

UC Davis D-Lab Report:

Georgia Regional Education Initiative

*“Building Capacities Around Agricultural and Environmental Sustainability
For Rural Farmers In Georgia”, A Two-Week Training for Future
Collaborations.*

Summer 2016

UC Davis D-Lab Team:

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Institutional Partners:



Introduction

During Summer 2016, the UC Davis D-Lab took a trip to the country of Georgia in Eastern Europe. D-Lab student and Blum Grant fellow Leanne Bolano remained in Georgia for one month, while D-Lab graduate student researcher Paula Balbontin, and D-Lab Director Dr. Kurt Kornbluth stayed in Georgia for one week. The D-Lab team traveled around Georgia in the capital, Tbilisi, as well as to different project sites in Bediani and Baret. The team also managed a day of recreational travel in Western Georgia to the Black Sea. This trip was executed as a result of a year of planning and evaluation under the UC Davis D-Lab Program. The project was initiated by the D-Lab partner Kakhaber (Kakha) Bakhtadze who came to UC Davis as a Humphrey Fellow and studied at the university for one year. In Georgia, Kakha was one of the founders of the Bediani Children's Center (BCC) and its subcomponent, the Bediani Regional Education Center (BREC). As a human and social geographer working in Tbilisi, Kakha hoped to gain resources and skills in the development of a farm and an additional education center in Baret Village. Thus, Kakha's project became part of the D-Lab I course during Winter 2016. In this course, Leanne was assigned to his project and continued working with Kakha, Dr. Kornbluth, and Paula after the class ended in preparation for this summer scoping trip.

Project's Background

In the 1990's, the Soviet Union officially collapsed, setting Georgia free from its grasp as one of the red Soviet states. However, following this event was a period of tragedy and struggle for Georgia, as the country tried to regain its momentum on its own. As a result of the lack of social services provided by the previous Russian government, many children ended up on the streets because their parents could not provide for them. Thus, the BCC was founded to host, raise, and educate these children in need, particularly children from more impoverished parts of Georgia such as Bediani. Now, over 20 years later, many of these original BCC children are matured and require technical and theoretical training in sustaining their community and its natural resources. Many of them have ideas for a profitable business or already have a small business as well as financial support from BCC, but wish to scale their businesses up and capture a wider market to reach financial sustainability for themselves and the village of Bediani.

Project Objectives

There were two main goals for this trip. The first was to teach the selected participants from Bediani the basics of business model development, agriculture, natural resource management, and entrepreneurship, all for the purpose of evaluating the feasibility of their project ideas and the potential for them to be D-Lab projects. The second was to identify and meet with potential partners in Georgia, whether private, public, or non-profit, to discuss further collaboration between UC Davis D-Lab and their organization in conjunction with BCC projects and others. Specifically, the team:

1. Delivered a short D-Lab style feasibility study training module around business development and project's sustainability (4-Lenses approach).
2. Conducted stakeholder meetings to assess local needs and available resources of BREC.

Next steps are to build a roadmap for short and long term collaboration between D-Lab, BREC, and GIPA.

Project Description

Goal 1: This Satellite consisted of a 2-week training for rural farmers in Bediani, Georgia. The goal was to build capacities around local governance and environmental protection. These included the following topics:

1. Assessment of natural resources.
2. Elaboration of local socio-economic development feasibility studies following the 4-Lenses approach.
3. Business Model Generation and Strategic Planning
4. Introduction of modern sustainable technologies.

Planned innovative activities were based on best available practices from developed countries.

Over the two-week training, 10-15 people were trained each day. By the end of the training, five projects were developed:

1. Organic Farm
2. Livestock Production
3. Honey Production
4. Flower Production
5. Fish Production

Please go to: Appendix 1 for more information about the Itinerary, Appendix 2 for information about Syllabus, Appendix 3 for information about Speakers and Appendix 4 for information about the Training's participants.

Goal 2: The team worked with local partners (BCC and GIPA) to evaluate current courses and to develop appropriate project-based curricula using the D-Lab model, with a focus on Environmental Protection, Natural Resources Management, and Rural and Agriculture Development. The team also held meetings with various stakeholders such as the Ministry of Agriculture and the Ministry of Education.

August 29, 2016: Stakeholder Meetings Day 1—meet with Georgian Institute of Public Affairs (GIPA), meet with Ministry of Agriculture.

