



International Trip Report: Kenya Rural Markets, Natural Capital, and Dynamic Poverty Traps

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Dates: 8-22 March 2004

Itinerary: 8-9 March: travel from Ithaca to Nairobi, Kenya

10-13 March: work in Nairobi (SAGA national workshop, BASIS, SAGA, NSF,

World Bank meetings and grad student supervision)

14-16 March: travel from Nairobi to Nyeri for annual BASIS CRSP project team

meetings

17-21 March: travel back to and work in Nairobi (USAID, NSF, RF, SAGA

meetings, work on food aid book)

21-22 March: Travel back to Ithaca

Objectives: The purposes of the trip were, roughly in chronological order, (1) to give a seminar

at the World Bank country office and to meet with Bank staff about funding prospects for Cornell work in Kenya, (2) to co-lead the SAGA workshop on integrating qualitative and quantitative methods of poverty analysis, (3) to meet with SAGA collaborators to ascertain the status of their research projects under SAGA and to agree on a program for our policy workshops, (4) to meet with colleagues at ICRAF, KARI and Tegemeo about collaborative research

opportunities, (5) to meet with Heidi Hogset, one of my Agricultural Economics

Ph.D. candidates, reviewing her field dissertation research progress and working out the research protocol and budget for a new experiment to be fielded under the Pew project, (6) to meet with David Amudavi, one of the RF Fellows on whose Cornell dissertation committee I sit, to review his field dissertation research progress, (7) to co-lead the BASIS annual team meeting, (8) to meet with USAIDKenya and REDSO to brief them on progress under the BASIS CRSP,

SAGA and Global Livestock CRSP projects, (9) to meet with Rockefeller Foundation to brief them on the status of the current AFSNRM project and to explore follow-on funding opportunities with them, and (10) to work with my co-

author, Dan Maxwell, on our food aid book.

Daily Log: 8-9 March: Travel from Ithaca to Nairobi. Uneventful trip, with a couple hours'

sleep and quite a bit of reading and writing (until I had wiped out two laptop

batteries).

10 March: I paid a courtesy call on senior KARI staff. Dr. Kiome, the Director, was out of

town, so I spent ~30 minutes with his Deputy, Dr. Ephraim Mukisira.

Dr. Mukisira expresses appreciation for KARI's sustained collaboration with Cornell and would like to see further work, especially on agricultural marketing channels which KARI leadership considers one of the key gaps in understanding of what holds agriculture back in Kenya. I then called on my principal KARI collaborator, Dr. Festus Murithi to coordinate details for our upcoming team meeting in Nyeri and to talk through data issues from our Embu site, where he has become very actively involved in sorting out data problems that emerged and in kickstarting delayed data cleaning and analysis. Finally, I met with Dr. Helga Recke, the EU representative at KARI, to talk about northern Kenya and research among pastoralists. She is quite pleased with Cornell/PARIMA research on pastoralists, especially our work on livestock markets. She is very keen to get Cornell DVM students to spend a summer doing extension and research in Marsabit with KARI and PARIMA.

Then I went to the World Bank and presented a seminar on "Poverty Traps and Safety Nets" (paper with John McPeak) to an audience of ~30 from the Bank, FAO, ALRMP (Office of President), Ministries of Agriculture and Planning/National Development, DFID, Aga Khan Foundation, etc. It was very well received with fruitful comments from various attendees.

I made it back to ICRAF for a late lunch with Alice Pell to talk through admin details related to NSF and RF projects. I prepared my talk for the following day's SAGA workshop and went through a concept note with Alice that Cornell and Columbia plan to submit jointly to the Gates Foundation. In the evening, Steve DeGloria (Chair, Cornell's Crop and Soil Sciences Department) joined us on his return from visiting one of his Ph.D. students in the field in western Kenya.

11 March: Spent the whole day at the SAGA workshop sponsored by KIPPRA. See Appendix A for the program. It was well attended, with ~50 attendees from various government ministries, Central Bureau of Statistics, ILRI, ICRAF, Tegemeo, IPAR, KIPPRA, University of Nairobi, Kenyatta University, etc. The keynote speaker was David Nalo, the former head of CBS and now the Permanent Secretary of the Ministry of Planning and National Development, the lead ministry on poverty analysis and the PRSP in Kenya. He was interviewed by the media at the workshop after speaking and I heard a brief clip of his remarks on the evening news in the taxi ride back to my friends' apartment, where I stayed. The workshop was a real success, with interesting presentations and much lively commentary and discussion.

In the evening, Heidi Hogset, one of my Ph.D. students doing fieldwork here in Kenya, arrived from her Vihiga District site. We spoke briefly about her

fieldwork, saving the substantive discussions for the following few days. I had dinner with Alice Pell and her husband, Peter Schofield, Steve DeGloria and Tom Owiyo, Steve's Ph.D. student and one of the RF fellows at Cornell, now doing field research in western Kenya.

12 March: In the morning I met with Brent Swallow about extending our work on fractal poverty traps with particular application to tree-based agriculture. Tom Tomich and I met to discuss the possibility of Cornell and ICRAF/ASB partnering in the upcoming RFP from the USAID mission in Madagascar on alternatives to slash-and-burn agriculture. I will speak with Norman Uphoff in Ithaca about this while Tom will speak with ICRAF leadership.

I then had a productive meeting at KIPPRA with the SAGA-Kenya team. We agreed to a follow-up plan after the Qual-Quant workshop, with Cornell posting the presentations to the SAGA web site, Omiti/Odhiambo editing the set of papers and adding rapporteurs' notes on the discussions (esp. the final plenary discussion) into a proceedings volume no later than June 1. Meanwhile, the SAGA-Kenya team will work on formalizing the Kenya Policy Research Forum – begun under BASIS representing the main research institutes, government ministries and local universities – into a regular (e.g., bimonthly or quarterly) meeting to share research results and discuss policy research priorities. The University of Nairobi proposes to take the leadership role initially on this event. Finally, KIPPRA will send invoices for the workshop expenses to Philip Neuwirth at Cornell and will collect all the presenters/rapporteurs' invoices and forward them to Cornell along with their papers to certify completion of their tasks. Our discussion then turned to the research projects. I cautioned the team about the current state of SAGA funding from USAID/Washington and about the need to demonstrate progress (e.g., through timely, complete progress reports according to the TOR schedule). Each team is presently in the field collecting data or has recently completed data collection. We agreed that we will hold a day-long, internal team meeting in mid-August to share and discuss/critique draft research results. Then each team will revise their reports/papers and prepare a 4page policy brief on their findings. The team will then meet in mid-November to do a half-day internal workshop to present the revised findings and policy briefs as a lead-up to a large, national policy workshop in January-February 2005. We will hold a single workshop under an umbrella theme, and nest subthemes (e.g., our empowering the rural poor and reducing risk and vulnerability themes) within it. The idea will be to present the policy briefs in the first hour each day, when the Ministers/PSs are present, followed by the detailed papers that flesh out the analysis behind the briefs.

