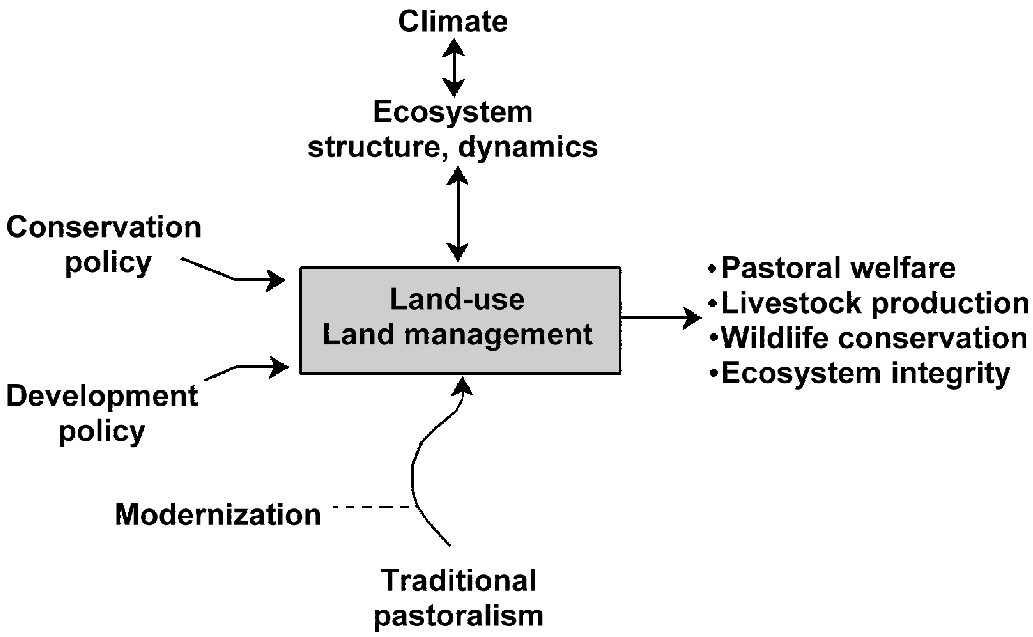
IMAS Overview

The Problems spawning IMAS

Livestock-based agriculture is the most prevalent form of land-use in East Africa, and is a proven basis for food security. These same pastoral areas of East Africa support some of the largest and most viable wildlife populations in the world. Livestock and wildlife have historically been compatible forms of land-use, but are seen as increasingly in conflict.

Food security for pastoralists is central to our concerns and the IMAS approach, but livestock development cannot come at the expense of valuable wildlife resources. In Tanzania, an estimated 326,000 tourists visited parks and reserves, and added an estimated $372,000,000 to the Tanzanian economy - believed to be the number one exchanger earner for the country.

An assumed competition between livestock and wildlife has led to systematic exclusion of wildlife to increase livestock production on smaller blocks of land, to support more people per unit land area. Portions of range critical to both livestock and wildlife have



been lost or fragments, disrupting grazing patterns. These changes can lead to increasingly unstable wildlife populations *and* livestock populations and pastoral food security.

