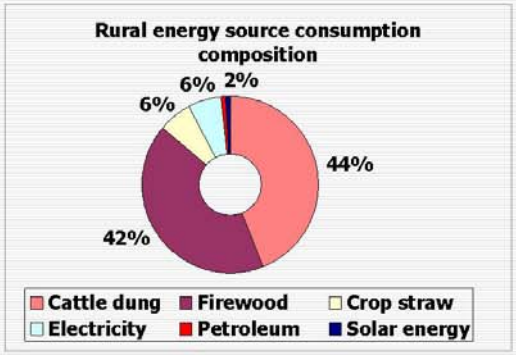
The Tibet Autonomous Region forms the main part of the Qinghai-Tibet Plateau which is the highest Plateau of the world with an average altitude over 4000 meters above sea level.
Unique physical features resulting from this location hold both risks and chances with a view to land use. Within thousands of years a humanized environment has been developing which is the result of the great contributions to the exploitation of the Plateau.
On this score the usage of energy to the survival of man and for the purpose of land use has been playing a key role in Tibet.
The outstanding natural conditions, which distinctively differ from location to location, the ubiquitary natural lack of fossil fuels as coal, oil and gas, the economic structure in which the primary sector is still dominating as well as the social structure of population have been developing special patterns of energy consumptions and –technologies.
Even though the technical options of the usage of energy has been improved and a permanent growth of the secondary sector can be seen after the energetic support by the central government since the 1950s, a huge majority of the Tibetan population still consumes energy in terms of biomass.
In contrast to high developed countries like Germany, where high technology biomass plants are being applied, in Tibet cow dung, firewood and crop residues are burned directly.



Region	Rural population	Consumption per capita, kg			Total consumption, t		
		Cattle dung	Firewood	crop straw	Cattle dung	Firewood	crop straw
Grazing region of north Tibet Plateau	328764	1124	0	0	369859	0	0
Farming and grazing region of central	280000	550	200	80	154028	56010	22404
Farming and forest region (southeast)	1529000	580	950	190	455560	828110	148630
Total	2137764				979447	884120	171034

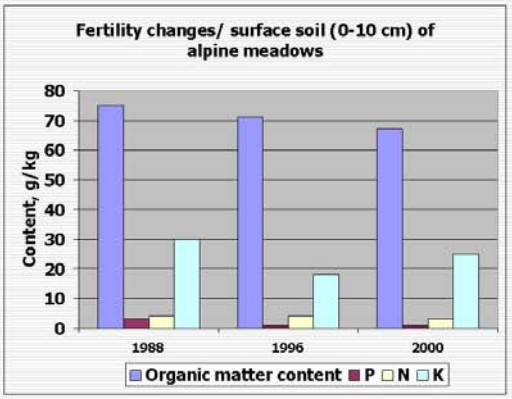
The use of traditional biomass has great impact on the Eco-environment as well as on the Socio-economic Environment in Tibet.

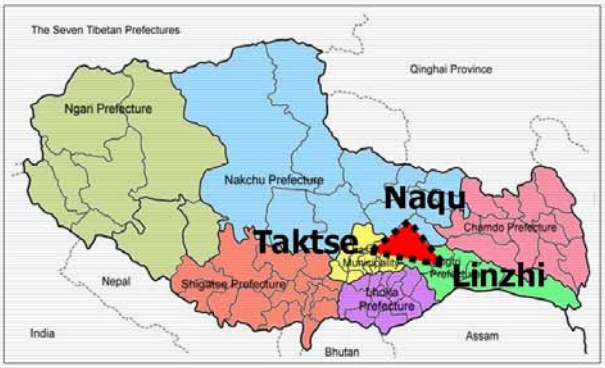
Eco-environment related impacts are:

- **DESERTIFICATION EXACERBATION**
- **SOIL EROSION AGGRAVATION**
- **GRASSLAND DEGRADATION**

On the Socio-economic site there are:

- **Health reduction by burning fuel inside rooms**
- **Less time for education due to collection of fuel**
- **Less Sustainable development in general**



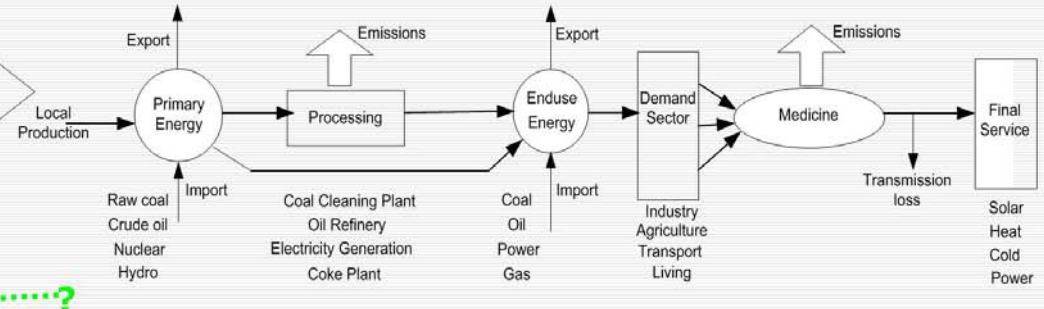


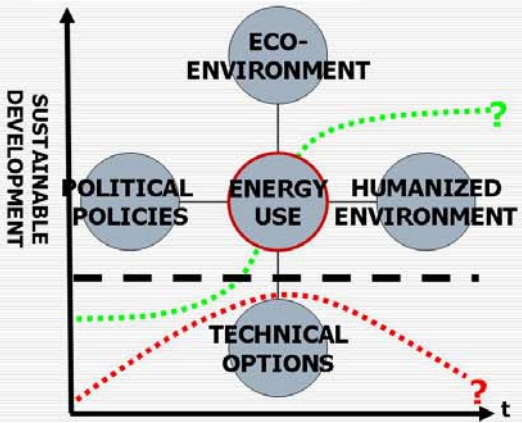
Energy consumption and environmental changes inside three rural regions of Tibet (*M.Lucas, Aachen University of Technology/Germany*)

- **Comparing three rural regions with different land use typs**
- **Which common and different energy consumption patterns can be observed, how did they change by and by? Which are the main determinants and which are the main consequences of those patterns?**
- **Which are the major energy technologies and which parameters do determine their usage? Which environmental impacts exist?**
- **What are the Best Practical Technologies and how can they lead to a Sustainable Development?**

LEAP
Long-range Energy Alternative Planning system

Energy-Environmental model tool based on scenario analysis





Strategies for Rural Energy (***Reedy, Amulya K.N.***)

- **Reduction of ardous human labor**
- **Modernisation of biomass**
- **Transformation of cooking**
- **Elektrifikation of all homes**
- **energy for income-generating activities**