I then enjoyed a productive and fun late lunch at the home of Makhtar Diop, the Director of the World Bank Country Office for Kenya/Eritrea/Somalia (and former Finance Minister of Senegal) with Makhtar, his wife (a World Bank economist), Christine Cornelius (the World Bank staffer responsible for the Kenya Office of the President's Arid Lands Resources Management Program), Fred Kilby (the World Bank – Kenya staffer responsible for the Poverty Analysis and Data Initiative and Makhtar's righthand man), Wendy (forgot her last name, a WB-Kenya staffer) and Michael (forgot his last name, a visiting WB-education staffer). Chris Cornelius expressed interest in getting us to analyze the massive ALRMP monitoring survey data, a substantial panel data set from the northern ASAL regions that has yet to be exploited whatsoever for research. She wants to add some funding for this to the proposal Patti Kristjanson (ILRI) and I are submitting through the Bank to the Norwegian Trust Fund for joint work (incl. a policy conference and an edited book) on pastoralism and poverty in east Africa. Fred, Wendy and Chris have vetted our proposal and the Country Office is strongly supportive of it. Makhtar is keen to assemble a set of papers on agricultural and rural development in Kenya for an edited volume on evidencebased policymaking (he's asking Michael Kremer to coordinate something similar on the social services and human development theme based on Harvard-Berkeley's work on social policy evaluation using randomized trials). Makhtar is also keen to invest in building up high quality research and graduate (MS) training in economics/agricultural economics in Kenya and asked me to join him for an important meeting on funding this effort on Wednesday, March 17. He also offered to host and to provide a small consultancy to Cornell graduate students working on empirical economics studies in Kenya in exchange for them publishing a paper and giving a seminar at the Bank Country Office.

Late afternoon I met with Lou Verchot to talk about the NSF project a bit. Then I spent a few hours before/over/after dinner talking with Heidi Hogset, one of my Ph.D. students doing fieldwork in the central and western Kenyan highlands, about the status of her field research and about a module we're going to field under the Pew project on weak ties and strong ties in social networks. We worked out the general protocol for this study, which other students will replicate in Madagascar, Togo and southern Ethiopia/northern Kenya. The idea is to move beyond existing approaches to mapping social networks and, in particular, to establish whether the value of networks for learning comes from accessing local information (e.g., neighbors' experience using a new technology) or from accessing distant information (e.g., prevailing wholesale prices in the nearest metropolitan market). This harkens back to Granovetter's classic sociology work on the strength of weak ties and the hypothesis that social networks matter most for bridging to distant/novel information.

13 March: Heidi Hogset and I spent more time discussing the weak ties/strong ties test and field methods, drafting up a prototype questionnaire, field protocol and budget. In the afternoon, she left for Embu and I went back to ICRAF to work in the office there, spending several hours handling a backlog of email, preparing my presentations at the BASIS CRSP team meetings the following week, and attending to issues arising with the conversion of the AJAE to webbased editorial management.

14 March: In the morning I worked with Ben Okumu on his presentation at the BASIS CRSP annual team meetings and on the CLASSES model more generally. We met up with many of the other meeting participants at ICRAF at midday and traveled by KARI bus up to Nyeri, to the lovely Outspan Hotel. There we met up with the other arriving participants. I spent a few hours with David Amudavi going over his survey questionnaire and his dissertation fieldwork progress in Baringo, Embu and Vihiga.

<u>15 March:</u> The day was spent entirely in the BASIS annual team meeting (agenda attached as Appendix B, meeting notes attached as Appendix C). In the evening, the co-PIs, Alice Pell (the NSF PI) and I had a fruitful meeting to coordinate management issues in the last year of BASIS.

<u>16 March:</u> The day was spent entirely in the BASIS annual team meeting (see Appendices B and C). I also met with Josephat Cheng'ole Mulindo about prospective funding for his Ph.D. program in Natural Resources at Cornell (he has been admitted but has yet to find funding to cover his studies) and with Justine Wangila and Collins Obonyo about difficulties they are encountering with the University of Nairobi Department of Agricultural Economics in getting faculty supervision for their Ph.D. dissertation research.

17 March: We returned to Nairobi in the morning. The remainder of the morning was spent in meetings with Alice Pell and Ben Okumu on the NSF, RF and BASIS projects. John Lynam of the Rockefeller Foundation and Brent Swallow of ICRAF and I then had lunch together to talk about RF's new initiative on integrated information systems for development. They're looking into strategies for multisectoral information systems for agriculture, education and health in Kenya, Tanzania and Uganda and John sees Brent and my fractal poverty traps paper as providing an intellectual foundation for some of this work. He would like to see us prepare a project devising a methodology for identifying key thresholds and the marginal returns to investments in different domains, then assembling these at different scales to identify the key limiting factors on poverty

reduction in the region. This effort would parallel the big donors' initiative on national statistical systems. After lunch, Brent and I briefly roughed out an outline of a short concept note we could pass to John for informal review. Later in the afternoon I went to the World Bank for a videoconference meeting on the \$20 million credit for reforming the Kenya national statistical system (see notes in Appendix D). Makhtar Diop had invited me, in significant part to support his argument that part of this project needs to invest heavily in building data analysis capacity in Kenya. After the videoconference, I spoke briefly with Bank staff about the proposal Patti Kristjanson (ILRI) and I put in to link our two projects on pastoralism in Kenya and to fund a conference and Bank edited book. The Bank wants to put this into the competition for Norwegian Trust Fund monies later this month and just need a bit more information from us. Wendy will email Patti and me on this. I had dinner with Patti (and Alice Pell, Jhon Rasambainarivo and Heidi Hogset) in the evening and alerted her that she'd need to get more budgeting details to the Bank and that we'd have to tweak the proposal slightly in the coming week (the proposal is due in Washington March 31).

March 18: Alice Pell and I had a breakfast meeting with John Lynam (Rockefeller Foundation) to brief him on the current status of the RF fellows in the African Food Security and Natural Resources Management program, to talk about next steps, especially in support of fellows' reintegration into national research programs and prospective follow-on graduate student funding at Cornell. Future students will likely be on a one-by-one basis, rather than as a big cohort. John supports our no-cost extension under the current program and directed us to start the process through Wanjiku in the fall. After our meeting ended, I spent most of the rest of the morning clearing and answering the hundreds of emails that had accumulated during the trip.