GIPA: In a meeting with Natalie Partskhaladze, headmaster of the Master’s program in Environmental management resources at the GIPA, specific approaches for collaboration, such as curriculum exchange, between GIPA and UC Davis were discussed. GIPA has already established collaborations with the U.S. but there is still room for development. The long-term goal is a cooperation mechanism between UC Davis and GIPA to share relevant educational material, research topics, and expertise (please refer to pictures’ folder).

Ministry of Agriculture: In our meeting with the Ministry of Agriculture, the Deputy Minister Mr. David Galegashvili stated to the UC Davis D-Lab team the need to provide entrepreneurial education as a national priority giving special attention to agricultural and environmental projects (please refer to pictures’ folder).

August 30, 2016: Stakeholder Meetings Day 2—meet with Ilia State University, meet with Ministry of Education and Science, meet with LEPL Scientific Research Center of Agriculture, meet with National Environmental Agency, meet with U.S. Embassy, meet with Governor of Kvemo Kartli Region, meet with Millenium Challenge Account (MCA) Georgia.

Ilia State University: In our meeting with the Chancellor and Head of Office Development, both the D-Lab team and the university representatives agreed future supportive collaboration of some kind. The Chancellor requested a follow-up from D-Lab including a written brief of the concrete needs expressed by each party.

Ministry of Education and Science: With the Ministry of Education and Science, the Deputy Minister expressed the desire of the ministry to connect local schools with colleges and universities in Georgia. The Ministry stated that any cooperation from universities in the United States is always welcome, and thus the Ministry is open to continue the dialogue about offering resources to D-Lab for this initiative.

LEPL Scientific Research Center of Agriculture: The Director of the Center and the Head of the Division of Public, Regional, and International Relations met with our team to discuss their capacity to support the BREC farming project. The center expressed full support, and agreed to an official partnership with UC Davis. The center asked for D-Lab to draft a memorandum to begin the process of establishing the partnership.

National Environmental Agency: The D-Lab team met with the Director of the National Environmental Agency to discuss the scope of this initiative and purpose for travel in Georgia. The director offered to provide any assistance needed in the preparation of the land plot for the BREC farm, including soil and water testing.

U.S. Embassy, Georgia: In a meeting with the U.S. Embassy, the Cultural Attache and the Educational and Professional Programs Coordinator shared their current opportunities for grant funding that the project would be eligible for application. The Embassy offered to use its social media platforms to publicize success stories of this project and agreed to continue the conversation about D-Lab's collaboration with the UC Davis Humphrey Fellows Program.

Millenium Challenge Account, Georgia: In a meeting with MCA, D-Lab had the opportunity to share the different objectives for the project after the summer trip to Georgia. MCA informed the team of several grant-funding opportunities and suggested the team send in a project proposal.

Governor of Kvemo Kartli Region: In this meeting with Governor Paata Khizanashvili, the timeline of the initiative was shared, including future hopes for D-Lab and BCC. The Governor expressed full support for the entire project, and also requested D-Lab to work on attaching a PEV and renewable energy component to the project. The Governor requested that BCC or D-Lab follow-up immediately to begin project development.

Please go to Appendix 1 and 5 for more information about the Itinerary (1) and Contact information of our Stakeholders (5).

Summary of Evaluations

At the end of the training, the mentors and participants completed separate evaluations.

Mentors: Seven mentors participated in the training and six of them answered the training. Three open questions were asked to:

1. What can be brought to this training that could improve the performance of this group?
2. Did you feel utilized as a mentor?
3. What other training would have been useful for your role as a project mentor in this training?

In general, the mentors found the training to be successful in general, but all expressed that they wish there was more training on budget analysis and computer programs such as Excel and PowerPoint. They also felt that it would have been good to be given hard copies of a budget, presentation, and report examples. Overall, they found the experience to be enjoyable and useful.

Please refer to Appendix 6 for the Mentors's Evaluation Survey.

Participants: All the participants answered the survey. The participants had an extensive evaluation, covering the training as a whole, each instructor and guest lecturer, the activities conducted in class, and the two deliverables that we collected from each project group. This

evaluation had a series of multiple choice and free response questions. The mentors received a brief evaluation to complete that asked about their productivity and preparation for the training. This evaluation had three free response questions. Both groups were given the opportunity to provide additional comments and questions at the end.

