:

- Estimated national farming population of 12.1 million and non farming rural population of 2.5 million. Mean household size of 11.4. Approximately 6% of total rural population are returnees
- Farm sizes are often very small; total area estimated at 3 million hectares of irrigated and 3.5 million rainfed. Up to a third of irrigated land not currently planted due to water constraints
- Power asymmetries have led to water rights infringements at the head of irrigation systems often leading to abandonment of villages lower down. Commanders have also encroached upon public grazing lands by ploughing and establishing sharecroppers. Rainfed cultivated land area grew by 15% during 2002-2003 due to this problem.
- Mechanized ploughing covers a half of all land, and 50% of irrigated cereal crops are fertilized. In 2002-2003, cereal production grew by 18% on previous years. At the time of the survey, Livestock numbers were still diminished by the drought.

Overall the findings of the survey indicated that many farmers remain food insecure with risky livelihoods; most farmers are not self sufficient in any food type and about 61% rely

on off farm incomes. There was strong evidence for increased debt during the year prior to the survey and at the time of survey 60% were in debt, although in most cases debts are of the order of just \$500.

This report provides an excellent overview of the state of farming systems at the time the survey was undertaken. The data is comprehensive and concisely presented. However, given the rapid process of change underway in Afghanistan, the data is primarily now of historical value. Furthermore, the survey methodology employed in the study give little indication of what is changing and the reasons underlying these changes.

Pain, A. 2002

Understanding and Monitoring Livelihoods under Conditions of Chronic Conflict: Lessons for Afghanistan London ODI Working paper 187 (36 pp)

This paper contends that understanding of Afghan livelihoods in the context of chronic conflict has been limited. This resulted in Aid Practice being driven by 'simplified stories' about the country which reinforces short term programming with an emphasis on delivery rather than learning and a failure to appreciate the complexity and dynamism of Afghan Livelihoods.

- The paper provides a background to instability and diverse interests in Afghanistan, citing the interests of Taliban, Afghan groups external to the Taliban, foreign intervening powers, transitional government and the proliferation of Aid agencies (acting largely without coordination). While there are aspirations for a 'normal development process' things are not normal.
- Detailed discussion of Afghan historical political context. Key historical junctures identified. The simplistic notion that Afghanistan was devastated by war is challenged; war effected different communities in different ways over time. Rural livelihoods have responded and adapted to these changes using diverse coping mechanisms.
- Aid Culture evolved in response to the humanitarian refugee crisis following soviet invasion. The inadequacy of practices led to the 1998 'Strategic Framework for Afghanistan' to improve coherence of delivery. In practice, Aid remained driven by project/donor implementation needs and technical progress reporting
- Case study of opium production demonstrated that opium was not just valued for income but also for the security, access to land and credit opportunities. It was particularly valuable for the rural poor who otherwise could not access these resources for food production
- Study of the Hazarajat region during a wartime economic blockade indicated that contrary to expectation, the blockade did not result in starvation or loss of life, but instead, through the smoothing impact of coping mechanisms, merely resulted in 'immiserisation'. It was concluded that these coping mechanisms that averted loss of life should be strengthened
- The study of carpet weaving schemes in Faryab indicated that producers were much more sensitive to prices and markets than the scheme promoters were aware of. It also evidenced the importance and specificity of intra-household adaptation strategies and how this knowledge had not been incorporated in project planning
- It is clear that current understanding to Afghan livelihoods do not explain how people are successfully coping with adversity and are thus redefining the notion of 'vulnerability'. Evidence suggests a blurring between licit and Illicit activities, and dynamism in the political/power relationships which structure livelihoods

The paper concludes that that there is a clear need for improved understanding of livelihoods and posits the development of a cohort-based livelihood tracking system, using asset indicators, to be combined and underpinned with qualitative and contextual studies.

This conclusion is of great value to the current project since it is wholly consistent with elements of the projects aims and methods. The paper raises some interesting points about the complexities of livelihood decision making and the weak focus of recent development interventions

Duchier, J. and Pascal, P. 2006

Understand needs diversity to design sustainable programs, the case of wheat seeds distribution programs Kabul, Goup URD (5 pp)

This paper provides a critical analysis of wheat seed distribution programmes by analyzing and highlighting diversity in household livelihood systems given hypothetical ranges of capital and human agricultural assets. After reviewing the rationale for wheat seed distribution, the author:

- Looks at farm differences in terms of land assets and considers farm size in terms of area per person (calculating that in order to achieve wheat self sufficiency, 0.25 ha of land per adult is required). Accordingly, about 80% of 100 interviewed farmers in Badakhshan were not wheat self sufficient. Therefore farmers either diversify into off farm labour or moved to higher value crops (notably poppy).
- Analyses farm differences in terms of the household cycle and fluctuating labour availability. Waged labourers can support themselves and the needs of two other adults.

By aggregating the factors of land availability and labour availability the author hypothesizes six categories of household with varying production capacities and livelihood options. It is concluded that households lacking land or male off farm labour were vulnerable: Recommendations include that the cultivation of wheat may not provide a viable livelihood for farmers of some categories and therefore there may need to be a reassessment of these programmes Although grossly oversimplifying the range of household assets the approach adopted in the analysis is useful to demonstrate diversity in livelihood options an raises some interesting methodological ideas.