Alice Pell and I then headed to the USAID mission, where we had a nice lunch with Kevin Smith, the USAID-Kenya pastoralism adviser. Kenya briefed us on some of the current concerns within the mission. Disappointingly, the pastoralism adviser position is being discontinued due to funding cuts in spite of the facts that the pastoral regions (i) have the heaviest food aid injections by the US, (ii) have the highest poverty rates in the country, and (iii) are the places where Islamic extremists are most likely to make converts of hopeless and frustrated youth absent effective development interventions. Kevin's joining the USAID Foreign Service, so he'll do fine. But I worry a bit about priorities at the Kenya mission. After lunch, I gave an informal briefing on current work under the BASIS and Global Livestock CRSPs and the SAGA cooperative agreement, and Alice and I jointly briefed people on the NSF project. In addition to Kevin, those attending included one fellow (Ben) from the Office of Foreign Disaster Assistance, Julius

Kilungo (the Mission's economist in its Ag Office), Peter Ewell of REDSO's Food Security office, Eric Johnson of REDSO's trade effort (RATES), Pam Fessenden and Brian Bacon from the REDSO Food For Peace office, and two others who came during the meeting and whose names I never got. There was much discussion about livestock trading, food aid, the extent to which export promotion could be reasonably expected to benefit smallholders and pastoralists, etc. There were some very good comments and questions. For example, Julius informed us that Kenya was now down to just six tanneries, none in the ASAL regions where extensive grazing of livestock by pastoralists is the economic lifeblood of the region. He likewise informed us that more than 85% of national dairy production continues to be sold in informal markets. The few commercial producers selling into the formal marketing channel are very large scale dairy firms or a few unusually well-organized coops. Bulking problems (cost, quality control, reliable throughput volume) effectively keep smallholder dairy producers out of the higher-return market supplying the emerging supermarkets and fast food chains. The rapid growth of that sector could shake things up, but it's hard to see a great future for smallholder dairying absent some direct interventions to make them viable organizationally. The food aid people were very excited about the conversation and asked me to come join their staff meeting 30 minutes later. I wound up spending about an hour there with all the REDSO food aid staff and the REDSO Deputy Mission Director talking about food aid, key operational issues confronting them in this region and prospective reforms to the system. There was considerable interest in my forthcoming book with Dan Maxwell and the Deputy Mission Director volunteered that they would love to host graduate students interested in doing thesis research in this area.

Alice and I then went to meet James Nyoro, the Director of the Tegemeo Institute for Agricultural Policy Analysis, an arm of Egerton University that is heavily supported by USAID-funded research projects. James is PI of Tegemeo's efforts under SAGA and we spoke for a bit about SAGA. He introduced me to the staff member who is directing their field work on producer groups under SAGA. Dr. Gideon Obare, chairman of the Department of Agricultural Economics at Egerton University, also joined our meeting to talk about prospective research collaborations. Nyoro explained that his Institute would especially welcome opportunities to collaborate with Cornell and that they are keen to improve the quality and publishability of their research. They are starting into work with IIED (London) that could fit reasonably well with the work Tom Reardon and I have discussed under a possible new BASIS project on the effects of downstream food marketing changes (e.g., supermarkets, fast food chains) on smallholder producers.

About 6 PM, Alice dropped me off at Dan Maxwell's office at CARE's Regional Management Unit. Dan and I spent a bit of the evening working on our book.

March 19-21: Dan Maxwell and I spent three solid days working on our food aid book. We now have 11/12 chapters completely drafted, 9 of them fully revised, and a feasible, agreed schedule for completing the final, complete manuscript this summer. It was a very productive couple of days.

On Sunday evening, March 21, the Maxwells dropped me off at the airport and I made my way home via Amsterdam, Detroit and Syracuse. A long but very productive trip successfully ended.

Appendix A: Program for SAGA Workshop on March 11

KIPPRA-CORNELL SAGA WORKSHOP ON QUALITATIVE AND QUANTITATIVE METHODS FOR POVERTY ANALYSIS THURSDAY MARCH 11, 2004 GRANDY REGENCY HOTEL NAIROBI

8.15 - 8.45 AM	REGISTRATION	
8.45 - 9.30 AM	OPENING CEREMONY	
8.45 - 9.00 AM	SESSION Chairman: <i>Prof. Willis Oluoch Kosura</i> Welcome by <i>Dr. Hezron Nyangito, Acting</i> Executive Director,	
9.00 - 9.10 AM	KIPPRA SAGA Project Brief: <i>Prof. Chris Barret</i> , Cornell University	
9.10 - 9.30 AM	Chief Guest Speech by Mr. David S. Nalo , Permanent Secretary, Ministry of Planning and National Development	
9.30 - 10.30 AM	SESSION 1: METHODS FOR POVERTY ANALYSIS	
9.30 - 10.00 AM	Prof. G. Mwabu Quantitative Methods	
10.00 -10.30 AM	Prof. E. Njeru Qualitative Methods	
10. 30 - 11.00 AM	Prof. C. Barret Integrated Methods	
11.00 - 11.15 AM	TEA BREAK	
11.15 - 1. 00 PM	SESSION 2: CASE STUDIES	
	Chairman: Dr. H. O. Nyangito (KIPPRA)	
11.15 - 11.45 AM	Dr. Mary Omosa (IDS, UON)	
11.45 - 12.15 PM	Dr. Nelson Mango and Ms. Maren Radeny (ILRI)	
12.15 - 12.45 PM	Mr. Kilele (Acting Director, Central Bureau of Statistics)	
1.00 - 2.00 PM	LUNCH	
2.00 - 2.30 PM	Dr. M. Kulundu (KIPPRA)	
2.30 - 3.00 PM	Prof. W. O. Kosura (Dept of Ag. Econ, UON)	
3.00 - 3.30 PM	Discussions	
3.30 3.45 PM	TEA BREAK	

3.45 – 5.00 PM SESSION 3: PLENARY PANEL DISCUSSION AND WAY

FORWARD

CHAIRMAN SESSION Prof. Chris Barrett

Panelists: Dr. John Omiti (IPAR)

Mr. Paul Gamba (TEGEMEO) Dr. Fred Kilby (World Bank)

Floor Discussions

4.45 – 5.00 PM Recommendations and Closure

Rappoteurs

Dr. Walter Odhiambo (KIPPRA)
Dr. J. O. Omiti (IPAR)
Mr. J. Nzuma (KIPPRA)
M/s. N. Nafula (KIPPRA)
Mr. J. Muthaka (KIPPRA)