Overall, the participants found the training extremely useful and were thankful for the educational opportunity. Everyone found each activity and lecture to be useful for the development of their business models, and are interested in more trainings that will provide in-depth knowledge on agriculture issues relating to their project ideas. There were a couple of students who found some of the customer identification activities to be less helpful. For the instructor portion, the feedback was generally moderately positive. Some made comments wishing for the instructor to stay for a longer period of time to teach more material, or to be involved in the other portions of the training in addition to their assigned lecture times. Additionally, almost everyone requested having more training on budget analysis and development for their small businesses. Finally, 100% of the participants that completed the evaluation would like to establish future collaboration with D-Lab.

Please refer to Appendix 7 for the Participants' Evaluation Survey.

Training Conclusions

Above all, this scoping mission was a major success for UC Davis D-Lab and BCC. The groups' deliverables exceeded all expectations, and the team felt confident in transferring skills, knowledge, and encouragement to the village. The students expressed their gratitude for the experience and opportunity to work with a UC Davis program, and all groups confirmed their fullest desire to continue working with D-Lab as a partner. Additionally, the team's meetings with various stakeholders succeeded in creating key partnerships, to gain support and resources for this initiative moving forward, as well as scale up the project efforts. And lastly, the team had the opportunity to cover a lot of ground in Georgia through different traveling events, which allowed for the chance to scope out potential markets, landscapes, and training opportunities. Though the team was there for a seemingly brief period of time, many objectives were successfully reached. Mentors' evaluation provided useful information for improvement.

Quotes from Participants:

Do you think this educational opportunity gave you the skills needed to develop your idea, improve your business, or succeed in your project? Please explain why.

"Good because it helps us identify how feasible our ideas are, what kind of expectations we can have from our partners and consumers, how beneficial our business could be, how to present our idea to investors or partners."

"I have never received such kind of education and it will be very useful in the future."

Which of the topics would you need further training in?

"Market study and research for CSA type of vegetable production businesses; more details regarding the techniques of different types of vegetable production, rotation principles, bio-agriculture, etc."

"I think that I will need additional training in budgeting and marketing."

Which activities were most helpful for improving your project? Why?

"Problem Tree because it helped us to find the most important problem for us and the solution from this problem."

"Partners research because it gives you more specific realities in the differences of interest and possibility to highlight your value proposition."

What were the activities least helpful for improving your project? Why?

"Simulation games because I don't know how it was related to the training."

"Description of the client in very details was least helpful."

Quotes from Mentors:**What can be brought to this training that could improve the performance of this group?**

"The practical examples of the agricultural enterprises (livestock, vegetable, fish, flowers, honey) including excel files of budget (cost, revenue, etc)."

"More time for the financial analyses."

Did you feel utilized as a mentor?

"I would wish more practical work and simulations, as well as cost and income. I wish I could have done more."

What other training would have been useful for your role as a project mentor in this training?

"To be aware of the course material before the training began and to agree on our roles during the group work."

"More practical experience of agriculture business models and market analysis, research approaches of CSA type of businesses."

Appendices:

Appendix 1—Itinerary: Attached below is the itinerary of the entire scoping trip, including travel time for Leanne, Paula, and Dr. Kornbluth.

August 11, 2016: Leanne flies from San Francisco to Tbilisi.
August 13, 2016: Leanne arrives in Tbilisi
August 14, 2016-August 15, 2016: Training preparation in Tbilisi
August 15, 2016: Training Day 1—Icebreakers, introduce D-Lab and team, introduce CANVAS Business Model and training agenda, lecture on Spatial Mapping
August 16, 2016: Training Day 2—lecture on Entrepreneurship (Part 1), Block 1 of CANVAS (customer segment, problem statement)
August 17, 2016: Training Day 3—lecture on Entrepreneurship (Part 2), lecture on Natural Resource Management, Block 2 of CANVAS (value proposition)
August 18, 2016: Training Day 4—lecture on Agriculture, Blocks 3 and 4 of CANVAS (channels, customer relationship)
August 19, 2016: Training Day 5—CANVAS Block 5 (Stakeholders/Key Partners)
August 20, 2016: Leanne visits Chatakhi village. Tour of Khrami Hydropower Plant 2. Visit to Chatakhi Fish Farm.
August 21, 2016: Visit to Tsalka for Prime Minister campaign meeting. Visit Bareti Village to view BCC farm plot and lake plot.
August 22, 2016: Training Day 6—begin working on deliverables, show examples
August 23, 2016: Training Day 7—Paula arrives, lecture on Budget Analysis
August 24, 2016: Training Day 8—lecture on Strategic Planning
August 25, 2016: Training Day 9—Kurt arrives, work on deliverables

