

INTEGRATED LAND USE
ASSESSMENT (ILUA)



FORESTRY DEPARTMENT
A.C.M. Masinja (Mrs.)

INTEGRATED LAND USE ASSESSMENT (ILUA)
REPUBLIC OF ZAMBIA

UPDATE - BRIEF

Jackson M. MUKOSHA

GEOGRAPHICAL LOCATION
ZAMBIA



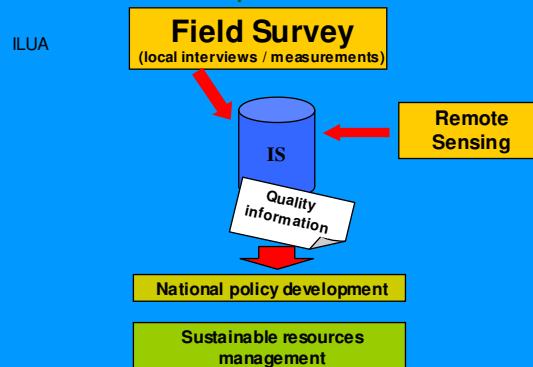
INTEGRATED LAND USE ASSESSMENT (ILUA) – ZAMBIA
JUNE 2005 – JULY/OCTOBER 2008

- The MTENR is undertaking a National Integrated Land Use Assessment Project (ILUA) with financial and technical assistance of the FAO. (TCP/ZAM/3007 – A);
- FAO Netherlands Partnership program (FNPP);
- Finnish Government through a trust fund, GCP/ZAM/065/FIN; and
- The Government of the Republic of Zambia.

ILUA Objective

- Assist Zambia land use institutions to develop and strengthen their capacity to collect, compile, and process and disseminate reliable up-to-date information to policy makers;
- Plan and carry out national land use assessment
- Develop up-to-date integrated land use information system; and
- Set up a long term land use monitoring system.

ILUA - Concept



Coverage

The project covers the whole country;

Comprises of three phases:

- preparatory;
- fieldwork; and
- information system development

The project is now in the final phase of data analysis and reporting.

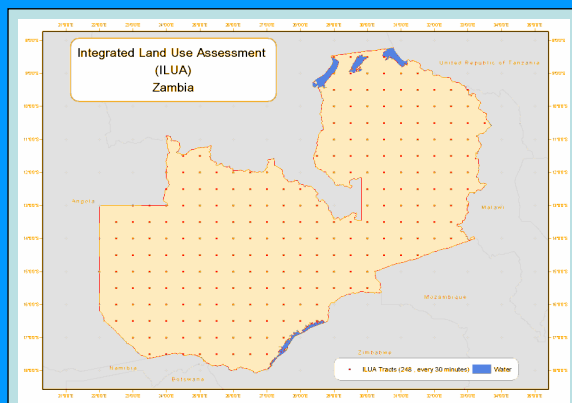
The data collection includes:

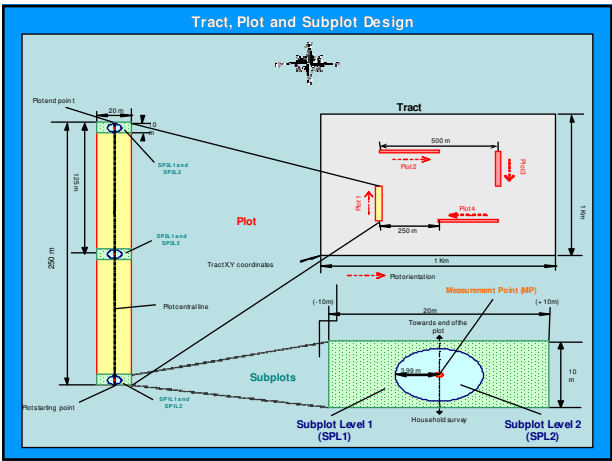
- forest resource;
- crops;
- livestock; and
- social economic data.

