

## Nepal Agriculture Earthzine Transcript

Claire: Hi, I'm Claire Herdy. I'm a graduate student in Earth Systems Science at UA Huntsville

Binita: Hi, I'm Binita KC, and I'm a graduate student at the University of Georgia. I'm majoring in geography.

Claire: And we're working on the Nepalese Agriculture project

The project involves using DSSAT, the decision system support for agrotechnology transfer, a point data model, and satellite data in our point system model to understand crop yields, growth stages, and forecasts for the population of Nepal.

Claire: (voiceover while images scroll) The goal of this research is to improve environmental management and climate change preparedness by strengthening the relationship between scientists and governments using geospatial technologies in order to improve food security in the country of Nepal. (Globe animation) Using satellite derived data, Nepalese food security forecast can be generated and famine threat predicted.

Binita: (in computer lab) The blue on the pops up, that is the TRMM precipitation data, and this one is the GLDAS surface temperature. So what we are doing is we are doing the 3D visualization using a data viewer from Nasa. We are just trying to visualize this is 3D.

Claire: This is incoming shortwave radiation, so you can get an idea of the amount of sunlight the plants are receiving and essentially their growth rates.

Binita: Soil data from SOTER data we can see different soil types from Cambisols to Luvisols.

Claire: All of these data sets are GLDAS solar insolation, temperature, and SOTER soil data were placed in the DSSAT crop model. The crop yields from the DSSAT crop model were compared to in-situ yield data collected by the Ministry of Agriculture.

(voiceover while results scroll) The results of this research show NASA data to be crucial for remotely studying agriculture, especially in the DSSAT program in Nepal. This research will benefit the local farmers in Nepal as well as the local government and NGOs tasked with aid distribution.

Jason Kessler: The partnership between DEVELOP and SERVIR is really starting to

create results. It's a great opportunity for us to begin work through DEVELOP here in the US and eventually expand it to our SERVIR hub in Katmandu and then I hope around the globe to the rest of the SERVIR network.

Music used (from iLife Sound Effects): "Elysium Long", "Borealis", "Tigris"