<p>August 26, 2016: Training Day 10—Students give final presentations and submit business reports, receive mentoring on project ideas</p>
<p>August 27, 2016: Closing Ceremony—presentation on UC Davis D-Lab, visit from media company Rustavi 2, last meal with students; Travel—video interviews with Rustavi 2 in Trialeti Village, drive to Batumi, Western Georgia</p>
<p>August 28, 2016: Spend day in Black Sea, drive to Tbilisi</p>
<p>August 29, 2016: Stakeholder Meetings Day 1—meet with Georgian Institute of Public Affairs (GIPA), meet with Ministry of Agriculture</p>
<p>August 30, 2016: Paula leaves, Stakeholder Meetings Day 2—meet with Ilia State University, meet with Ministry of Education and Science, meet with Agricultural Research Program, meet with Agency for the Environment, meet with Governor of Kvemo Kartli, meet with MCA Georgia.</p>
<p>August 31, 2016: Kurt leaves, drive back to Bediani</p>
<p>September 1, 2016: follow up with partners, begin report updates</p>
<p>September 2, 2016: prepare material for evaluations, begin translating deliverables</p>
<p>September 3, 2016: meet back with participants and mentors, conduct evaluations</p>
<p>September 4, 2016: translate and review evaluation results for participants and mentors, drive to Tbilisi</p>
<p>September 5, 2016: Begin working on memorandum for official partnership with Ministry of Agriculture, meet with U.S. Forest Service, review trip expenditure report</p>
<p>September 6, 2016: Leanne leaves Georgia</p>

Appendix 2—Training’s Syllabus.

“Innovative Approaches For Economic Regional Development in Georgia”

Week 1: August 15-August 22

<i>Date</i>	<i>Time</i>	<i>Topic</i>	<i>Guest Speaker</i>
Monday, August 15, 2016	10:00 - 13:00	<i>Session #1:</i> Introduction and Welcome	Kakhaber Bakhtadze, <i>Program Manager</i> Leanne Bolano, <i>UC Davis Project Intern</i>
	14:00 - 17:00	<i>Session #2:</i> Rural Planning and Development	Kakhaber Bakhtadze
Tuesday, August 16, 2016	10:00 - 16:00	<i>Session #1:</i> Natural Resources Management	Irakli Kobulia, Kakhaber Bakhtadze
	16:00 - 17:30	<i>Session #2:</i> Customer Development and Problem Framing	Leanne Bolano, <i>UC Davis Project Intern</i>
Wednesday, August 17, 2016	10:00 - 16:00	<i>Session #1:</i> Agriculture	Giorgi Ghambashidze
	16:00 - 17:30	<i>Session #2:</i> Value Proposition.	Leanne Bolano, <i>UC Davis Project Intern</i>
Thursday, August 18, 2016	10:00 - 16:00	<i>Session #1:</i> Entrepreneurship	Nino Andriadze

	16:00 - 17:30	<i>Session #2: Customer Relationship and Channels</i>	Leanne Bolano, <i>UC Davis Project Intern</i>
Friday, August 19, 2016	10:00 - 16:00	<i>Session #1: Presentations</i>	Nino Aniriadze
	16:00 - 17:30	<i>Session #2: Key Partners</i>	Leanne Bolano

Week 2: August 22-August 26

<i>Date</i>	<i>Time</i>	<i>Topic</i>	<i>Guest Speaker</i>
Monday, August 22, 2016	10:00 - 11:30	Mentoring and Presentation Preparation	Leanne Bolano
Tuesday, August 23, 2016	10:00 - 11:30	Business Model Report	Paula Balbontin, <i>UC Davis Graduate Student Researcher</i>
Wednesday, August 24, 2016	10:00 - 11:30	Strategic Planning and Project Management	Paula Balbontin
Thursday, August 25, 2016	10:00 - 12:00	4 Lenses, D-Lab style, Previous experience in Development	Dr. Kurt Kornbluth, <i>UC Davis D-Lab Founder and Director</i>
Friday, August 26, 2016	10:00 - 18:00	Presentations and Closing Ceremony	All mentors and speakers

Appendix 3—Guest Speakers

Nino Andriadze

Nino received her Bachelors of Arts in International Journalism in 1999 from Tbilisi State University in Georgia, then proceeded to receive training in Project Identification, Development, and Management from the Maastricht School of Management in Netherlands. She then received her MBA from the University of Bath in the United Kingdom in 2007. During her time there, she was awarded the University of Bath Scholarship from the British Foreign Commonwealth Office. She also notably won the Entrepreneurship in Action competition at the university. Since then, she has gained experience in sales, marketing, project management, and business consulting, a profession in which she currently resides as Director and Chief Consultant of MindWorks. She also has a background in teaching, having served as a lecturer at Ilia State University in Georgia and a recurring guest lecturer at the Caucasus School of Technology and School of Business in Georgia.

