



Dynamic AEZs: Bioclimatic Variables for Land Use Prediction under Climate Change, Dave Huggins, USDA-ARS

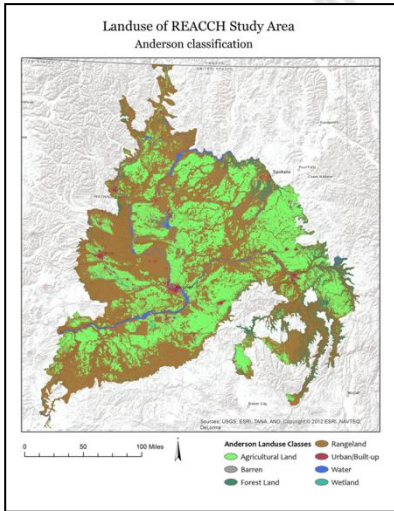


Fig. 1. Land use of REACCH study area based on Anderson classification using NASS Cropland data layer.

Agroecological zones (AEZs) enable researchers, stakeholders, students, the public, and policymakers to acquire a more holistic understanding of the interrelationships of agriculture and climate change. We have established a land use baseline where AEZs are geospatially delineated (annually) based on the regional cropland data layer (NASS; Figs. 1 and 2). We are working on predicting the distribution of future land use under different climate change scenarios using a suite of bioclimatic variables (e.g. Fig. 3). This effort will require close integration with climate and modeling groups. Additional goals are to: continue developing a geospatial land use context for research, education and extension activities that will enable regional assessment of agricultural mitigation and adaptation strategies; and, in addition to bioclimatic variables, integrate biophysical and socio-economic data to pursue a trans-disciplinary examination of climate-driven futures. This effort will require cross-project synthesis and integration.

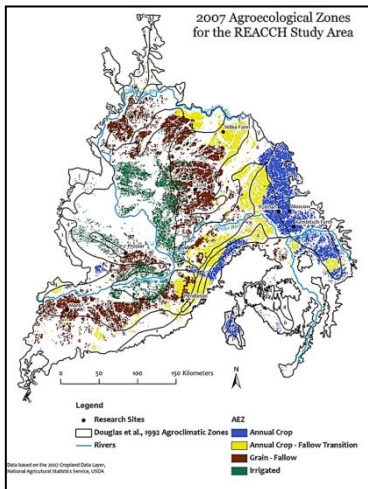


Fig. 2. Classification (57-m scale) of major cropping systems (AEZs) of the REACCH study area.

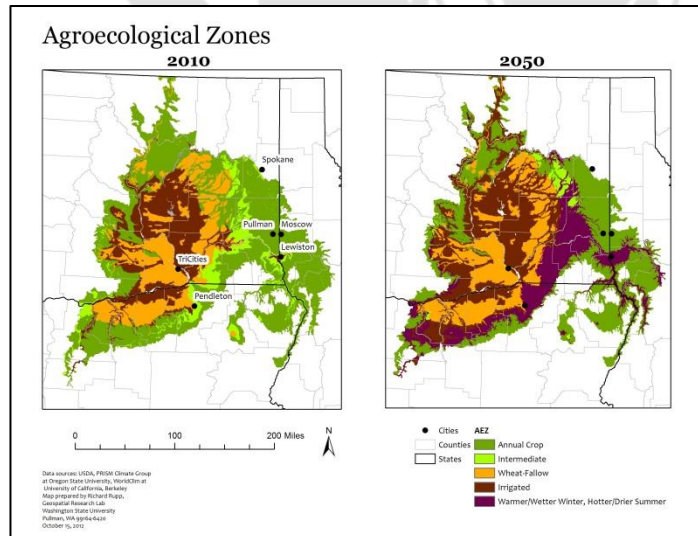


Fig. 3. Predicted shift of Douglas agroecological zones from 2010 to 2050 based on future climate change scenario.

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