

**MEMORANDUM OF UNDERSTANDING BETWEEN  
THE FOLLOWING PARTIES:  
UC SAN DIEGO SUSTAINABILITY SOLUTIONS INSTITUTE (SSI),  
WORLD WILDLIFE FUND (WWF),  
TROPICAL FOREST GROUP (TFG),  
UC SAN DIEGO EXTENSION (Extension)**

**MOU13-002**

This Memorandum of Understanding (MOU) between these parties clarifies a business relationship for support of professional development activities related to terrestrial carbon accounting.

**I. THE ACTIVITY**

The following parties are collaborating to provide services in support of professional development activities related to terrestrial carbon accounting:

- UC SAN DIEGO SUSTAINABILITY SOLUTIONS INSTITUTE (SSI)
- WORLD WILDLIFE FUND (WWF)
- TROPICAL FOREST GROUP (TFG)
- UC SAN DIEGO EXTENSION (Extension)

The primary goal of the collaboration is to develop and conduct, for a period of at least three years, a unique and advanced educational experience in terrestrial carbon accounting (TCA program), in order to train at least 100 individuals as scientific/statistical experts in enabling the global Reducing Emissions from Deforestation and Forest Degradation (REDD) initiative, as well as in the more ambitious effort of forest conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+).

Secondary aims of the collaboration are to foster global terrestrial carbon data acquisition, sharing/transparency, and quality assurance, through the immediate application of skills learned during the program, and the establishment of remote continued learning nodes of terrestrial carbon accounting.

Services associated with these objectives are initially outlined in this MOU, but may be augmented by one or more parties in the future via written amendment to this MOU signed by all parties. Additional organizations may join the collaboration via written amendment to this MOU signed by all parties.

**II. RESPONSIBILITIES**

- A. Each party appoints the persons named below to serve as the official contact with regard to this MOU. The following individuals will serve as contacts for coordinating the work of each organization in carrying out this business activity.

**UC San Diego Sustainability Solutions Institute (SSI)/ Calit2**  
Kristin Blackler



Project Manager  
5119 Atkinson Hall  
9500 Gilman Drive #0435  
La Jolla, CA 92093-0436  
858-534-8371  
858-822-4367  
kblackler@soe.ucsd.edu

**World Wildlife Fund (WWF US)**

John O. Niles  
Director, Climate and Forests  
1125 Fort Stockton Drive  
San Diego CA 92103  
805.252.6777  
John.Niles@wwfus.org

**Tropical Forest Group (TFG)**

Jeff Metcalfe  
Director  
519 Fig Avenue  
Santa Barbara CA 93108  
786.877.5375  
jeff\_metcalfe@tropicalforestgroup.org

**UC San Diego Extension**

Hugo Villar  
Director, Science and Technology  
Mail Code 0170T  
La Jolla, CA 92093  
Phone: 534-9354  
Fax: 534-9359  
hvillar@ucsd.edu

B. The organizations agree to the allocation of duties as stated below in connection with achieving the goals of this effort.

1. SSI will:

- a. Provide overall direction and coordination of the collaboration, ensuring frequent and constant communication and clarification between parties, providing focus for efforts, and facilitating resolution of question, concerns or lapses in performance which may arise.
- b. Provide financial oversight for the initiative, accepting financial responsibility for covering shortfalls, which may occur (up to \$50,000 initially) managing contractual agreements between UCSD and WWF and/or TFG (and any other organizations that may enter the collaboration in the future), and managing relationships with donors. SSI will oversee finance and budgets associated with program development. The target budget for program development is shown in attachment A).
- c. Recruit and coordinate an academic advisory committee.



- d. Encourage and oversee UC research, degree-oriented instruction, or other faculty-driven activities related to Terrestrial Carbon Accounting which may emerge from this effort.
- e. In conjunction with other partners, develop curriculum and learning materials, identify ongoing data collaboration opportunities.
- f. Arrange and coordinate access to specific UC resources and develop partnerships with other UCSD entities which may support the effort, including at least CalIT2, the San Diego Supercomputing Center, the UC library system, and suitable graduate student assistants.
- g. In conjunction with other partners, develop, facilitate and/or coordinate relationships with UCSD organizations and appropriate external organizations.