Irakli Kobulia

Irakli received his Bachelors of Arts and Masters of Science in Geography from Tbilisi State University in 1999 and 2001, respectively, and is currently pursuing a PhD in Geography from Ilia State University since 2011. Irakli has received a number of prestigious certificates, ranging in subject from Environmental Impact Assessment to Participatory Geographic Information Systems (GIS), to Training and Participation Skills. He also completed a fellowship program in Washington, D.C. with the U.S. State Department for the International Visitor Program for Urban Environmental Assessment in 2007. Irakli has an extensive background in several different professions, including environmental consulting, environmental training, and research. Currently, he serves as an Environmental Specialist with Environment and Development in Georgia.

Giorgi Ghambashidze

Giorgi received his Bachelors of Science in Agroecology from Georgian State Agrarian University in 2002, then a Masters of Science in Agroecology and a PhD in Agricultural Sciences from both the University of Natural and Applied Life Sciences in Vienna, Austria and Georgian State Agrarian University in 2004 and 2006, respectively. Throughout these years and after, Giorgi worked as a specialist, lab researcher and assistant, consultant, and instructor. In all these positions, Giorgi focused on agriculture, GIS, and soil science. Currently, Giorgi holds several positions. Since 2010, he has been working for GammaConsulting as a Specialist in the fields mentioned previously. He also teaches as an Assistant Professor at the Agricultural University of Georgia. Lastly, he serves as the Head of the Laboratory in the Soil Fertility Research Service for the Scientific-Research Centre of Agriculture, Georgia.

Appendix 4—Participant Contact List

<i>Name</i>	<i>Email</i>	<i>Project</i>
Vazha Sultanovi	vazha.sultanovi@gmail.com	Vegetable
Tamar Mumladze		Livestock
Joni Mikeladze		Flowers
David Papunashvili		Bees
Ana Oganessian	ana.oganesian@gmail.com	Flowers
Mzia Mamuchashvili	zazuna@gmail775	Flowers
Irma Giorgadze	irma.masi@gmail.com	Flowers
Larisa Kushian		Fish
Zuka Khapava	zura.khapava@gmail.com	Fish
Kakha Chincharauli	kakhachincharauli@gmail.com	Livestock

Appendix 5: Stakeholder Contact List.

Organization	Contact	Email(s)	Website
Georgian Institute of Public Affairs (GIPA)	Natalie Partskhaladze	n.partskhaladze@gipa.ge	www.gipa.ge
Ministry of Agriculture of Georgia	David Galegashvili, Deputy Minister	David.Galegashvili@moa.gov.ge	www.moa.gov.ge
Ilia State University	Ketevan Lakirbaia, Chancellor	ketevan.lakirbaia@iliauni.edu.ge	www.iliauni.edu.ge
Ilia State University	Ketevan Darakhvelidze, Head of Office of Development	ketevan.darakhvelidze@iliauni.edu.ge	www.iliauni.edu.ge
LEPL Scientific-Research Center of Agriculture	Prof. Dr. Levan Ujmajuridze, Director	saguramoagro@yahoo.com , l_ujmajuridze@yahoo.com	www.srca.gov.ge
LEPL Scientific-Research Center of Agriculture	Nino Chkhartishvili, Division of Public, Regional and International Relations	Nino.Chkhartishvili@srca.gov.ge , n_chkhartishvili@yahoo.com	www.srca.gov.ge
Ministry of Education and Science of Georgia	Ketevan Natriashvili, First Deputy Minister	knatriashvili@mes.gov.ge	www.mes.gov.ge
Millennium Challenge Account-Georgia	Nodar Surguladze, Tertiary Education Project Director	nsurguladze@mcageorgia.ge	www.mcageorgia.ge
Industry-led Skills and Workforce Development	Tatia Khubulava, Communication and Outreach Manager	tatia.khubulava@pem-consult.de	www.iswd.ge
Industry-led Skills and Workforce Development	Tsotne Iashvili, National Grants Scheme Manager	tsotne.iashvili@pem-consult.de	www.iswd.ge
United States Embassy, Public Affairs Section	Tea Kuchukhidze, Educational and Professional Programs Coordinator	kuchukhidzet@state.gov	www.georgia.usembassy.gov
United States Embassy, Public Affairs Section	Damian Wampler, Cultural Attache	WamplerDG@state.gov	www.georgia.usembassy.gov
Administration of the State Representative--Governor in Kvemo Kartli Region	Paata Khizanashvili, Governor	paata.khizanashvili@gmail.com , paata.khizanashvili@kvemokartli.gov.ge	www.kvemokartli.gov.ge
National Environmental Agency, Georgia	Tamar Bagratia, Head of the Agency	tamunia@gmail.com	