Pain, A. and Lautze, S. 2003

Addressing Livelihoods in Afghanistan, Kabul: Afghanistan Research and Evaluation Unit (57 pp)

www.areu.org.af/index.php?option=com_docman&Itemid=&task=doc_download&gid=264

This paper utilizes the Livelihoods Framework (as developed by DFID), as an analytical tool for exploring the extent and implications of livelihood security and insecurity in Afghanistan shortly after the fall of the Taliban regime. The study begins by introducing the framework and its various components both a theoretical model but also as a way understanding the complex social and economic elements upon which livelihoods are based. The second part of the study examines application of the model to the Afghan context while the third offers some general policy and programming recommendations.

The key arguments made in the study include:

- Situations of Chronic Conflict and Political Instability have generic features which generate specific vulnerabilities, including weakened state and social institutions, food insecurity, disease, violence and population displacement
- There are limitations to the applicability of the Livelihoods Framework in the Afghan situation of chronic conflict. It is argued that livelihood decisions may be shaped by insecurity in ways inconsistent with those described by the model
- During the years of warfare, households have undergone asset depletion, diversification and migration, resulting in a declining role for agriculture in Rural Afghanistan

- The process of policy development in Afghanistan is proving problematic, and insensitive to the realities of livelihoods in Afghanistan. The Natural Resources and Agricultural Needs Assessment (NRAS) is cited as an example of this. Community driven prioritization is expected to address disparities in asset distribution, which fails to appreciate the realities of rural power relations

The paper concludes that policy and programming needs to take account of the dynamism and complexity of livelihoods in Afghanistan if they are to be effective. In its conclusion, the paper cites the need for an improved understanding of Afghan livelihoods, ways of building institutional capacity to deal with this improved understanding and more effective sharing of information between development stakeholders.

The paper is of particular utility in providing a theoretical and policy background to understanding livelihoods in post-conflict Afghanistan. However the paper provides little in the way of empirical evidence or data.

RAMP (Rebuilding Agricultural Markets Program) 2006
Insights: Agriculture in Afghanistan. RAMP Insights, Vol 3.

The paper offers an overview of the impact and efficacy of the USAID RAMP project, which was designed to develop the agricultural sector through a “market-driven value chain” approach.

- The paper provides figures for the estimated benefits of the project, both realized and project impact, in terms of USD. The paper then very briefly overviews the macro-economic implications of this sum in terms of percentage of GDP and probable impact on illicit crops. It concludes that RAMP’s “realized impact for 2005 accounts for 30% of the annual GDP.” The paper then continues by stating the outputs of the infrastructure in terms of irrigation projects and roads. Impact figures are not extrapolated from this.
- Agricultural production and marketing are then considered, taken sector by sector. In the fruit, nuts and vegetable markets the rise in the value of exports of fruits and nuts is noted (from USD 2.9m in 2003/2004 to USD 9.5m) and attributed to the RAMP project. Similarly for vegetables, including the introduction of new strains, the introduction of agri-businesses, greenhouses and storage facilities. Projections are made in USD.
- The paper elaborates on the investments on inputs to benefit food crops. The investments made through RAMP into livestock and poultry are specified. It notes the interventions in terms of capacity building. Little space is devoted to this aspect of the project.
- Rural finance is stated last of the sectoral interventions.
- The remainder of the paper is devoted to methodologies for estimating impact, for each component of the project. The calculations themselves are not provided.

Schelhas, B. 1996

Afghanistan: Promotion of Agricultural Rehabilitation: Farming systems, Rome FAO (48 pp)

The report provided an overview of farming systems in Afghanistan, based upon the collection of farm level information (124 interviews) and meetings with key institutional informants. The paper identifies and describes a range of farming systems models representative of agricultural activities in diverse agro-ecological zones of Afghanistan. The report contains:

- Identification and description of 11 agro-ecological zones, with data on extent of irrigated and rain fed cultivation

- Brief overviews of prevalent farming systems and their constraints, in each of seven different agro-ecological zones. Data on cropping patterns, livestock, farm sizes, household sizes and share cropping
- Review of the main physical features of Afghan farming systems; active and inactive land, distribution of farm sizes, Household size and Labour, issues of land tenure
- Discussion of farm inputs, seeds, fertilizers, agrochemicals, pest control and traction for ploughing
- Discussion of range of crops cultivated in Afghanistan; major crops like Cereals, Poppy, Cotton, Beans and Peanuts, Clover and Alafalfa, Fruits, potatoes and vegetables. Also discussion of other more minor crop types and livestock and their products
- Discussion of subsistence or market orientation of production and related factors. Data is given on the gross margins of major crop types in different areas around the country, and also data on cash income and returns to labour.
- Major agricultural problems as identified by farmers are also detailed

This report constitutes a very valuable reference document. It provides a wealth of detail on aspects of Afghan farming systems as they existed at time of compilation. The major drawbacks of the work are its age (and thus relevance) and also the limitations of the data collection notably sample size. However, discussions of crop and farm types are valuable as are data for yields.