2. WWF will:

- a. Co-design and guide development of the learning experience for the TCA program. The program is anticipated to include about 200 hours of instruction through a combination of residential classroom and remote online delivery methods, including a few field/lab experience activities.
- b. Identify, select and guide the performance of qualified faculty to conduct the TCA program. The program is anticipated to accommodate up to five instructors for the program, each directing a portion of the overall learning experience, with about four days for each instructor in residence, and two instructors to review and grade individual student work (supported by a few graduate student assistants).
- c. Oversee the learning experience, including, while working in partnership with a designated UCSD faculty member, admission/acceptance of students, performance of instructors, progress of students, evaluation of student work (e.g., grades), and the success of the overall academic effort.
- d. Recommend and actively guide development of service and activities to address the secondary aims of this collaboration (see section I), such as a web-based community for TCA program graduates and the individuals they train through outreach efforts, as well as data sharing tools.
- e. Recommend and recruit WWF participation in the course as appropriate, including country offices and programs, with a special consideration for participation from Nepal, Peru, and Vietnam initially.

3. TFG will:

- a. Identify and recruit qualified students nationally and internationally to participate in the TCA program. A timeline which includes recruitment efforts is referenced in Attachment C of this MOU.
- b. Co-design and implement the learning experience, including course packs, video content, and other necessary materials. A timeline which includes program development is referenced in Attachment C of this MOU.
- c. Work to integrate the course with emerging climate change policies, funds, and initiatives including but not limited to the UNFCCC, CA AB 32, and IPCC while maintaining a context neutral curriculum.
- d. Conduct a gap analysis of existing skills among key stakeholders to inform course content and learning goals.
- e. Author and/or create marketing resources for both fundraising and student recruitment including print and web based materials and video documentation.
- f. Pursue and obtain donor contributions for the development and management of the TCA program, as well as student scholarships, and manage any scholarship funds. The



collaborators desire to eventually achieve an allocation of about one third of enrollments in the program each year to be supported by (partial) scholarships.

- g. Manage the relationship with providers who may assist this effort in meeting its secondary aims (e.g., web-based community and data sharing).
- h. In conjunction with WWF, develop and manage external partnerships (non-UCSD) with organizations such as the World Bank, USAID, climate focus, CIFOR, Climate Action Reserve, CA Air Resources Board, GHG Management Institute, the Governors' Climate and Forest Taskforce, etc.

4. Extension will:

- a. Enable TCA program accreditation, manage the student application and admissions process, and administer student records. The program is anticipated to result in an Extension Professional Certificate.
- b. Manage TCA program delivery finances and accounting, including assessment and collection of student/program fees, encumbrance and posting of program expenses, and contracting with and compensation of instructors. A target budget for the program is identified in attachment B of this MOU. Extension will, jointly with the collaborators, make a determination as to the minimum and maximum number of students that should enroll by a given date prior to start date to ensure that the course will be financially viable and consistent with the requirements for successful educational outcomes.
- c. Manage the process for initiating and facilitating student visas to attend the residential portion of the TCA program, including registration with INS and related support while the students are in the U.S.
- d. Provide TCA program communications support, including services such as web and print information/promotion, and press releases and media relations.
- e. Manage all TCA program administration and logistics, including for example, lodging (if included in the design/price of the program), food, transportation, classrooms, materials, field/lab activities, software, and social activities. The target budget for the program in attachment B of this MOU identifies the anticipated scope of these items in more detail.
- f. Provide and manage elements of the TCA program conducted online using the Extension online learning management system (Blackboard.com). The courses and courseware developed should be consistent with current capabilities and policies for Online learning within Extension. To that end, Extension will work the other parties to ensure the materials developed are within our standards and practices but will have ultimate discretion as to what can be incorporated for online delivery.
- g. Design, develop and conduct pre- and post-TCA program workshops. The parties agree to offer a pre-program "math" and "GIS" workshop, and a post-program "train the trainer" workshop as of the date of signing this MOU. Other workshops may be considered and offered in the future without modification to this MOU.
- h. Provide and manage internet infrastructure to facilitate the granting of credit and/or certification of students trained remotely by graduates of the TCA program, including assessment and payment of associated fees.
- i. If agreed to by the collaborators and Extension jointly, capture, edit/produce and broadcast a portion or a produced examination of the TCA program via UC/UCSD television, also posting the event on the stations' web sites, YouTube channel and iTunes page after the initial broadcast.