Appendix B: Agenda and Objectives Program for BASIS Team Meeting

"Rural Markets, Natural Capital and Dynamic Poverty Traps in East Africa" Fourth Annual BASIS CRSP Project Team Meeting

March 15-16, 2004 Outspan Hotel, Nyeri, Kenya

Meeting Objectives:

- (1) Brief team on results of qualitative research from Madagascar and Kenya under the Social Aspects of Dynamic Poverty Traps sub-project.
- (2) Present results of quantitative analysis of data from the project sites.
- (3) Present CLASSES model calibrated to Madzuu site in western Kenya.
- (4) Present related graduate student research
- (5) Discuss related work on soils analysis and natural capital poverty dynamics relationship
- (6) Pin down FY2004 (Oct. 1, 2003 Mar. 31, 2005) workplan details: who takes responsibility for which remaining activities (see calendar and listing of anticipated published outputs after meeting agenda)?
- (7) Help with team building by providing more opportunity for team members from different institutions to interact with one another.

2004 Team Meeting Agenda

Sunday, March 14

Participants arrive at Outspan Hotel, Nyeri

Monday, March 15		Discussion Leader		
At Outspan Hotel, Nyeri				
08:00	Welcome to 2003 team meeting	Representative of KARI		
08:15	Participant introductions	All team members and guests		
08:30	Review of project overall, FY03-04 objectives	Chris Barrett		
	and promised project outputs			
09:15	Findings of qualitative research in Madagascar	Jhon Rasambainarivo		
10:00	Coffee/tea break			
10:30	Findings of qualitative research in Kenya	Nelson Mango/Festus		
		Murithi/Frank Place		
11:15	Findings of comparative quantitative research	Barrett		
12:00	Lunch			
13:30	Graduate student preliminary research findings	Heidi Hogset		
14:00	Graduate student preliminary research findings	David Amudavi		
14:30	Group discussion of results and synthesis	Team		
15:30	Coffee/tea break			
16:00	Presentation of results from soils work in Madagascar	Rasambainarivo		
16:30	Presentation of findings from NSF project	David Mbugua/Alice Pell		
17:00	Closing group discussion and comments	Team		

Tuesday, March 16		Discussion Leader
08:00	Presentation/discussion of CLASSES model for Madzu	u Ben Okumu
10:00	Coffee/tea break	
10:30	Coordination of remaining project research:	Barrett/Place/Murithi/
	who does what and when?	Rasambainarivo
12:30	Lunch	
14:00	Coordination of remaining project outreach:	Murithi/Rasambainarivo
	community/national stakeholder meetings	
15:30	Coffee/tea break	
16:00	Final group discussion of BASIS outreach, research,	Team
	and training activities potential extensions	
17:00	Close of team meeting	

Team members depart Tuesday evening or Wednesday morning

Participants

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Appendix C: 4th Annual BASIS CRSP Team Meeting Notes

4th Annual BASIS CRSP Team Meeting

March 15-16, 2004 Outspan Hotel, Nyeri, Kenya

Meeting Notes

Chris Barrett and Festus Murithi opened the meeting with some preliminary remarks explaining the nature of the project for all participants. Each participant then briefly introduced him/herself.

The Eastern Provincial Deputy Director of Agriculture, Mr. Muchoki, then formally opened the meeting with a welcome to Nyeri.

Nelson Mango, a development sociologist, gave a presentation on the qualitative findings of the Social Aspects of Dynamic Poverty Traps study in Kenya. See the Powerpoint file on the BASIS CRSP project web site (similarly for each of the other presentations over the two days). Across all three sites, education and connections necessary to get a good off-farm, salaried job is key to escaping poverty. Diversification into higher-return off-farm and on-farm activities (e.g., higher-value horticultural products) and a wider social network are likewise strongly correlated with likelihood of escaping poverty. A stable family life, self-discipline and work ethic are key to avoiding collapse into poverty, as is capacity to safeguard your assets against claims from poor relatives.

Not everyone can access these strategies. They haven't extensive social networks to be able to borrow, to find jobs for educated family members, and to learn about promising agricultural products and technologies. They lack the education necessary to get a good off-farm job. They haven't livestock enough nor cash to move into higher return niches.

Those who fall into poverty tend to have experienced a death of a key adult worker in the household. Health care and funeral expenses force households to liquidate productive assets and the household loses valuable labor. Loss of stable, salaried/wage employment is likewise a key factor. Natural shocks (drought/flood) often associated with collapse into poverty (through health shocks, loss of farm employment and loss of livestock). Finally, shrinking land sizes (plots for cultivation shrinking due to farm partitioning for adult children, or reduced grazing area due to increased competition, encroachment by crop cultivation or insecurity) and decreasing land quality due to nutrient depletion and erosion (in cropping areas) or localized overgrazing or introduction of invasive species (in grazing areas) are likewise associated with households' collapse into poverty when they cannot come up with non-farm employment.

The nonpoor tended to be more actively engaged in conserving natural resources. The poor are understandably preoccupied with taking care of themselves, in some cases even overharvesting resources (e.g., firewood/charcoal) in their struggle to survive.

Gatarwa Kariuki, the social anthropologist at KARI-Marsabit who led the fieldwork in Dirib Gombo, emphasized the importance of social networks in helping people. In the lower potential areas of Baringo and Marsabit, respondents placed relatively greater emphasis on natural shocks - livestock disease, drought, etc. - as an explanation for collapse into poverty. Markets are increasingly important in all sites, especially for facilitating peoples' escape from poverty. Josephat Cheng'ole Mulindo, the KARI-Pekerra agricultural economist who led the fieldwork in Baringo, then discussed the importance of choice of families into which one marries off one's daughters, livestock lending and hiring herders, etc. A variety of questions and comments emerged from the group, from David Amudavi, Chris Barrett, George Keya, Francis Kihanda, David Mbugua, Festus Murithi, Collins Obonyo, Martins Odendo, Ben Okumu, Alice Pell and Frank Place, asking for clarification of what sorts of social networks help and hinder, for a bit more precision as to what strategies prove most important/effective in helping people escape/avoid poverty, and for clarification on the relation between poverty and mining of natural resources (e.g., through brickmaking). Nelson responded that people commonly construct multiple, intersecting networks to serve their objectives, that success in deflecting damaging social claims on one's resources requires a certain level of cleverness and creativity. George Keya challenged the importance of social networks, emphasizing that increasing individualism has caused significant deterioration of the use and effectiveness of clan-based networks in all of these places. Frank Place emphasized that creating new productivity in crucial ... social networks may be effective as individual strategies but they don't work at larger scale since networking for a job doesn't create any new goods or services or productivity, so while it can be a good strategy at household scale it's not at national scale. Frank also emphasized the time scales involved. Education might be a good long-term strategy, but few poor people can now invest with such long-term payoffs. Alice pointed out that depleting soils can be a short-term strategy that helps conserve human capital short-term but has a big long-term cost.