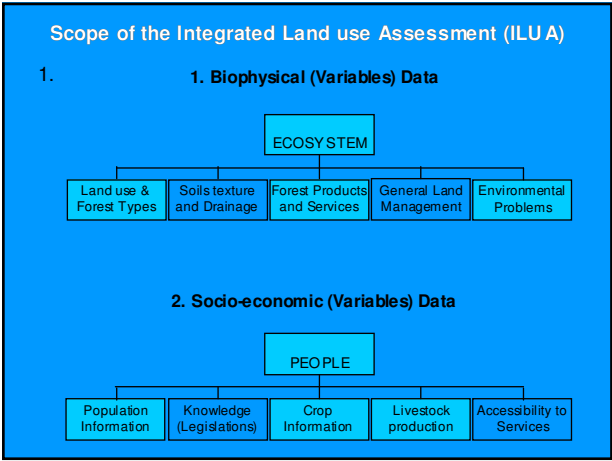
STAKEHOLDERS INVOLVED IN ILUA

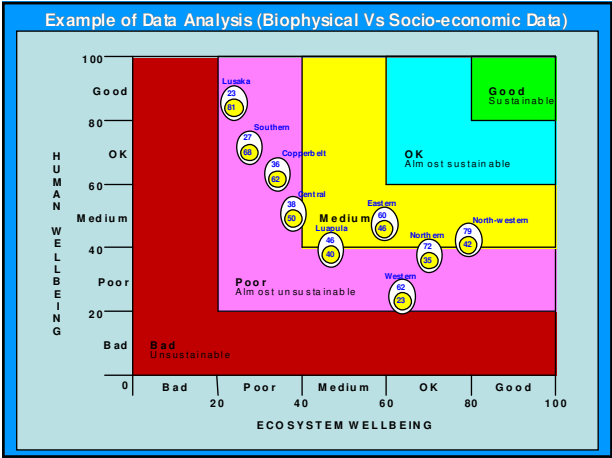
- **Lead Institution is Forestry Department, Ministry of Tourism, Environment and Natural Resources.**
- **Collaborating Institutions:**
 - Agriculture, (Ministry of Agriculture and Cooperatives).
 - Survey, (Ministry of Lands).
 - Central Statistical Office, (Ministry of Finance and National Planning).
 - ZAWA, (Zambia Wildlife Authority)
 - Fisheries
 - Water Affairs Department
 - University of Zambia
 - Copperbelt University
 - Local Government, (Councils)
 - Zambia Forestry College
 - NGOs

Distribution of tracts for the Integrated Land Use Assessment in Zambia



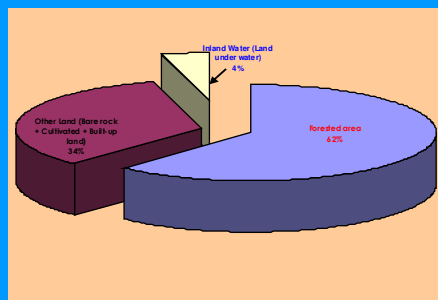






Source: ILUA Land cover map (2005 landsat Images)

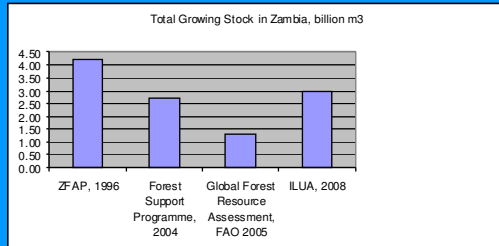
Provinces in Zambia	Land Area (ha)	Wooded Area (ha)	% Cover
Central	9,450,438	4,913,115	52.0
Copperbelt	3,244,377	1,893,522	58.4
Eastern	7,004,411	5,128,460	73.2
Luapula	6,368,106	3,162,225	49.7
Lusaka	2,283,401	986,260	43.2
Northern	14,791,385	8,023,022	54.2
Northwestern	10,730,419	8,915,325	83.1
Southern	8,739,283	5,101,232	58.4
Western	12,649,580	8,433,420	66.7
Total	75,261,400	46,556,581	61.9



Area of cultivated land per province

Province	Land Area (ha)	Cultivated Area (ha)
Central	9,450,438	2,767,876
Copperbelt	3,244,377	730,178
Eastern	7,004,411	1,368,143
Luapula	6,368,106	1,467,175
Lusaka	2,283,401	659,867
Northern	14,791,385	3,575,413
Northwestern	10,730,419	727,004
Southern	8,739,283	2,259,323
Western	12,649,580	1,550,124
Total	75,261,400	15,105,104