5. In connection with fulfilling their responsibilities, all collaborators agree to:

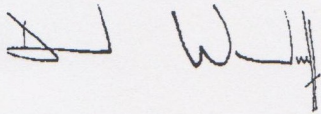


#### IV. TERM OF UNDERSTANDING

The term of this agreement is for a period of at least three years from the date of signature and will continue until or unless any party terminates this agreement through written notice to the other parties. Termination will be without penalties or liabilities, but continuation of services after such notice will extend for a period of time necessary to complete the learning experience for any students currently enrolled, collect fees, and/or fulfill financial or academic obligations.

#### Authorization

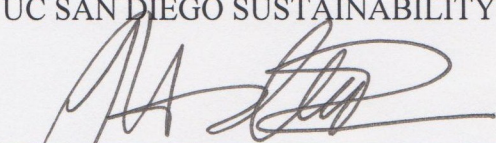
On behalf of the organization I represent, I agree to this memorandum of understanding.



\_\_\_\_\_  
David Woodruff  
Director

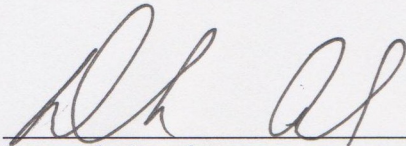
UC SAN DIEGO SUSTAINABILITY SOLUTIONS INSTITUTE (SSI)

\_\_\_\_\_  
Date 9/24/12



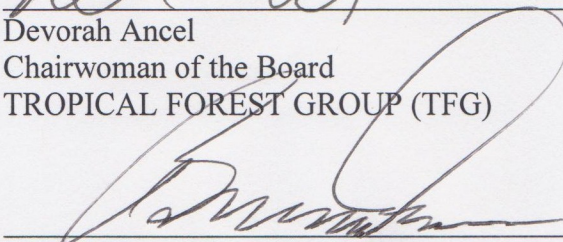
\_\_\_\_\_  
Lou Leonard  
Managing Director of Climate Change  
WORLD WILDLIFE FUND (WWF US)

\_\_\_\_\_  
Date 10/2/12



\_\_\_\_\_  
Devorah Ancel  
Chairwoman of the Board  
TROPICAL FOREST GROUP (TFG)

\_\_\_\_\_  
Date 10-2-2012



\_\_\_\_\_  
Bruce Dunn  
Associate Dean and Chief Administrative Officer  
UC San Diego Extended Studies and Public Programs

\_\_\_\_\_  
Date 9/28/12



## Terrestrial Carbon Accounting MOU13-002

- a. Publish information regarding the TCA program only with the express consent of the designated representative from all collaborating organizations. Special care will be given to using references to the UC, UCSD, and WWF names/brands, as well as the names/brands of other collaborators, and to the nature of the credit/certification obtained for the program. This care extends to verbal conversations regarding the program as well.
- b. Extend/make financial commitments in connection with the effort only in concert with budgets and financial understandings first reached by all collaborators. Agree to participate in monthly budget review meetings. Attachments A and B of this MOU provide initial guidance regarding these understandings. The collaborators also agree that the effort may be postponed or cancelled at any time that financial targets are not achieved.

### III. FINANCIAL ARRANGEMENTS

- A. Outlines of budgets for this effort are provided in Attachments A and B of this MOU.
- B. Primary funding for the effort will be managed through an interdepartmental fee-sharing account as follows:
  - a. Fund 20301A
  - b. Org. 617011, "ESPP-SSI Fee-Sharing "
  - c. Account 519920
  - d. Indexes
    1. CITTC AV, "T Carbon Acct - Develop"
    2. CITTCAD, "T Carbon Acct - Delivery"

SSI agrees to ensure that the account has a positive balance at two periods during the year: (1) fiscal close, and (2) December 31<sup>st</sup> following the conclusion of each TCA program offering. All Parties will collectively seek to ensure that no budget shortfalls occur in excess of \$50,000 for any accounting period that would need to be covered by SSI.

- C. All parties agree to place a priority on the use of any program fund surpluses toward the continued development of the TCA program. Partial distribution of any surplus funds, beyond the purposes identified in the program delivery budget, is permitted if approved by all parties.
- D. Donations directed to UCSD will be made out to "The Regents of the University of California", and will be coordinated through:

University of California, San Diego Extension  
Attention: Jennifer Lopez - SA12  
9500 Gilman Drive Mail Code 0176H  
La Jolla, California 92093-0176
- E. Course-related donations to the Tropical Forest Group or WWF US will be used for the sole purposes of the course in a transparent manner with input from other collaborators.
- F. Any scholarship fund created through third-party donations will be managed by TFG according to agreed upon terms.