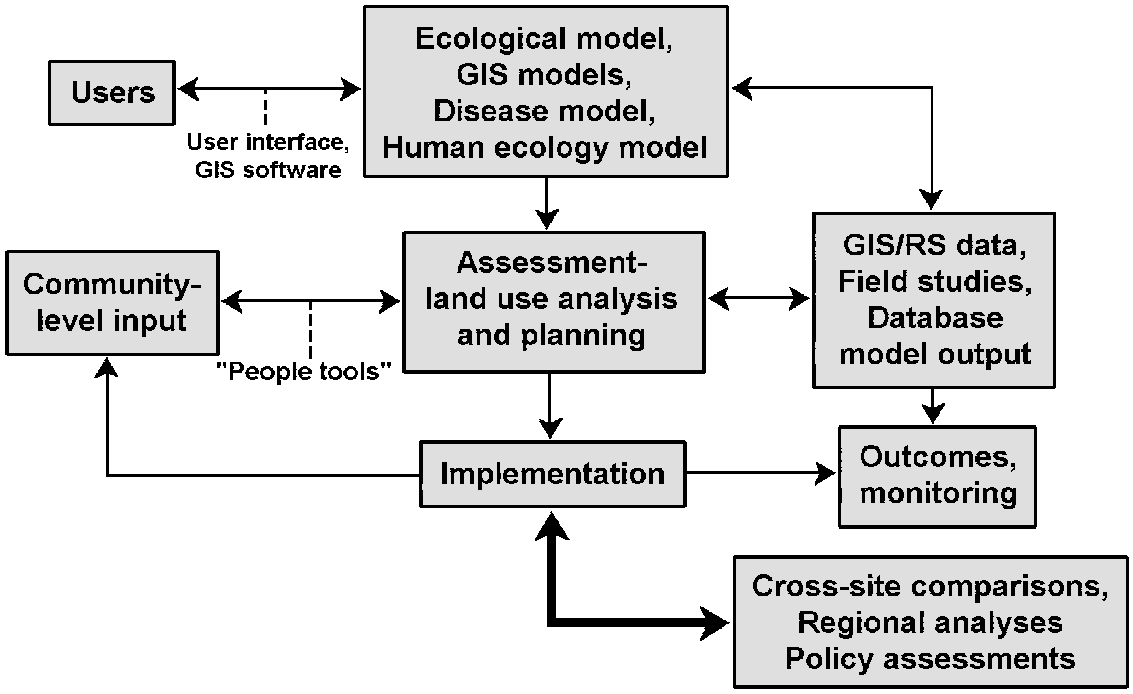
Human populations are increasing in pastoral areas, with intensification of the pastoral land use and changes in land tenure. Pastoralists are becoming more sedentary, and areas of pastoralism and wildlife conservation are being encroached upon by human settlements, urban expansion, and other effects of modernization.

The effects of the individual changes in East African ecosystems are known to various degrees, but considering the entire suite of effects from management questions is difficult, if not impossible. Managers and policy makers require a tool that can integrate the ecological, sociological, and economic relationships and suggest outcomes from decisions being considered.

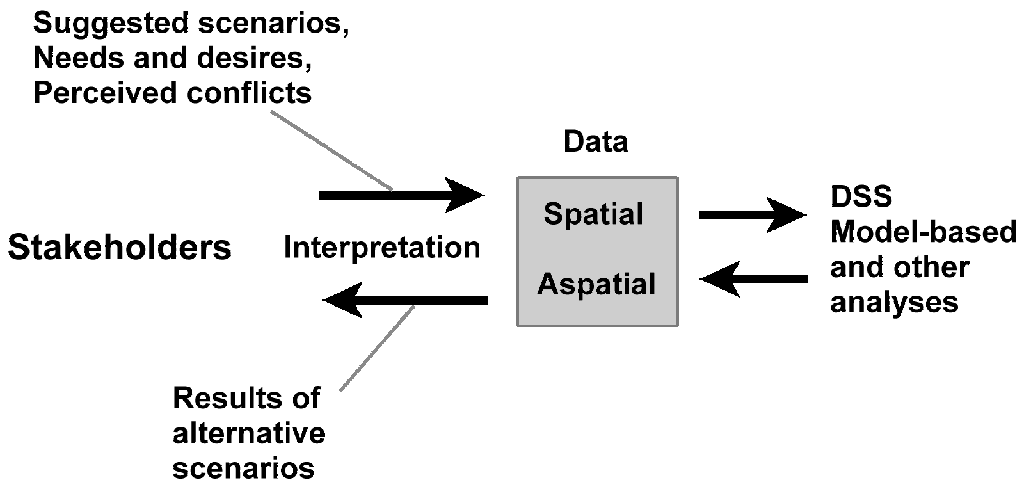
The Integrated Management and Assessment System

The Integrated Management and Assessment System was created to assist stakeholders, planners, and policy makers to assess interactions between livestock, wildlife and other natural resources. Once adopted, managers will be able to assess the level of competition between livestock and wildlife, for example. Here we will concentrate upon the ecosystem modeling component of IMAS, but the project also includes geographic information system analyses, data synthesis, and field assessment methods.

The IMAS model



A primary goal of IMAS includes having the system adopted by relevant decision and policy makers. Decision makers would pose questions or suggested scenarios, which would be addressed using Savanna. The results of the model would be evaluated in concert with other IMAS methods, such as GIS analyses and results from



field investigations. Results would be interpreted, and alternative scenarios might be suggested, or the results might be passed-on to the stakeholders.