Jhon Rasambainarivo, the FOFIFA PI under BASIS, then presented findings from the qualitative ("social aspects of dynamic poverty traps") study in our two Madagascar sites. They find that the dynamics of escape from poverty are closely linked to diversification within agriculture into higher value enterprises (fruits, dairy, vegetables) and into remunerative non-farm activities (e.g., owning a restaurant or a store or a construction business, salaried employment). The key ingredient is really stable cash flow from off-season cash crops, dairy, wages, etc. as a complement to annual crop income from rice and maize. People get poorer due to shocks: illness or death in the family, biophysical shocks that kill livestock (e.g., disease, drought) or destroys crop (e.g., hail, drought). Children's education is a high priority because it is almost necessary for long-term escape from poverty through non-agricultural employment. Land inheritance is a key correlate to being nonpoor, suggesting much intergenerational propagation of poverty.

Josephat Cheng'ole Mulindo and Alice Pell asked about education and cost. In Madagascar, the cost of education is much lower at secondary level than it is in Kenya, so education is more accessible. Josephat mentioned that in Baringo (Kenya) some households blame education for their poverty, because they spent lots of money on school expenses and lost their children's labor while they're in school. Justine Wangila asked about those who remain nonpoor. Jhon emphasized their inheritance and the diversification of their activities on-farm and supplementation with decent off-farm employment. Those who remain poor have very little land, too little to be self-sufficient, and they haven't education enough to get salaried employment, so they depend on casual, unskilled wage labor to earn enough money to buy their rice. George Keya asked about definitions of poverty lines and food security. Frank Place asked about off-farm diversification. Jhon explained that this is primarily in off-season, in the dry period, when people engage in construction, seasonal migration, etc. Some people have yearround sources, but most use seasonal cash supplementation of household rice production. Heidi Hogset asked about differences in NRM and improved technology adoption between the poor and non-poor. Jhon remarked that there seem to be relatively modest differences in NRM but significant correlation between technology adoption and initial wealth/income, e.g., with SRI. Ben Okumu asked about farmers' perceptions of the link between health and food consumption. David Amudavi asked about importance of land to welfare dynamics. Jhon emphasized that in the highlands, greater population density makes land that much more important, in particular lowland rice fields (not rainfed hillsides). Adult children need either a decent sized plot to be able to make it as a farmer or a good education to be able to make it in the non-farm sector. In Kenya, land is relatively less important, in contrast to nonfarm employment, than in Madagascar because there's a more vibrant non-farm rural economy. David Mbugua asked about maintaining soil fertility in continuous rice cultivation. Jhon responded that manure from cattle is central to maintaining yields. Those households that are too poor to have cattle get lower yields and then wind up dependent on the wage labor market. So livestock boost labor productivity, in part through effects on soil fertility and crop production.

Chris Barrett then presented preliminary results from the quantitative analysis of survey data. (Sorry, I can't take notes on a discussion when I'm presenting.) A key thread of the conversation was the importance of integrated development strategies, for example, introduction of zero grazing, improved livestock keeping requires development of milk markets and disease prevention.

Heidi Hogset presented early, descriptive results from her ongoing dissertation field research in Embu and Vihiga Districts on social networks and the adoption of improved natural resources management techniques. She has 114 and 128 respondents in Embu and Vihiga, respectively, for her broad survey. She has surveyed a subset of these households (28 and 24, respectively) to reconstruct social networks to second order through snowball sampling. She finds that Embu has much denser social networks, especially exchange networks (in which people give gifts, lend/borrow or exchange labor), than does Vihiga. Density of social networks is positively

correlated with incomes. Adoption of organic fertilizers and terracing is widespread in both sites. Adoption of tumbukiza (deep incorporation of organics through double digging) is relatively widespread in Embu but not in Vihiga; same for use of fallows/improved fallows. Conflicts over weed or water spillovers are more common in Embu. In Vihiga, people are more likely to have an unmet emergency but less likely to ask for help. Nelson Mango and Martins Odendo asked about the problem of network endogeneity and how one can establish whether a larger network causes technology adoption or if technology adoption causes one's network to expand or to change. Heidi emphasized that she can trace the sequencing of adoption and what she's after mainly is the direction of information flow. Justine Wangila asked about the spatial spread of respondents' networks. Heidi observed that the vast majority of contacts are very close, mostly one kilometer between homes or less. Very few direct network members in urban centers.

David Amudavi presented early, descriptive results from his ongoing dissertation field research in Baringo, Embu and Vihiga Districts on community groups and partnerships. He's trying to establish which sorts of groups can help build wealth and reduce food insecurity among the poor and which are ineffective at this, as well as which partnerships between community groups and external agencies (what sorts of transfers – info, money, technologies, etc.) prove helpful with which sorts of groups. He presented a long battery of characteristics of groups that he has found, the shortcomings of these groups and their partnerships with external agencies, etc. Collins Obonyo asked about inter-institutional coordination and the role of government District Development Committees (DDCs), which have formal responsibility for this. David observed that DDC coordination is theoretical/rhetorical, but not functioning in reality. Agencies, at most, pay a courtesy call on the DDC or the District Development Office (DDO), and then proceed to the field to do what they want. The Deputy DPA remarked that external donors direct different terms (what they provide, where, to whom, etc.) for group formation, but these efforts are all driven from above, based on a donor's vision of optimal design irrespective of local conditions. This crowds out much prospective group activity and causes disconnects between local needs and resource availability. Coordination problems are significant. George Keya observed that groups may be formed for one reason and then subsequently shift toward or acquire another purpose as they evolve. Also, sometimes, groups don't need to be sustainable. Some activities necessarily have a fixed term of relevance and thus they should emerge, work and then dissolve. That's not a problem. David replied that he's focusing on groups for which there remains an ongoing need and thus dissolution is an undesirable thing (relative to the continuation of a successful group).

Alice Pell and David Mbugua presented preliminary findings from the closely affiliated NSF Biocomplexity project based on a paper prepared for the recent AAAS meetings in Seattle. Need to understand how farmer decisions affect agroecological system functioning and how they understand (i) their environment and (ii) how their actions affect the agroecology. Then need to understand how agroecosystem state affects farmer choice, thereby creating a feedback loop.