## Attachment B

**UCSD TERRESTRIAL CARBON ACCOUNTING PROGRAM****Annual Program Delivery Budget**Assumptions

Instructors	5
Program Enrollments:	30
Program Classroom Days:	20
Calendar days:	30
Field trip days and social activities:	4
Four-hour evening sessions:	5
Program Fee:	\$12,500
Percent of enrollments receiving half scholarship:	20%
Percent of enrollments receiving group discount:	20%
"At-cost" program fee	\$2,061
Workshop Fee (each):	\$1,400
Pre/Post Workshops:	2
Percent taking one workshop:	60%
Percent taking second workshop:	30%

Additional clarification

	plus program director
20	(students paying full price)
7	Hours per classroom day
	(one per week of each)
	(one per instructor)
\$6,250.0	(price for 20% of students)
	(every fifth participant in full price group is free)
	(these individuals are not factored into the budget)
	(no discounts for workshops)
2	(two days each)
18	total participants in one workshop
9	total participants in a second workshop

Income

Program Fees	\$375,000	
Workshop Fees	\$37,800	
Scholarships/Discounts	-\$87,500	
Subtotal		\$325,300

Fixed Expenses

Program Director	\$15,000	(1 @ \$15K)
Residential Instruction	\$40,000	(\$250 per hour; \$8K/instructor)
Instructor travel and lodging	\$11,983	(1.33 lodging nights per calendar day)
Post-program online instruction	\$8,000	(2 @ \$4K each)
Workshop Instruction	\$6,000	(4 days @ \$1500 per)
Transportation	\$11,500	(airport pickup/dropoff, field trips only)
Program Support Person	\$27,000	(.4 FTE)
Classroom rental	\$2,000	
Online setup and assistance	\$1,000	
Subtotal		\$122,483

Variable Expenses

Visa management	\$10,500	(\$350 per person)*
Graduate Assistants	\$3,000	(\$1000 per assistant, 10 students per asst.)
Materials and Software	\$16,000	(\$500 per person)
Use of labs/field sites	\$12,500	(2,500 per field trip, plus CalIT2)
Food	\$18,316	(Beverages, lunch, dinner for eve. sessions)
Activities (incl. welcome and graduation)	\$17,700	(\$500 per person)
Diploma processing fee	\$2,250	(\$75 per person)
Online learning support	\$750	(\$25 per person)
Subtotal		\$81,016

Overhead

Extension	\$101,749	50% of expenses
UCSD SSI	\$20,350	10% of expenses
Subtotal		\$122,099

Surplus/Deficit/Reserve

	\$0
Surplus sharing with instructors	\$0 20% of surplus



**UCSD TERRESTRIAL CARBON ACCOUNTING PROGRAM****General Program Development Timeline**

<u>Month</u>	<u>Program Development*</u>	<u>Cumm. Expense -- Funds Required*</u>	<u>Student Recruitment*</u>	<u>Cumm. Expense -- Funds Required*</u>
September 2012	Convene Advisory meeting	\$9,406	Agree to student recruitment plan	\$1,250
October 2012	Agree on final program design	\$18,813	Meet to organize student recruitment assignments (incl. web, print, media) All copy approved, web design approved, produced video media storyboarded and arranged	\$2,500
November 2012	Identify, recruit, and obtain commitment from instructors	\$28,219		\$12,750
December 2012	Convene meeting to organize curriculum development, including online elements and pre/post workshops	\$37,625	Web site up, print material produced, media available	\$23,000
January 2012	Agree to curriculum development plan, assignments, deadlines	\$47,031	Recruitment trips scheduled, recruitment begins	\$35,542
February 2012	Development deadlines	\$70,500	Recruit students	\$48,083
March 2012	Development deadlines	\$93,969	Recruit students	\$60,625
April 2012	Development deadlines	\$117,438	Recruit students	\$73,167
May 2012	All content tested, accepted, ready	\$140,906	Deadline for applications/commitments, go-no go on summer program	\$76,083
June 2012	Pre-workshop and program begins	\$150,313		\$79,000
July 2012	Program continues. Post-workshop held	\$159,719	Debrief with students	\$80,250
August 2012	Follow-on (online) work with students	\$169,125	Debrief with sponsors	\$81,500

\* See Program Development Budget