

# The Terrestrial Carbon Accounting International Academic Partnership

*publically known as*

## **The Carbon Institute**

A Project of the Greenhouse Gas  
Management Institute

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Supported by:



Federal Ministry  
for the Environment, Nature Conservation,  
Building and Nuclear Safety

based on a decision of the German Bundestag



# The Carbon Institute's Goals

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- Build strong, sustainable, endogenous academic capacity to teach world class terrestrial carbon accounting (TCA).
- Establish high-quality national TCA Certificate Programs custom-tailored to needs of countries, so TCA Certificates solve national challenges.
- Mainstream TCA where appropriate.

# Context for The Carbon Institute



- The Paris Agreement – international treaty to reduce emissions, transparency critical.
- Most countries need to massively increase the quantity and quality of carbon accounting.
- A range of needs for enhanced carbon accounting capacity: international, national, provincial, academic, local, private sector.

# The Greenhouse Gas Management Institute (GHGMI)



- World leader in developing and delivering pedagogically-rich course material for greenhouse gas measurement, reporting, and verification (MRV).
- Conducts the Expert Reviewer training program for the UNFCCC secretariat (23 courses).
- 18 online courses in GHG MRV for various sectors and scales with learners across government ministries, NGOs, private sector.
- 3,194 GHGMI course alumni from over 50 countries.
- Just launched the only comprehensive course material on the 2006 IPCC Guidelines after a 3-year development effort (the Paris Agreement training package).



# UCSD 2013 TCA Course

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- First university accredited Advanced Certificate in Terrestrial Carbon Accounting
- 145 hours of instruction in 6 integrated classes
- 150 applicants for 24 positions
- Taught at University of California San Diego (UCSD)
- Overwhelming positive reviews
- Important lessons learned, ideas for improving

# Self-Score Improvements

**Table 3. TCA Certificate Classes, Self-Assessments and Improvements**

| Class Name  | Average Pre-Course Self Score | Average Post-Course Self Score | Improvement |
|---|-------------------------------|--------------------------------|-------------|
| Policy Contexts for Terrestrial Carbon ( <i>BIOL-40285</i> )  | 3.13                          | 4.00                           | 0.87        |
| Measuring Terrestrial Carbon Change, Modeling Using GIS, Remote Sensing, and Activity Data ( <i>BIOL-40286</i> )    | 2.17                          | 3.69                           | 1.52        |
| Classifying Forest and Land Cover ( <i>BIOL-40287</i> )   | 2.57                          | 3.60                           | 1.03        |
| Terrestrial Carbon Accounting Data Collection & Evaluation ( <i>BIOL-40288</i> )                                    | 2.57                          | 3.88                           | 1.31        |
| Statistics for Terrestrial Carbon: Data Aggregation, Uncertainty Analyses & Error Propagation ( <i>BIOL-40289</i> ) | 2.22                          | 3.63                           | 1.41        |
| Applying and Communicating Analysis Results ( <i>BIOL-40290</i> )   | 2.83                          | 3.75                           | 0.92        |

