

**Increased accessibility, landscape changes, rural transformations, and urbanization:  
Impacts of the east-west economic corridor from Da Nang, Vietnam, to Khon Kaen,  
Thailand**

**Progress Report**

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Period of Report: January 1, 2013 – December 31, 2013 (Year 1)

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**Summary**

Overall we have been able to accomplish most of the activities that were planned for year one of the project. The planned activities for year two build on year one activities and are in-line with the activities outlined in the original project proposal.

**Project Goals/Objectives Year 1 and Accomplishments:**

Original Plans and Objectives:

1. Yearly planning meeting
2. Initial collection of remote sensing data for all parts of the EWEC and initial analysis of the imagery
3. Collect socio-economic data for the EWEC study area in each country
4. Field visits to district level offices in each country

Yearly Planning meeting: As this was the first year of the grant, the PI communicated with each of the co-I's and collaborators via email initially to discuss data acquisition plans and fieldwork plans. In May/June the PI visited each of the Co-I's and collaborators personally to review the original workplan and to revise the schedule as needed. The workplan has been revised as follows to better reflect the reality of the Co-I's and collaborators other work and projects, which have started since the project proposal was submitted.

Workplan and schedule	Project Year 1 (2013)				Project Year 2 (2014)				Project Year 3 (2015)			
	Jan-Mar	Apr-Jun	Jul-Oct	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Oct	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Oct	Oct-Dec
<b>Yearly planning meeting</b>	x				x				x			
<b>Remote Sensing</b>												
- data collection			xxx	xxxx	xxx	xxx						
- initial data analysis (pre-fieldwork)			xxx	xxx	xxx	xxx						

- revised analysis (post fieldwork)					xxx			xxx	xxx	xxx		
<b>Socio-economic data</b>												
- data collection		xxx	xxx	xxx	xxxx		xxx			xxx		
- data analysis					xxx				xxx		xxx	
<b>Fieldwork</b>												
- data collection in field					xxx	x	Xx			Xxx		
- field data analysis					xxx	xxx		xxx	xxx		x	
<b>Integrative analysis</b>												
Initial integrative analysis by country						xxx			xxx			
Comparison (cross-county) integrative analysis											xxx	xxx
<b>Final Report</b>												xxx

Changes that have been necessitated by changes in the co-I's and collaborators schedule changes follow:

Co-I Dr. Andreas Heinimann has taken a new position with the University of Bern in Switzerland. He is still involved with the remote sensing analysis and analysis of the fieldwork. He will not be able to be involved in fieldwork as closely as was originally planned, though. To remedy this PI Leisz has contacted Savanakhet University in Savanakhet, Laos, and Dr. Bounheuang Ninchaleune will collaborate with the PI and co-I to organize necessary fieldwork.

Collaborator Dr. A. Terry Rambo's Ph.D. student received funds to spend a year at the East-West Center in Honolulu, HI, from April 2013 through April 2014. Because of this we have changed the time period when fieldwork will be done in Northeast Thailand.

Remote Sensing: Landsat data and MODIS data has been collected for the study area. Initial analysis of the data is currently underway.

Socio-economic data: population data has been collected for the area; agricultural census data has been collected for Laos and Vietnam and will be collected for Thailand; district and province level data has been collected for Vietnam. Protocols were decided upon for choosing villages that will be investigated in the second phase of the fieldwork.

Fieldwork: Initial fieldwork has been done in Vietnam. All districts along the EWEC have been visited and socio-economic data collected. Village level research is planned for August of 2014. At least three villages will be visited, stratified by distance from the road. Follow-up visits will be done if needed in 2015. Initial fieldwork in Laos and Thailand has been pushed back due to the issues noted above. The schedule for fieldwork in Savanakhet, Laos, is that district level fieldwork will be done in November/ December 2014 and village level field visits will take place in January / February of 2015. In Khon Kaen, Thailand, field visits to the district level will be

done during September and again during November of 2014, village level field visits will take place in November 2014 and February/March of 2015.

Integrative analysis is ongoing. Currently data collected during initial field visits is being reviewed and analyzed in conjunction with initial remote sensing analysis. The PI, Co-I's and collaborators are considering having a joint meeting in Khon Kaen, Thailand after the final fieldwork in 2015 to jointly analyze all information.

Success in Meeting Goals/Objectives: Initial equipment and data acquisitions have been made and initial fieldwork started in Vietnam. Fieldwork in Laos and Thailand had to be postponed to the second year of the project due to changes in Co-I Heinemann's and Collaborator Rambo's professional positions and schedules respectively. However, neither of these are serious detriments and the project is progressing in an effective manner.

### **Year Two Activities**

1. Continue remote sensing data acquisition, specifically acquire SPOT data to fill gaps in Landsat TM coverage and acquire high resolution imagery. Image processing and time series analysis completed.
2. Collect socio-economic data that was not collected in 2013 (e.g. Thailand)
3. District level field visits in Savanakheth, Laos, and district level and initial village level (if possible) visits in Khon Kaen, Thailand.
4. Continue review of all data and integrative analysis.

### **Subject Inventions/Reportable Items Interim Summary Report**

No subject inventions or reportable items

### **Utilization of Subject Invention/Reportable Items**

No subject inventions or reportable items