Overview of the Second State of the Carbon Cycle Report (SOCCR-2): **Process and Status**

Gyami Shrestha

U.S. Carbon Cycle Science Program Office/ UCAR CPAESS @USGCRP Carbon Cycle Interagency Working Group (CCIWG)

contact: gshrestha@usgcrp.gov

https://CarbonCycleScience.us

USGCRP Meeting with Natural Resources Canada and Environment Canada USGCRP NCO, Washington, D.C. June 14, 2017









































U.S. Carbon Cycle Science Program/CCIWG Mission

To coordinate and facilitate federally funded carbon cycle research, & provide leadership to the USGCRP on carbon cycle science priorities



United States Global Change Research Program



Different interagency working groups



U.S. Government level partnership



Carbon Cycle Interagency Working Group (CCIWG)

U.S. Carbon Cycle Science Program

Programs/ activities with scientific community

Reports, Science Groups, Workshops, Meetings etc.

North American Carbon Program (NACP),

Ocean Carbon & Biogeochemistry Program (OCB)

International partnerships

Global Carbon Project

"Future Earth" Component

CarboNA

U.S., Mexico, Canada government level

e.g. **SOCCR-2**











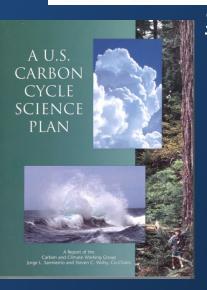












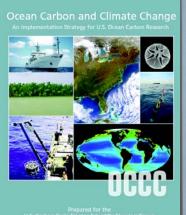
Since 1998: CCIWG instrumental in process of prioritization of U.S. govt. carbon cycle science research themes

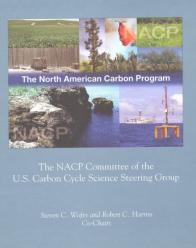
What we do:

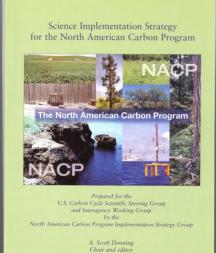
- **Promote** interagency cooperation and coordination;
- Help secure funding, prepare individual & joint agency initiatives & solicitations; and
- Involve the scientific community in providing the needed science to understand the carbon cycle

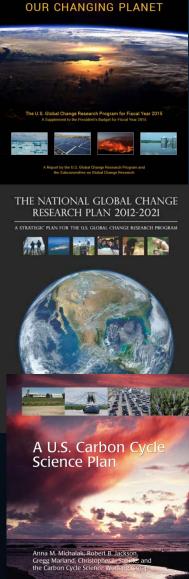


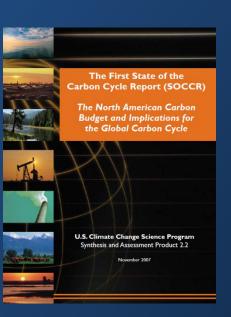










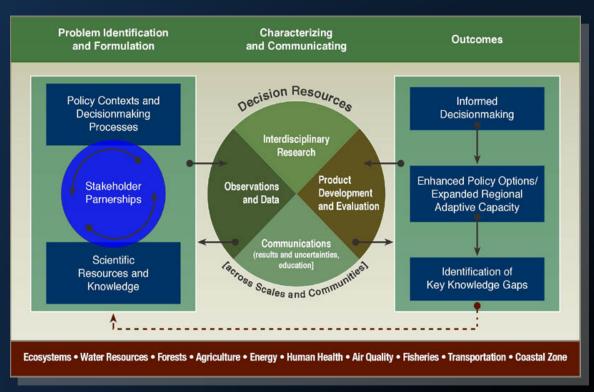


1st State of the Carbon Cycle Report: SOCCR-1 (2007)

- The North American Carbon Budget and Implications for the Global Carbon Cycle
 - Synthesis and Assessment Product

2 major goals of SOCCR-1 (2007)

- 1. To summarize scientific knowledge about carbon cycle properties and changes for North America.
- 2. To provide scientific information for decision support and policy formulation concerning carbon.