Appendix 6: Mentors' Evaluation Survey

University of California, Davis
D-Lab
Georgia, Summer 2016

Course Evaluation

1. What can be brought to this training that could improve the performance of this group?

2. Did you feel utilized as a mentor?

3. What other training would have been useful for your role as a project mentor in this training?

Thank you very much! Please leave additional comments and questions here:

Appendix 7: Participants' Evaluation Survey:

University of California, Davis
D-Lab
Georgia, Summer 2016

Course Evaluation

Course Evaluation:

1) The content covered in this course was:

- a) Too detailed
- b) Too broad
- c) Just right

2) The classroom environment (accommodations, temperature, refreshments, etc.) was:

- a) Comfortable
- b) Neutral
- c) Uncomfortable

Please explain why:

3) Do you think that there was enough time spent on each topic?

- 1) There was an appropriate amount of time
- 2) There was not enough time
- 3) There was too much time

4) Do you think the training should have been:

- a) One week
- b) Two weeks, as it was
- c) Three weeks

5) Feedback given by mentors was:

- a) Very helpful
- b) Helpful
- c) Not helpful

6) What was your favorite moment?

7) Do you think this educational opportunity gave you the skills needed to develop your idea, improve your business, or succeed in your project? Please explain why.

8) Which of the topics would you need further training in?

9) Would you recommend this training to a friend or family member who is starting a business? Why?

- a) Yes
- b) No

Instructors' Evaluation:

Leanne: CANVAS Business Model:

1) Leanne's teaching style was effective.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

2) Leanne had a good attitude while teaching.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

3) Leanne effectively communicated her respective units.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

If needed, please provide supplemental comments/feedback below for Leanne:

Paula: Budget and Strategic Planning

1) Paula's teaching style was effective.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

2) Paula had a good attitude while teaching.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

3) Paula effectively communicated her respective units.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

If needed, please provide supplemental comments/feedback below for Paula:

Guest Speaker: Nino Andriadze:

1) Nino's teaching style was effective.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

2) Nino had a good attitude while teaching.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

3) Nino effectively communicated her respective units.

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

If needed, please provide supplemental comments/feedback below for Nino:

Guest Speaker: Irakli Kobulia

- 1) Irakli's teaching style was effective.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

- 2) Irakli had a good attitude while teaching.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

- 3) Irakli effectively communicated his respective units.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

If needed, please provide supplemental comments/feedback below for Irakli:

Guest Speaker: Giorgi Ghambashidze

- 1) Giorgi's teaching style was effective.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

- 2) Giorgi had a good attitude while teaching.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

- 3) Giorgi effectively communicated his respective units.
 - f) Strongly agree
 - g) Agree
 - h) Neutral
 - i) Disagree
 - j) Strongly disagree

If needed, please provide supplemental comments/feedback below for Giorgi:

In-class Activities and Exercises

1) Which activities were most helpful for improving your project? Why?

2) What were the activities least helpful for improving your project? Why?

Presentation and Report

1) Did the training adequately prepare you for the final presentation and report?

- a) Yes
- b) No

2) Do you think the presentation and report will be useful in the future?