# TCAIAP Carbon Institute Partners



国家林业局调查规划设计院



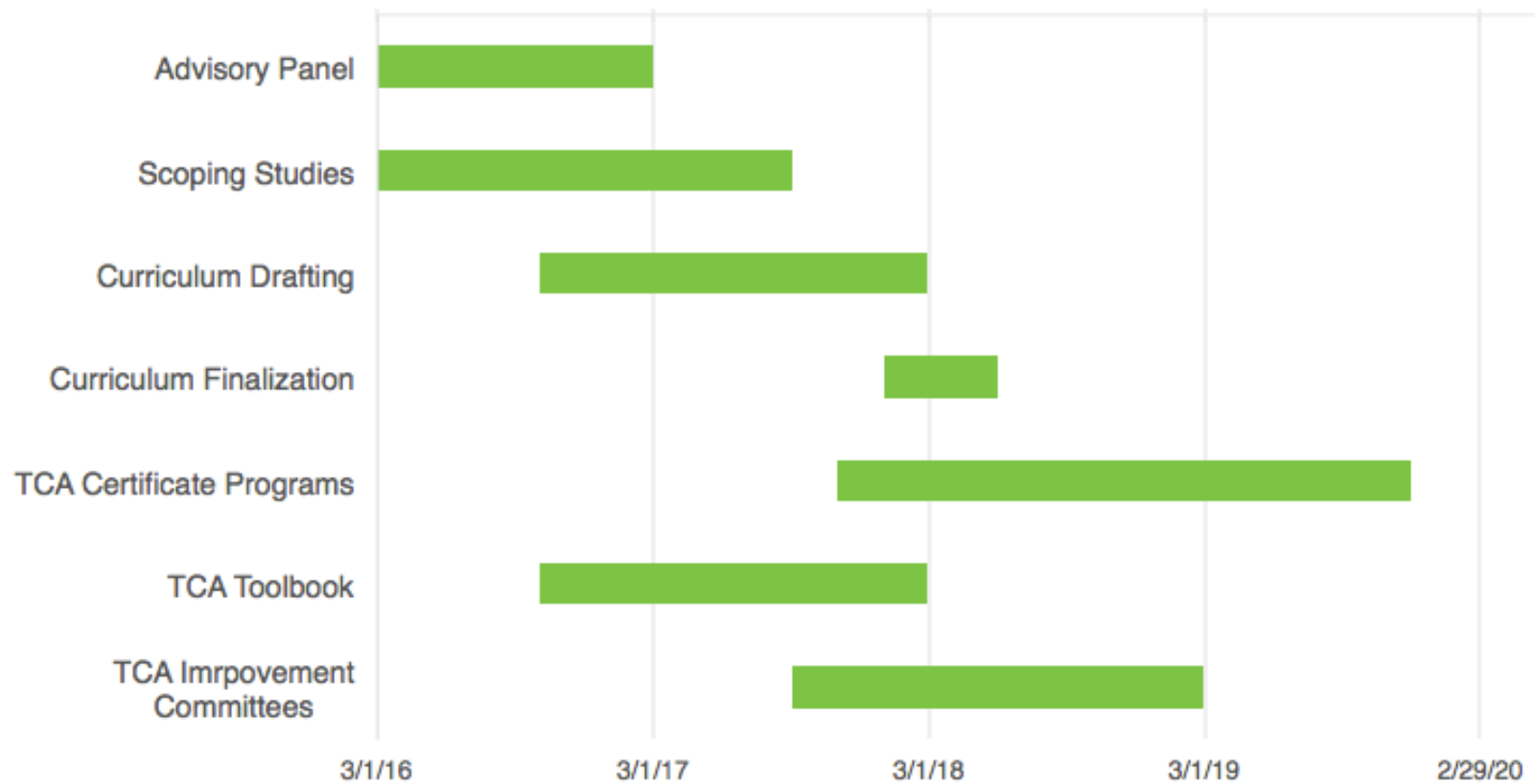
# The Carbon Institute: Broad Workplan



- 1) Organize an international advisory panel to provide high-level guidance
- 2) Conduct country-specific research on existing TCA academic programs
- 3) Identify unfilled country TCA needs, academic gaps, and TCA Certificate opportunities
- 4) Help CCROM and FCAMC develop and run nationally-tailored TCA certificates, based on best practices
- 5) Support sustainability of TCA academic programs
- 6) Provide ongoing support for faculty and alumni of TCA certificate programs



# Timeline





# The Carbon Institute Outputs

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- High-Level Panel Recommendations
- 3 Scoping Studies: existing TCA programs, TCA gaps/unmet needs, business model opportunities
- Curriculums from menu of 6 integrated courses
- Faculty mentoring and support
- Accredited TCA Certificate Programs
- TCA Toolbook (Help TCA Certificates thrive)
- TCA Improvement Committees

# Four Challenges/Opportunities

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1. Build the right management teams, cross-cultural, that *help the expert academics do their work to the maximum impact*
2. The rules of the German IKI are fairly stringent, we will be audited
3. Speed is of the essence to sign and begin
4. No one has ever done this scale of international academic cooperation, to solve an immediate pressing global problem, using competency-based training

# Thoughts for Discussion

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- What is the best way for us to *creatively* work together to create the most impact?
- What range of TCA Certificates is most needed in Indonesia **now**, and in the **future**
- How much CCROM/IPB mainstream TCA into other academic programs?
- Future funding opportunities, future partnerships

# Terima kasih