Key questions about the agroecosystem concern how long it takes for soils to become degraded and what is required for soils to be replenished? Chronosequence data underscore that soils deplete relatively rapidly. P appears to become limiting after about 15 years' continuous maize cultivation. Maize quality and quantity in harvest fall off markedly in old conversion plots. Percent soil carbon falls from 11-12% at newly converted lands to around 2% at 20-30 years, at which point it stabilizes thereafter. The same sort of hyperbolic relation emerges when one studies soil enzyme activity ... fertility falls off quickly, bottoming out after 15-30 years' continuous cultivation. There's a strong correspondence between soil fertility indices based on spectral data on soils and farmers' perception of soil change. In Embu, SFI are much higher and farmers commonly perceive that soil quality is improving, while in Madzuu farmers typically indicate that their soils are degrading and SFI measures indeed bear out that soil quality is strikingly lower than in Embu. Current soil repletion trials are exploring how treatment efficacy (manure, inorganic fertilizer, etc.) varies with time since conversion. We are simultaneously trying to understand farmers' perceptions of this through a "cognitive mapping" exercise. There is also field research on animal performance in Embu and Vihiga and how livestock management and performance is related to nutrient intake and manure output (and its resulting contribution to soil fertility). High quality manure seems to degrade quite quickly while lower quality manure degrades more slowly. Francis Kihanda observed that there already exist some studies of farmer perceptions of soil quality and manure management in Kenya and that it would be wise to draw on these. Typically, scientists' measures of soil quality and farmers' perceptions of soil quality correspond reasonably well. He asked about the level at which soil organic carbon becomes problematic ... isn't there much difference across soil types, altitude, etc. that matter? Alice and David replied that we're now studying soil organic matter fractions, the stable/labile fractions we're presently computing (as well as N and P) probably will give us a more robust measure of soil quality and resilience. Frank Place observed that Embu farms were not converted more recently than Vihiga farms. So why the difference in SFI and farmer perceptions when the chronosequence suggests all should degrade? And to what extent are the concepts of thresholds and traps relevant in soils and animals? Alice replied that our trials are trying to look explicitly for multiple equilibria and threshold effects in soils (the break between labile and stable SOM fractions) and in animals (e.g., adequate nutrient intake in early lactation due to basal metabolic rates). Ben Okumu and Chris Barrett both remarked on the prospective persistence of farmer soil perceptions, i.e., farmer assessments might not evolve at the same rate as soil biophysical characteristics. Alice remarked that this is an issue with the chronosequence ... mismatches may be greatest in recently converted lands, where rates of change in soil status are especially high. Farmers might not replenish nutrients because their average level (and thus yields) are high, yet rates of decline (and thus the marginal response to nutrient application) are very high. George Keya remarked on the importance of manure availability on farm and the methods of manure application, that these matter a great deal to rates of soil nutrient repletion, perhaps especially due to soil micronutrient content (perhaps especially in western Kenya where deficiency of potassium and other micronutrients is of growing importance). Festus Murithi asked about returning information and analytical results (e.g., soil fertility test results) to farmers, for both

instrumental reasons (i.e., to keep farmers willing to participate) and for intrinsic reasons (i.e., an ethical obligation to contribute directly to addressing local problems and to compensate farmers for their significant contributions of time). David Mbugua and Justine Wangila reported on methods that are being used, e.g., providing improved maize seed (which was farmers' preferred non-cash compensation method ... had to be careful not give fertilizer which could distort soil fertility measures). George Keya called for making these massive data sets publicly available so as to reduce future researchers' demands on farmers' time and so as to be able to build on good longitudinal data.

Jhon Rasambainarivo then discussed the new soils analysis being done on the BASIS CRSP survey households. We collected samples from all samples on plots less than 15 minutes' walk from each of the 337 households. This includes all irrigated rice fields as well as many rainfed fields. Samples were all GPS'd, so we have plot-specific data on soil fertility. This generated more than 1120 samples of 400 grams each. The samples have just arrived at ICRAF in Nairobi for spectral analysis (with about 20% undergoing wet chemistry for calibrating the spectral data) in collaboration with FOFIFA. Francis Kihanda emphasized that spectral analysis can only predict well on certain elements (e.g., soil organic carbon) and need to be careful about not attributing false precision to the components of the soil fertility measures.

Chris Barrett then presented preliminary results on estimating multi-output production functions in intercropped maize-bean plots in Vihiga District. David Amudavi and Francis Kihanda pointed out the SAGRET is extending new maize-bean intercropping spacing recommendations. Collins Obonyo remarked that households may have minimum maize yield targets that create a lower bound on the maize share in crop mix. Alice Pell and Francis Kihanda remarked that beans may be higher risk crops and thus that what appears as suboptimal crop mixes (too heavy on maize) may in fact be optimal.

We closed the day's proceedings with logistical/administrative announcements by Justine Wangila and Dennis Simuyu, who did a terrific job with all the local organizational details of the team meeting.

The second day of the meeting began with a presentation by Ben Okumu of the first partially calibrated prototype of the CLASSES model, to Madzuu in Vihiga District (western Kenya). The emphasis in the talk was on resource degradation poverty traps. Ben's presentation aimed to demonstrate how a complex model might capture feedback effects in this sort of system. Alice Pell asked about incorporation of soil nutrient depletion processes, which are absent from this model. Ben responded that erosion should be understood as a composite of soil quality loss by whatever mechanism. Frank Place asked about the relevance of the top layer of 15-20 cm of high quality top soils in a place where plots have been cultivated continuously for decades. Is this relevant any longer? Chris Barrett replied that soil erosion in CLASSES is merely shorthand for land quality decline and should not be understood as modeling a specific process of change in