U.S. Climate Science Program (now U.S. Global Change Research Program) Decision Support Strategy

10 years later: SOCCR-2

- Follow-up to the 1st SOCCR (2007)
- Led by CCIWG
- Lead Administrative agency is USDA.
- U.S. and North American carbon stocks and fluxes in managed and unmanaged systems
- Including relevant carbon management science perspectives and tools for supporting and informing decisions addressed in/related to US Carbon Cycle Science Plan (2011) and National Climate Assessment, USGCRP 2012-2021 Strategic Plan (2012-2021)

SOCCR-2 broad assessment framework

- 1. Carbon Cycle at Scales (Global Perspective, North American Perspective, U.S. Perspective, Regional Perspective)
- Interactions/Disturbance/Impacts from/on the carbon cycle
- 3. Role of carbon in systems (Soils, Water, Oceans, Vegetation, Terrestrial-aquatic Interfaces)
- 4. Carbon Management Science Perspective and Decision Support (measurements, observations and monitoring for research and policy relevant decision-support etc.)

SOCCR-2	#	State of the Science – Chapters - Draft	Required sections for each chapter	
		Preface/motivation for the report/ advances since SOCCR-1	i. Key Message/ Findings/Highlights (incl.	
		Governmental, intergovernmental and interagency context	traceable accounts - see examples from Health and NCA supporting evidence)	
Part I		Executive Summary	and <u>Non</u> cappering endence,	
Synthesis	1	What is the C cycle and why care/the C cycle in a global context	ii. Introduction	
Cynthicolo	2	North American C budget past, present, and future		
Part II	3	Energy Systems (incl. Transportation)	iii. Historical context (incl. socioeconomic	
Human	4	Urban	drivers of carbon emissions)	
Dimensio	5	Agriculture	iv. Current State of Carbon Cycle	
ns of the	6	Societal Perspective on Carbon	Understanding of Fluxes and Stocks	
C Cycle	7	Tribal Lands	v. Indicators, Trends, Feedbacks	
Dort III.	8	Atmosphere	v. maioatore, fremae, i ecapacite	
Part III: State of	9	Forests	vi. North American	
Air, Land	10	Grasslands	and Global Context, Regional Perspective	
and Water	11	Arctic/Boreal/Permafrost regions	NCA regionsU.S., Mexico, Canada	
	12	Soils	Arctic, Tropics, <u>RECCAP</u>	
	13	Terrestrial Wetlands		
	14	Inland waters	vii. Societal drivers and impacts, carbon	
Part IV: Conseque nces and ways forward	15	Tidal wetlands and estuaries (incl. blue carbon)	management and decisions	
	16	Oceans and continental Shelves (oceans, methane hydrates etc.)	viii. Synthesis, conclusions, gaps in knowledge,	
	17	Consequences of rising atmospheric CO2 (e.g. ocean acidification)	and (near) future outlookoverarching synthesis of the current state	
	18	Decision-support (social, behavioral, economic)	of the carbon cyclekey knowledge gaps/ opportunities and	
	19	Future projections and associated climate change in North America	near-term outlook on the North American carbon cycle	







Lead agency: **USDA** (legal)

Carbon Cycle Science Interagency Working Group (CCIWG)

+ SOCCR-2 Federal Steering Committee

U.S. Carbon Cycle Science Program Office (i.e. Gyami Shrestha

+ logistical support from UCAR CPAESS Boulder, Colorado)

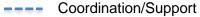
Federal Liaisons for each chapter

5 SOCCR-2 Science Leads (Fed + non-Fed scientists)

Oak Ridge Editorial Team (reports to DOE)

Chapter Leads, **Chapter Contributors** (Fed + non-Fed scientists)

Reporting









SOCCR-2 DECISION PROCESS



FSC ensures delivery of high-quality report for approval and release as a **USGCRP** document

FSC keeps SGCR informed; seeks SGCR approval on strategic items as needed

Lead agency **USDA** (legal)

Carbon Cycle Science Interagency Working Group (CCIWG)

+ SOCCR-2 Federal Steering Committee (FSC)

FSC Makes/approves decisions

Reports to FSC, provides input to and feedback on FSC decisions

Federal Liaisons for each chapter

U.S. Carbon **Cycle Science Program Office** (Gyami Shrestha) Facilitates CCIWG + FSC decisions + communications+ conveys/ implements FSC decisions. contributes to report conceptualization. drafting etc.

