For an overall research plan, it would be helpful to define research questions that can be addressed at different spatial scales of analysis. Here are some basic ideas for discussion based on what I think are existing data and data that could be easily acquired. The general approach is to address specific research questions at different scales of analysis.

Local scale analysis:

Question: How does the portfolio of land resources affect household-level resilience to climate variability?

What explains differences in exposure to shocks?
What explains differences in coping behaviors?

Data: Field plot locations (Miyazaki san et al.)
Agricultural productivity (household survey)
Digital Elevation Model (derived from 1991 aerial photography)

Spatial Extent: Intensive study site (Sites A, B, C)

Methods: Characterization of field plots based on site condition surface slope (soil conditions?)
Create typology of field plots based on surface slope, aspect
Create household indicator of risk based on land resource attributes
Statistical analysis
Dependent variables: self assessed poverty indicator, agricultural productivity
Independent variables: crop diversity, land resource measure, HH labor

Meso-scale analysis:

Questions: How does land suitability vary across communities?
What is the relationship between land suitability and land cover across communities?
How has land cover changed over time as a function of land suitability?

What areas exhibit the greatest vulnerability to climate variability?
How do community-level conditions contribute to household resilience?

Data: Digital Elevation Model (ASTER GDEM)
Land cover (Landsat MSS, Landsat ETM, ASTER)
Village locations (1:50,000 scale topographic maps)
Resilience Project Survey (GPS locations for HHs, 20 HH/SEA)
Post Harvest Surveys – Crop Forecast Surveys (No GPS data, but broad spatial coverage)
Living Condition Monitoring Survey -

Spatial Extent: Intersection of MSS, Landsat ETM and ASTER data, possible comparison of Southern vs. Eastern provinces, and comparison within provinces.

Methods: Generate slope surface from ASTER GDEM
Construct village partitions based on location of villages (Thiessen/Vornoi polygons or accessibility measures)
Measure

Regional scale analysis:

Questions: What is the relationship between land cover composition/pattern and demographic characteristics at the district level?

Data: MODIS MCD12Q1 Land Cover Type data, 500m classified
ZambiaInfo – census information, agricultural data

Spatial Extent: Southern and Eastern provinces - district scale of analysis

Methods: Acquire MODIS data (coarse scale, but already classified and cover a broad spatial extent
Import ZambiaInfo data into ArcGIS
FRAGSTATS spatial metrics to characterize land cover composition and pattern at district level

Other random comments:

1) It would be useful to have boundaries of communities for some analysis. My impression is that these data do not currently exist. But perhaps data could be collected for a limited area.

2) Another entire line of research would be the use of AVHRR or MODIS data to document vegetation productivity as an indicator of precipitation variability. For this analysis it would be best to bring in a climatologist (maybe Kanno san?)

3) Yet another topic of interest is the interplay between household and community resilience. There is a very strong set of data that the project already has to assess household resilience. But communities can also serve as a reservoir of resilience for households. It might be interesting to conduct some limited community level surveys to address this issue.