Pound, B. 2004

Livelihoods systems analysis consultancy: Development for sustainable agricultural livelihoods in the eastern Hazarajat FAO (118 pp)

This report describes the findings of a two month consultancy to ascertain information on livelihoods in the project area, particularly the role of farming systems in these livelihoods. The sustainable livelihoods framework was utilized as a guiding concept and visits were made in two months, November 2003 and April 2004. The study findings include:

- Conflict and disruption have left most village families resource depleted (land , capital, livestock seed, access to employment). Although migration to employment offers some access to incomes, farming capacity is low and there are few viable alternatives to poppy cultivation.
- Mixed farming is the predominant agricultural activity, in eastern Hazarajat with livestock and cropping being of similar strategic importance. Most households use combinations of irrigated and un-irrigated land as well as mountain pastures.
- Livelihoods are closely related to resource access and asset ownership; household wealth is assessed on the basis of ownership of land and livestock, or access to off farm employment. There is a need to recognize heterogeneity within villages.
- Differences between villages are also stark, with some having nearly all the irrigated land in the hands of a few families....This was predominant in valleys, while at higher elevations, resource distribution was more equitable.
- A small percentage of people practice recognized trades other than farming, and a certain amount of weaving also occurs. Most villages have shuras of elders to settle disputes. While men and women sometimes work together on a collaborative basis for harvesting or weeding, most production is organized around the family unit.
- Lack of infrastructure means that many villages are accessible by foot only, while in accessible locations, many houses and structures have been damaged by conflict. While there are few formal financial institutions there are extensive informal networks

- Most poor and medium wealth group families are characterised by debt, and insecurity of tenure.
- Vulnerability factors have driven many households to cultivate opium poppy, even though there is little historical precedent in the area.

Observations made by the study team have led to the development of extensive recommendations for project interventions and these are cited in the report. In addition to the main volume of the report there are four accompanying district level reports containing data from village surveys. These reports cover the districts of Panjab, Shibar, Waras and Bamyar and Yakowlang. The data presented arbitrary scores to assess assets and other livelihood elements as defined by the Livelihoods framework. There is no quantitative assessment of agricultural production, cash flows or livelihood security and so the data has limited comparative value other than for other projects employing the 'livelihoods framework'. The problem seems to be that there is no common approach to employing the livelihoods framework for assessing vulnerability. The way it is used in the Hazarajat study is different from other studies in Afghanistan cited in this bibliography.

Vulnerability Analysis Unit, 2004

Analysis of Drought Impact in Afghanistan, Kabul: MRRD (20 pp)

This paper provides an assessment of the Impact of drought 1997-2004, with specific reference to rural livelihood and food security.

- Data is presented to demonstrate the extent and severity of the drought (rainfall data, % change precipitation against annual means regionally through the country, vegetation condition change against average for previous five years) in four regions of the country
- Market analyses describes trends in wheat and labour prices over the previous year. Relative wheat and labour values are plotted. Also sheep prices regionally (north and south of country).
- The report predicts that a significant proportion of the rural population will be unable to cover their basic food needs during 2005 and compares this with prior harvests and levels of security
- Food insecurity is mapped at a district level both in absolute terms but also as 'food-gap' months. Food insecurity is also presented as a percentage at village level
- Winter market access is also plotted at a district level
- Need to buy water is plotted at a district level

These data illustrate the extent of livelihood vulnerability and give indication of its geographical distribution.

WFP/VAU MRRD, 2004

The National Risk and Vulnerability Assessment 2003: Rural Afghanistan (123 pp)

The National Risk and Vulnerability Assessment was a collaborative effort between the Afghan Government, the United Nations and multiple NGO's. The NRVA was undertaken during 2003 following four successive years of drought and poor agricultural harvests in many parts of the country. The principal objectives of the study were to collect data in order to better understand the types of risks and vulnerabilities faced by farmers and nomads through the year. Sampling for the survey was based around selected agro-ecological zones and encompassed 11757 households (almost 8% of the estimated rural population). The first portion of the volume comprises descriptive text and the latter portion tables of data relating to the text. Data sets collected by the survey describe:

- Categorisation of rural households and their conditions by agro-ecological zones

- General household demographics and composition, with socio-economic conditions (including access to education and healthcare), housing conditions, asset ownership, access to labour and incomes, agricultural activities and assets (including land and livestock) and access to markets
- Shocks impacting on rural households and their reported coping strategies to deal with these
- Participation in development programs
- Dietary diversity and food security profiling (by both diversity and calorific values of intakes).
- Respondent preferences for priority interventions (beneficiary groups, gender groups, seasons for intervention and agro-ecological zones)
- A section specifically on the vulnerabilities of nomadic peoples

Overall the NRVA represents one of the most comprehensive descriptions of rural conditions and development challenges undertaken in Afghanistan. Descriptions and data are clear and concise. The major problem with the study was its reliance on a single visit questionnaire to cover the entire agricultural calendar and a wide range of social and economic indicators. The NRVA was updated in 2005, and this data is just becoming available in unprocessed form.