soils. Justine Wangila emphasized that CLASSES is not a predictive model, it's meant to trace out how complex interrelationships and how particular changes lead to perhaps unanticipated results and why might pathways diverge between different farmers starting from pretty similar initial conditions. He also gueried about household illness and the difference between idiosyncratic and covariate disease risk. Justine also emphasized that KTDA has a minimum size for registered tea farmers. Ben replied that this has been incorporated within the CLASSES model. David Amudavi asked about the empirical basis for initial assumptions of the model. He is especially puzzled by the marked divergence in trajectories between two farms starting at similar initial conditions. Alice Pell pointed out that the land size difference is considerable (the bigger farmer has 40% more land). Chris Barrett emphasized that the point of these models is to be able to trace out the complex interactions between different aspects of the system through feedback effects. Some small movements (e.g., in land or livestock space) will have big effects. Others (e.g., relief food supplementation, reduced school costs, higher tea or maize prices) have negligible effects. David Mbugua asked about persistence in farmer behavior, that western Kenyan farmers might persist in maize cultivation regardless of soil conditions. Millet and sorghum are far preferable once soils are highly degraded. Collins Obonyo asks about setting a minimum amount of land in maize. Alice Pell remarked that in Embu people are less wedded to maize cultivation and are more willing to go buy their own maize. She wanted to know if CLASSES would accommodate those sorts of inter-site differences. Ben replied that it could indeed do this by changing the preference parameter that affects land use. George Keya asked about economies of scale in tea production. Ben explained that this was due to the sunk costs of joining the tea system since there's a minimum entry cost. Gatarwa Kariuki and George Keya emphasized that the KTDA minimum entry costs are a big issue and that we should look explicitly at how changing the minimum entry costs will change tea cultivation. Those rules are old and have not evolved in response to changes in technologies (e.g., moving from planting tea seed to more current vegetative propagation methods). Chris Barrett replied that this tool probably cannot be used for identifying precise levels, but could be used effectively for identifying subgroups of farmers for whom particular rules or assets are limiting. Festus Murithi asked whether there will be different models or a core model that can be tweaked to adjust to different settings and different initial conditions. Alice Pell emphasized that one needs to be careful to calibrate the model appropriately to a site before using it there, else one is extrapolating out of sample. Frank Place asked why consumption falls over the latter part of the period in this model and asked as well about other investments (e.g., in dairy, in nonfarm). In a follow up question, he asked about endogenous change in activities as wealthier folks take on more risk and get higher returns. Jhon Rasambainarivo and Elizabeth Nambiro asked about livestock, which are notably absent from the current run. Ben responded that the households in the model started with one cow but the animal was sold off in the model. The model might not yet be properly calibrated since it seems to fail to capture patterns of observed investments in livestock. Festus Murithi asked about when and how the CLASSES model will be made available with a users manual and a clear interface for users to be able to operate it. Ben suggested this can/will all be made available on a web site at Cornell. Alice suggested a one day

CLASSES users model workshop at the very end of the project. In her experience with CNCPS, those sorts of sessions have proved very valuable in getting more users of the system and to help them use it more effectively.

The conversation then turned to the workplan and next steps in the final year of the project. We discussed the core hypotheses we had originally proposed to explain the existence of poverty traps.

One hypothesis was that interhousehold and intersite variation in market access can cause poverty traps and bifurcated welfare dynamics. David Mbugua emphasized that Madzuu hasn't significantly worse market access than Embu does. Indeed, parts of Embu are far more difficult to access during the rainy season. A discussion ensued over how to define "market access". Francis Kihanda remarked that it may have to do with the existence of a reliable buying outlet for product and supplier for inputs (e.g., fertilizer). Products and distance both matter. There isn't bulking in Madzuu as there is in Embu (tea, milk, avocados, macadamia, etc.). Can we get at "market access". Frank Place remarked that we had more of a "commercialization" concept in our minds. We can study market participation activity explicitly from the baseline and subsequent surveys and look at Tegemeo's index of commercialization. We agreed to use relative prices for commodities (maize, milk, beans, perhaps vegetables), for inputs (maize seed, wage rates, DAP) and assets (cows) as a measure of differences in returns to sales/purchases and then correlate change in welfare with relative input and relative output prices. Then we will tell stories of why these differences exist (e.g., timing issues, quantity-dependent pricing, transactions costs differences, organization of markets – coops and bulking or market power by intermediaries) to try to flesh out the results.

Another hypothesis concerned risk exposure and poverty traps. Justine Wangila and David Mbugua and Nelson Mango suggested using qualitative data from the cognitive mapping and SADPT studies to help flesh out the quantitative results from northern Kenya. Frank Place also suggested modeling production functions with structural heteroskedasticity to get at risk over enterprises or even just getting qualitative rankings. For example beans and tomatoes are higher risk. Alice Pell suggested that Beth Medvecky's data on bean disadoption due to disease might be helpful in understanding patterns of risk-driven disadoption of beans among western Kenyan smallholders.

The third core hypothesis was the existence of entry barriers that impede joining high return strategies. For example, KTDA sets minima volumes for being a tea farmer in the KTDA system. In milk marketing, there's a minimum at cooperative scale and thus capacity to organize farmers is important. Andrew Mude's work will speak to this directly. Florence Nherera's work will give us some insights on milk marketing in Embu before and after the reopening of the coop. Francis Kihanda has the data on this, having tracked the explosion of milk marketing in Embu once KCC started paying for milk. This established a proper floor price for milk with

effectively perfectly elastic demand. Without KCC in the market, the market's capacity to absorb milk without the price falling to zero was limited. This has driven up cow prices, which then blocks those who didn't already have cattle. We can tell similar stories from Madagascar, e.g., the opening up of the road to Faratsiho (which Jhon, Jean Fidele and Bart will look into) or the explosion of the Ambohibary market and Antsirabe with the rise of barley and fruit contracts with size minima. Justine Wangila, Elizabeth Nambiro and Frank Place will tackle this topic for the group.

The fourth hypothesis relates to access to finance to enable people to make lumpy investments. We can study this using the survey data to study credit access.

On the relationship between wealth and natural capital, Justine Wangila suggested looking at thresholds in soils and livestock. Chris observed that this falls more within NSF than within BASIS. Alice Pell suggested looking at the soils spectral data by transition matrix cells used for the qualitative study. David Amudavi suggested studying investments in natural resources management techniques. Heidi Hogset and Paswel Phiri will be studying adoption of improved fallows, terracing, double digging, etc. in these sites. Alice Pell suggested we look at crop rotation as well, since that's relatively low barrier to entry but can matter a lot to maintaining soils. Paswel can/should do this in the BASIS data set and we can also draw on the cognitive maps data.

Frank emphasized that we'll need to do some integrative work at each site to establish which constraints are most important in a given spot and what one needs to do there, including identifying successful pathways out of poverty people have identified and feasible. This will be especially important for discussion for policy fora and should be pursued as separate papers.