5 SOCCR-2 Science Leads (Fed + non-Fed scientists)

Report to SL+ fed liaison, provide input to and feedback on FSC decisions

SL implement **FSC** decisions

Oak Ridge Editorial Team (reports to DOE)

Chapter Leads, **Chapter Coordinators, Contributors** (Fed + non-Fed scientists)

Reporting

Coordination/Support

Who's Who (SOCCR-2 Team so far)

CCIWG SOCCR-2 Fed Steering Committee and USGCRP	Organization
Nancy Cavallaro (Administrative Lead Agency POC + CCIWG co-chair)	USDA-NIFA*
Zhiliang Zhu (CCIWG co-chair)	USGS
Dan Stover	DOE Office of Science
Erica Ombres	NOAA OA
Tom Wirth	EPA
Kathy Hibbard	NASA
Marlen Eve	USDA ARS
Carolyn Olson	USDA OCE
Noel Gurwick	USAID
Ben DeAngelo (Deputy Executive Director) (prior to Dec 2016)	USGCRP
Glynis Lough (NCA Chief of Staff) (prior to Sept 2016)	USGCRP/UCAR
Gyami Shrestha (U.S. Carbon Program Office Director)	CCIWG/ UCAR @USGCRP USGCRP & CCIWG POC for SOCCR-2

Federal Liaisons (in addition to the Fed Steering Committee members)

Karina Schafer (NSF), Anne Marsh (USDA FS), Laura Lorenzoni (NASA), Jim Butler (NOAA), Eric Kasischke (NASA), Kathy Tedesco (NOAA), Libby Larson (NASA/SSAI)

Science Leads	
Rich Birdsey	USDA FS (retired)
Melanie Mayes	ORNL
Ray Najjar	PSU
Sasha Reed	USGS
Paty Romero-Lankao	UCAR/NCAR

SOCCR-2 Writing Team (200+)

Chapter Leads + Contributors + ORNL Editing Team

*USDA is the Administrative Lead Agency for SOCCR-2.