- a) Yes
- b) No

Thank you very much! Please leave additional comments and questions here:

Appendix 8: Link to Pictures:

<https://drive.google.com/drive/folders/0B-pbnTCRxsDibHo3bmltQ0lYLUU?usp=sharing>

Appendix 9: Leanne's Experience (as seen on the UC Davis Blum Center and UC Davis Program for International Energy Technologies websites)

“It Takes a Village”

For two weeks of my trip in Georgia, I will be leading and teaching a training to 20 participants in a town called Bediani for the Bediani Regional Education Center (BREC), a branch under the Bediani Children's Center (BCC). Bediani, located in the Tsalka Municipality of Georgia, has a small but mighty population count of 160. Most of those inhabiting the area are children, many of whom were displaced following the collapse of the Soviet Union in 1991 and sought extra support and resources from BCC.

Now, over 20 years later, there is a desire in the village to receive the necessary education that would enable the community to implement a series of projects. These projects would allow the area to be self-sustained financially, covering a wide range of topics. Seeing as the land in Tsalka is very fertile and the surrounding environment would support agriculture quite well, the project ideas of the students all relate to better utilizing Bediani's natural resources. They include commercial flower production, educational beekeeping, a Community Supported Agriculture (CSA) farm that works as a weekly box system, and more. Thus each day, the students receive time with me to learn how to develop their ideas into a business plan and time with a guest lecturer to learn the basics of agriculture, natural resources management, and entrepreneurship.

As I have now completed the first week of this training, I am genuinely and totally impressed by these students. The first day of the training felt like a breeze, because there was no heavy material to teach. The activities were light, and consisted of a lot of icebreakers and crafty games. The response was very positive, and so I thought the rest of the training would be as easy. But alas, come Tuesday, both the students and I were having more trouble than anticipated. It became clear that the material was more arduous and complex than the students expected. On the flip side, I am challenged every day to improve and adjust my means of communication, given the language barrier. Although I may feel that I've explained something from the lesson perfectly in English, I am slowly learning that it is not guaranteed that it will translate the same way in Georgian. This makes casual conversation a struggle, but it is especially important to consider when teaching a new topic to a room full of expectant, yet confused villagers. But upon realizing this, the week took a turn for the better. I think both my students and I adjusted to each other's perspectives, and gained a bit more patience. And now I see their drive, their creativity, their willingness and hunger for learning. It is so fulfilling to witness.

I see how passionate these people are about improving their quality of life in the village, and how excited they are to become equipped with the skills they need to use their natural resources in an efficient and sustainable way. I believe that my work here as a Blum Fellow is teaching me to consider the differences in cultural and educational values, and use those considerations to better

interact and connect with different groups of people. I know these lessons will prove to be valuable as I move forth in my academic and professional career; but as of right now, I am just thrilled to wake up each day Bediani and see what new dreams and wishes my students have for their community.

“The Broken Road”

The D-Lab training in Georgia at the Bediani Regional Education Center (BREC) has been completed, with much success. Although my students have so many great ideas pertaining to natural resource management, I cannot help but think about the challenges they will all face because of one simple artificial resource—roads. There are over 1000 kilometers of roads in Georgia that are deemed “some of the most dangerous roads in the world” [1]. But there are around 6943 kilometers of roads total in Georgia managed by its Department of Roads [4]. It is an interesting dilemma, because it would seem that communities in need would require the latest technological advancements in agriculture or engineering. But in fact, Bediani Village, like many other impoverished areas in the world, would benefit greatly from improvements to road infrastructure.

I can definitely say that I absentmindedly took roads for granted before I came here. In a grand position of privilege, I was genuinely shocked and rode in the car with disbelief as I journeyed from the Georgian capital, Tbilisi, to my project site in Bediani Village with my project client and BREC Founder, Kakha Bakhtadze. And that was nothing compared to our road trip to Batumi in Western Georgia. The roads in this trip were not only broken, but they were on the side of a mountain cliff most of the way for several hours. The governor of Bediani, Zviad Khapava, informed me that this trip should have only taken eight hours, but due to the bad condition of the roads most of the way, the trip duration lasted double that amount. And in other trips we took around Georgia, we experienced flat tires and scratched exteriors because of the rough terrain.

Although the people here in Georgia seem unfazed by this as they drive on these roads, the issue comes up in conversation at some point during the day, maybe at the dinner table or just in passing. I remember one day before I started teaching, my students informed me that it was “The Day of Bediani”, a local holiday established by a former villager who left Bediani to become rich, and came back to set this day. My students complained, “He comes every year on this day to throw an extravagant party with dancing and lots of food and vodka, yet doesn’t use his riches for real improvements, such as better roads”. And thus, even though a fraction of the village recognizes and celebrates this day, it was clear to me that those that I knew looked at the “holiday” with contempt.