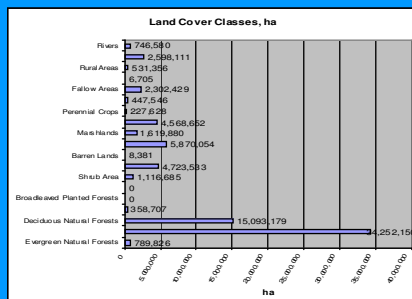
Previous inventories, growing Stock



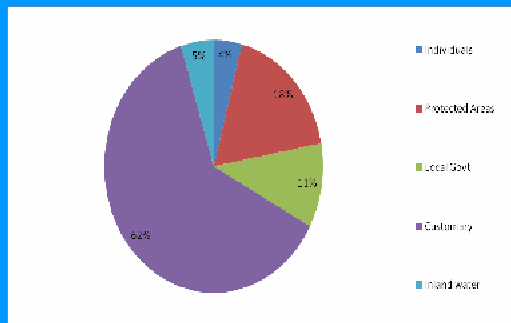
Main Land Cover Classes

	ha	%
Total Forest area	41,729,000	66%
Total Other Wooded Land	4,828,000	8%
Total Other Land	25,641,000	21%
Inland Water	467,496.91	5%

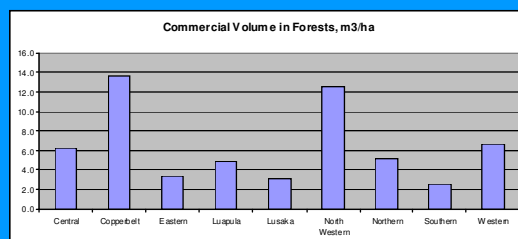
Land cover classes



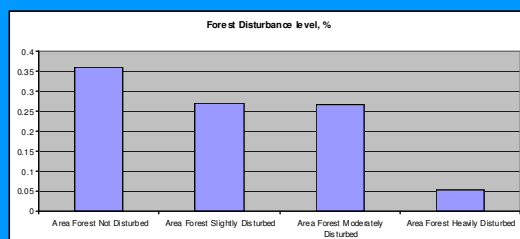
Area of major National Land Ownership



Commercial volume



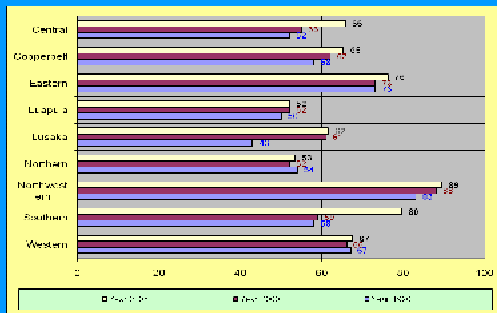
Forest Disturbance level



Land Change between 1990 - 2005

Province	Central	Copbelt	Eastern	Limpopo	Lusaka	Northern	NWestern	Southern	Western
2005	52	58	73	50	43	54	83	58	67
2000	55	62	73	52	61	52	88	59	66
1990	66	65	76	52	62	53	89	80	67

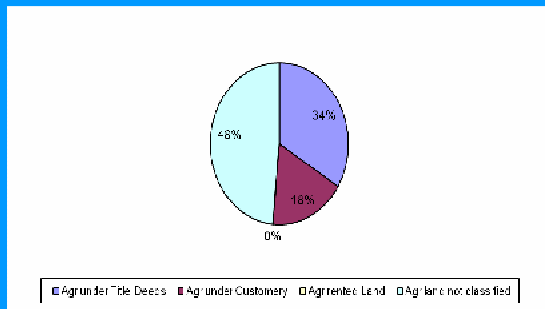
Land Change between 1990 - 2005



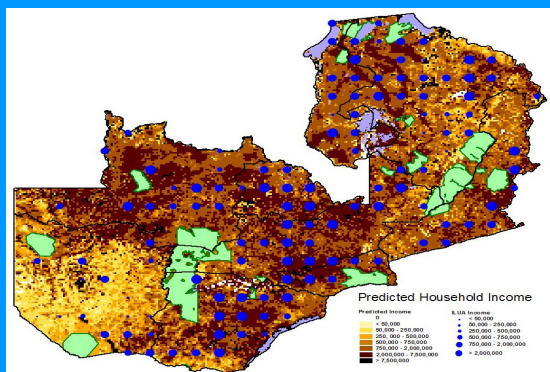
Distribution of Agriculture land

Sum Of Count Of 201 Household Number	Sum of Total Agr Land Assessed	Agr under Title Deeds	Agr under Customary	Agr rented Land	Agr land not classified
1680	22,477.1	7,609.5	3,960.3	20.8	10,886.6