Abhishek Chatterjee Adnin R. Kosenblatt Adnin R. Kosenblatt Evan S. Kane Adnin R. Kosenblatt Evan S. Kane Alon K. Kosenblatt Format Information Andrew R. Jacobson Anne M. Michalde Anne M. Michalde Format Mulicr-Korger Anne M. Michalde Format Mulicr-Korger Alon K. Kosenblatt Format Mulicr-Korger Format Mulicr-Korger Format Militra Mosezia Mulitra Mu	A. David McGuire	Elizabeth L. Malone	Melissa Lucash Wei-Jun Cai
Adriene C. Finzi Adriene C. Station Live S. Kane Adriene C. Station Live S. Kane Mithan Moezzi Milham Milham Milham Moezzi Milham Milham Milham Moezzi Milham Milham Milham Milham Moezzi Milham Milh	Abhishek Chatterjee	Emily McGlynn	Michele Betsill Wenwu Tang
Adricame J. Satton Alon K Knapfeirov Eelik Creutzig Alon K Knapfeirov Felik Creutzig Andrew R. Jacobson Andrew R. Jacobson Anna M. Michalak Anthony Walker Anna M. Michalak Anthony Walker Gram Domke Cram Domke			
Alan K Knapp Alexander N Hristov Hernando Faz Pellat Alexander N Hristov Frank Muller-Karger Grant Domke Anthony Walker Anthon			
Alexander N. Hristov Andrew R. Jacobson Forest Hoffmager Anthony Walker Anthony Walker Anthony Walker Anthony Walker Anthony Walker Basal El Maser Basal El Maser Ben Poulter Greicher Keppek-Alek Guido Franco Grant Domke Gustaf Higglins Greicher Keppek-Alek Guido Franco Grant Domke Gustaf Higglins Greicher Keppek-Alek Guido Franco Gustaf Higglins Greicher Keppek-Alek Guido Franco Gustaf Higglins Greicher Keppek-Alek Guido Franco Gustaf Higglins Grant Domke Gustaf Higglins Greicher Keppek-Alek Guido Franco Gustaf Higglins Grant Domke Gustaf Higglins Grant Domke Gustaf Higglins Grant Domke Gustaf Higglins Grant Domke Gustaf Higglins Gyami Shrestha Gyami Shrestha Gyami Shrestha History Grant Domke Gustaf Higglins Gyami Shrestha Gyami Shrestha History Grant Domke Gustaf Higglins Greicher Keppek-Alek Pamela II. Templer Paty Romero-Lankou Pany Vlahox Penny Vlaho			
Andrew R. Jacobson Anna M. Michalak Basai Ri Hasar Guido Grance Guido Grose Guido Grose Guido Grose Guido Grose Guido Grose Anna M. Guido France Anna M. Guido France Guido Grose Guido Grose Guido Grose Anna M. Guido France Anna M. Guido France Anna M. Guido France Bendan Rogers Brim Benscoter Brim Be			
Annha M. Michalalak Anthony Walker Anthony Walker Anthopy Walker Bene de Jong Ben Poulte Bene de Jong Ben Poulte Coyant Shresth Beverly Ramsey Bene de Jong Bene Belong Ben			
Anthony Walker Ashley Ballautyne Bassi El Masn Bassi El Masn Bassi El Masn Bassi El Masn Ben Poulte Guido Franco Guido Fra			
Ashley Ballantyne Basai El Masari Ben de Jong Ben Jamin L. Preston Benjamin McConkey Benjamin McConnes Benjamin McConnes James McMahon Jilise Predium McMedal John B. Millen Benjamin Benjamin L. Preston Benjamin McConnes John B. Millen Benjamin Benjamin McConnes John B. Millen Benjamin Benjamin Benjamin L. Preston Benjamin L. Preston Benjamin Benjamin Benjamin Bushen Benjam Be			
Bassif El Masri Ren de Jong Ren Poulter Ren			
Ben de Jong Ben Poulter Benn Poulter Benn Poulter Benn Poulter Benn McConkey Benn McCo			±
Ben Poulter Benjamin L. Preston Barlon Benjamin L. Preston Benjamin Benjam Bendan Roger J. Martin Hernandez-Ayon Barlon Benjamin Benjam Bendan Roger Brian Bensactor Barlon Benjamin Bent Benty Ben			
Benjamin L. Preston Benjamin R. K. Runkle Beverty Ramsey Benjamin R. K. Runkle Beverty Ramsey Brian McConkey Brian Benscoter Brian McConkey Brian Tangen Carl Trettin Carolyn Smyth Charles S. Hopkinson Charles S. Hopkinson Charles S. Hopkinson Charles S. Hopkinson Christopher A. Williams Christopher A. Williams Christopher M. Gough Christopher William Woodal Christopher William Woodal W Cornor Gately Curris J. richardson Daniel J. Hayes Daniel J. Hayes Daniel J. Hayes Darner Pilcher Daniel J. Hayes David Legomasino David J. Sailor David J. Sailor David Legomasino David Legomasino David Legomasino David Legomasino David Legomasino David Legomasino David Pere David Pere David Pere David Pere David Defeit David Pere Davi			E E
Benjamin R. K. Runkle Beverly Ramsey Bob Haight Brian Benesorer Brian Benesorer Brian McConkey Brian Tangen C. Alan Rotz Carl Trettin Charles S. Hopkinson Charles W. Rice Charles S. Hopkinson Charles W. Rice Chris Neigh Christopher A. Williams Christopher A. Williams Christopher Kennedy Christopher Williams Christopher Wil			
Bob Haight Brendan Rogers Brian Benscoter Brian Benscoter Brian Hernandez-Ayon J. Martin Hernandez-Ayon Jane M. F. Johnson Jane M. F. Johnson Jane M. H. Goloba Jane M. H. Goloba Jane M. H. J. Octor J. Martin Hernandez-Ayon Jane M. F. Johnson Jane M. H. J. Octor Jane M. J. Martin Hernandez-Ayon J. Martin Hernandez-Ayon Jane M. H. J. Octor Jane M. H. J. Octor Jane M. H. J. Octor Jane M. J. Martin Hernandez-Ayon Jane M. H. J. Octor Jane M. H. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Octor Jane M. J. Martin Hernandez Jane M. J. Octor Jane M. J. Martin Hernandez John W. Cotal John B. Miller John		Henry Janzen	Peter Raymond