On Tuesday afternoon, we discussed research dissemination and outreach. Our team is committed to briefing each of the survey communities on basic descriptive statistics and findings as to what we see taking place in their communities. It was proposed that we hold briefings at two distinct levels subnationally, one at KARI RRCs (Embu, Marsabit, Maseno, Pekerra) to KARI scientists and local institutional partners (e.g., NGOs, ALRMP and extensionists) and a second to local farmers and community residents. These meetings should include a 1-2 page handout for each attendee. These meetings should be integrated with partner projects (e.g., NSF in Embu and Vihiga, GL CRSP in Baringo and Marsabit, Ilo in Madagascar). At local level, where we can (e.g., with soils data) we should have a farmer-specific sheet with that farmer's results and a paragraph prescription as to what they ought to do in response. At the all levels, invite the local politicians (e.g., councilor at community level, MP at RRC level). George Keya suggests it would be best to present these findings at CRAC (Centre Research Advisory Committee) meetings at KARI RRCs. Francis Kihanda disagreed, suggesting that CRAC programmes are too crowded. These workshops ought to be sequenced, first at community level, then at RRC/CRAC, then at national level. The community work ought to include soils results

and be specific to that location. The RRC level ought to include local results but also put it into broader comparative context. Then national level ought to focus on the big picture.

The group emphasized the following policy brief topics for the national policy workshops:

- Central/Western Kenya Highlands Comparison (Frank/Festus)
- SRI in Madagascar (Chris/Chris Moser)
- Are There Poverty Traps? Why? So What? (Chris/Larry: conceptual/empirical)
- Chutes and Ladders: Poverty Transitions in Rural Kenya (Nelson/Frank/Chris/etc.: 4 pager national with 3 2-page District-specific inserts)
- Chutes and Ladders: Poverty Transitions in Rural Madagascar (Jean Fidele/Jhon/Bart/Chris: 4 pager national with 2 2-page Province-specific inserts)
- Extension, Improved Natural Resources Management and Technology Adoption and Rural Poverty Reduction (David A./Heidi/Chris)
- Markets and the Rural Poor (Chris/Emma/Justine/Frank)
- Perhaps social networks

Next steps in research/outreach:

- April-June: Descriptive statistics and basic inferences to be done in April-May for community group briefings and briefings at the KARI and FOFIFA regional research centers. Complete Madzuu CLASSES model and CLASSES documentation. Complete and publish qualitative studies.
- -June-August: Econometric work on finance use, relative prices, entry barriers, NRM-wealth relationships.
- -August-October: prepare the Embu survey revisit, including a new one page module on effects of reopening KCC distribution on dairy in Embu. Prepare remaining policy briefs for the national policy workshops.
- -January-February: national policy and technical workshops.

Need to run a separate two-day workshop to introduce and train people on CLASSES and write a technical brief on using CLASSES. Keep this separate from the policy workshop and policy briefs. After getting the Vihiga model completed, get the CLASSES documentation finished up and then switch the model over to one of the Madagascar sites.

Appendix D: Notes from World Bank Videoconference

17 March 2004 STATCAP Meeting at World Bank Country Office – Kenya

Videoconference with World Bank – Washington

From Nairobi: Makhtar Diop (Country Director), Fred Kilby, John Randa, Wendy, Caroline Kidiavayi, Lucas Ojiambo, local WB opns officer and CBB

From Washington: range of people (Johan Mistiaen was the only one who I knew already ... missed most of the names with a bad sound connection ... Irene Xenakis, Jan Bove, Kathie Krumm, Misha Belkindas, Graham Eele)

This is a \$20 WB credit over 5 years as part of a \$66mn effort to develop a national statistical system. See the Project Appraisal Document for background detail.

The Bank is stipulating that these data will be a public good freely available to anyone doing research on Kenya. The Bank is likewise very concerned about building capacity within Kenya – at universities and within government – for data analysis. Don't just focus on data collection.

The Bank will avoid procurement of vehicles and construction under this program. They're focused very much on developing human and institutional capacity for conducting regular, high quality (population and agriculture/livestock) censi, household surveys (DHS, labor markets and integrated household budget survey) and enterprise surveys, as well as updating input-output tables and social accounting matrices. Aim to update outdated databases on which government policy needs to be based and to make data widely available for analysis that can inform policymaking in Kenya.

Comments of Jan Bove, IMF peer reviewer of the project proposal: very supportive of moving forward with this project to advance improved statistical data collection and analysis. The IMF notes that much their Statistics Department has already been working with CBS on rebasing the national income and product accounts to 2000. They're keen to see development of source census and survey data. They suggest also developing quarterly national accounts for Kenya. He emphasized the need to develop and maintain technical skills within the government and the importance of public accessibility of all data. He raised concerns about access to micro data.

Comments of Irene Xenakis, WB-Washington: Likewise emphasized importance of technical skills maintenance and a range of institutional and organizational details.

CBB comments: Objective: sustainable ove to evidence-based policymaking Data collection and dissemination:

- Importance of thinking about a truly national system at multiple scales. With decentralization of social services provision and funding

allocation, crucial to have bidirectional flow of information from national level to Province, District and vice versa.

- Availability of micro data (fees, incentive compatibility, confidentiality/human subjects research protocols, etc.)

Data analysis: Kenya's data analysis capacity has grown perilously thin over the 17 years since I first began working in Kenya and it remains a net exporter (esp. to middle income SSA countries) of skilled people.

- Monitoring for MDGs needs to be able to track poverty dynamics, benefit incidence in social indicators, etc. But also need analysis to inform evidence-based policymaking at multiple levels of government.
- Sustainability will require capacity building in graduate level statistics and econometrics in Kenya (net outflows to Botswana, South Africa, US, UK, etc.). Beware of spreading too thin.
- Short courses and AERC/SISERA for replicability and regional basing.

Comments of Fred Kilby: Need a closer match between what's being monitored and the stated project objectives. Need to refine the objectives and get better correspondence between indicators, outcomes and objectives. Need a nationally coherent M&E framework before devising the national statistical plan.

Comments of Wendy: M&E system needs much more detail. Present indicators aren't really monitorable. No detail on how project will support development of Kenya's statistical capacity.

Final Comments from Nairobi by Makhtar Diop: He and Kathie Krumm at Washington would like to delay the schedule a bit to ensure that a high quality team is in place and that a thorough appraisal has been done and is in place before the Board. He wants to emphasize the analytical part of the project, deemphasize equipment, and make the data completely free of charge. He worries about confidentiality of responses as well. He wants to see stronger links between the data collection side and data analysis. His emphasis is strongly on doing good analysis and making it available to policy makers and for civil society to be able to offer independent data analysis to put pressure on government so as to empower the broader public to challenge government policy based on solid analysis of data. They want to identify a few key departments of statistics, some that are established and some that are more established. It may mean building a new statistics department at one of the universities, taking \$2-3 million of the \$20 million to do this.

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