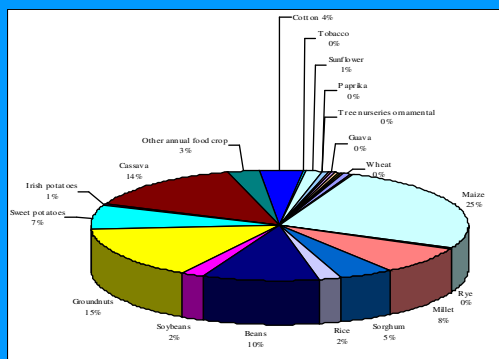
Distribution of Agriculture land



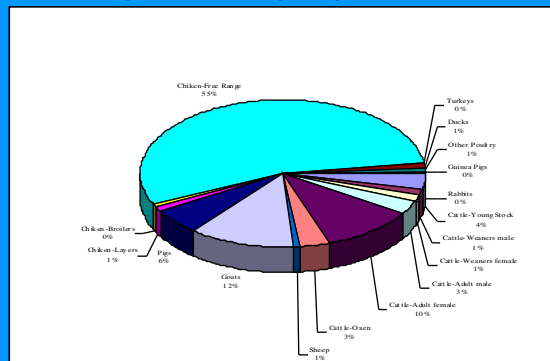
Modeled distribution of total household income



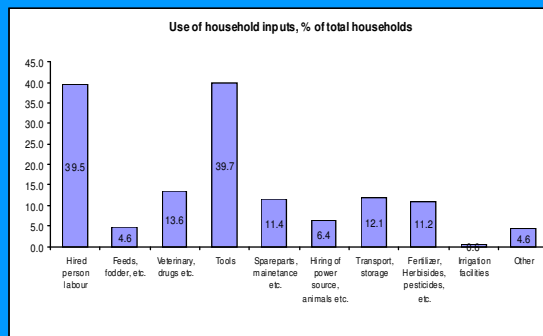
Proportion of Land area allocated to Cultivation of various Crops by the sample Households



Livestock Species owned by sample Households



Level of Agriculture Input Utilization



Policy implications

- Based on this analysis of ILUA data which was carried out in order to identify the required key information to link it to relevant national policies and action plans related to agriculture and forestry, the study offers the following policy implications:
- The country has a large population under extreme poverty. Even though poverty is widespread, the majority of people in Zambia who are affected by high poverty levels are predominantly found in rural areas. The country's poor and non-poor are closely associated with agriculture and the greatest gains on poverty reduction can be achieved through stimulating an efficient agricultural sector. This is further reinforced by the observation that the periods of highest economic growth in most developing countries coincide with the periods when agriculture was most vibrant. This observation in itself implies that for anti-poverty programmes to achieve the intended, they have to be designed and implemented in a manner that takes into account the large presence of the chronic poor in rural areas. There is need to design poverty reduction programmes that favour the agricultural sector.

Income distribution vs urban and rural areas



Deforestation vs urban and rural areas



LAND-USE AND FOREST COVER MAP - COPPERBELT PROVINCE



WAY FORWARD (beyond field data collection, analysis and outputs),
GRZ and Cooperating Partners can lead further support and added
value: Extension of ILUA Phase one

- Filling gaps in information of ILUA
- Complete ILUA database with reliable information for various uses
- Increase sample size in selected provinces
- Dissemination of ILUA information
- Agreed data sharing policy for ILUA data; Operational "one-stop-shop" also use of CD, Internet
- Link web-based ILUA site to/from livestock census data and population census etc
- Improved data by Remote Sensing methodological development and testing for monitoring of forest biomass and forest degradation
- Human capacity in collecting and analyzing data for REDD and carbon balance accounting
- To stimulate the implementation of best practice guidelines in (fire management, timber harvesting, tree planting, carbon accounting etc