Brian Benscoter Brian McConkey Brishard Bridsey Richard Conant Richard	Beverly Ramsey	Howie Epstein	R. Howard Skinner
Brian Benscoter Brian McConkey Brian Tangen C. Ann Rez Carolyn Smyth Charles R. Hopkinson Charles W. Rice Christopher A. William Woodall Christopher Potter Condulation Charles W. Milliam Woodall Christopher Potter Condulation Charles W. Brian Woodall Christopher Potter Condulation Charles W. Brian Woodall Christopher Potter Condulation Christopher Condulation Christopher Condulation Christopher Condu	Bob Haight	Ilissa Ocko	R.A. Houghton
Brian McConkey Brian Tangen C. Alan Rotz C. Alan Rotz Carl Trestly Card Trestly Charles S. Hopkinson Charles W. Rice Chris Neigh Chris Swanston Charles W. Rice Chris Neigh Christopher A. Williams Christopher A. Williams Woodall Christopher William Woodall Cindy Shaw Conor Gardy Con			
C. Alan Rorz Carl Trettin Carolyn Smyth Charder Gir Charles S. Hopkinson Charles W. Rice Richard Birdsey Richard Birdsey Richard Birdsey Richard Birdsey Richard Conant Richard Steely Rich			Randy Kolka
C. Alan Rorz Carl Trettin Carolyn Smyth Charder Gir Charles S. Hopkinson Charles W. Rice Richard Eindesy Richard Eindesy Richard Groant Richard Eindesy Richard Conant Richard Eindesy Richard Eindesy Richard Eindy Richard Eindesy Richard Eindy Richa			Ray Najjar And more
Carl Trettin Carolyn Smyth Chandra Giri Charles W. Rice Charles W. Rice Charles W. Rice Christ Swanston Christopher A. Williams Christopher A. Williams Christopher M. Gough Christopher M. Gough Christopher William Christopher A. William Christopher			Kelle Kellip
Carolyn Smyth Chandra Giri Charles S. Hopkinson Charles W. Rice Chris Neigh Christopler W. Rice Christopler M. Gough Christopher M. Gough Christopher Potter Christopher William Woodall Cindy Shaw Conor Gately Conor Gately Daniel J. Hayes Daniel J. Hayes Daniel Riceiuto Daniel Turk Darrel Cerkowniak Darren Pilcher David D. P. W. Krams David Clow David Lagomasino David J. P. Moore David J. M. Wear David Glow David J. M. Wear David Glow David Lagomasino David J. M. Wear David J. S. M. Wear David J.			
Charles S. Hopkinson Charles W. Rice Chris Neigh Chris Swanston Christopher A. Williams Christopher Poter Christopher Poter Christopher Poter Christopher William Woodall Cindy Shaw Conor Gately Courris J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Riceiuto Daniel Riceiuto David Butman David Glow David Glow David Glow David J. Sailor David J. Sailor David J. Sailor David J. Wear David Glow David J. Sailor David J. Wear David Glofelt David Parc David Robert Struse David Glow David J. Sailor D			
Charles S. Hopkinson Charles W. Rice Chris Neigh Chris Swanston Christon Schädel Christopher A. Williams Christopher M. Gough Christopher M. Gough Christopher W. Gristopher M. Gough Christopher William Woodall Cindy Shaw Conor Gately Curris J. richardson Daniel Ricciuto David J. Sail or Dav			
Charles W. Rice Chris Neigh Chris Swanston Christopher A. Williams Christopher A. Williams Christopher Mennedy Con Carlother C			Pichard Fooly
Chris Swanston Christonker A. Williams Christopher M. Gough Christopher M. Gough Christopher M. Gough Christopher W. Gollston Christopher W. Gough Christopher W. Gollston College Carabamoff Sara Hughes Sa	*		Rilay Duran
Chris Swamston Christon Schädel Christopher A. Williams Christopher M. Gough Christopher M. Gough Christopher M. Gough Christopher Wennedy Christopher William Woodall Cindy Shaw Conor Gately Curtis J. richardson Daniel GB. Richter Daniel J. Hayes Daniel J. Hayes Daniel Ricciuto Daniel a Turk Daniel a Turk Darrel Cerkowniak Darrel Pilcher Dave McGuire David G. Sailor David G. Sailor David J. Sailor David			Rita M S YII
Christina Schiädel Christopher A. Williams Christopher A. Williams Christopher M. Gough Christopher M. Gough Christopher M. Gough Christopher W. Gough Christopher W. Glough Christopher W. Gough Christopher W. Glough Christopher W. Glough Christopher W. Glough Christopher W. Gough Christopher W. Glough Christopher W. Golffer Sara Ohrel Sara Hughes Sara Ohrel Collaborative partnership Sara Hughes Sara Ohrel Collaborative partnership Sara Hughes Sara Ughes Sara Chrel Sara Cheleki Sara Hughes Sara Chrel Sara Chrel Sara Chrel Sara Chrel Sara Cheleki Sara Chrel Sara Chrel Sara Chrel Sara Chrel Sara Chrel			
Christopher M. Gough Christopher M. Gough Christopher M. Gough Christopher Potter Christopher Potter Christopher William Woodall Cindy Shaw Conor Gately Curtis J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Aruk Darrel Cerkowniak Darren Pilcher Davie McGuire David Clow David J. Sailor Scientists Scientist Scienti			
Christopher M. Gough Christopher M. Gough Christopher M. Gough Christopher Potter Christopher Potter Christopher William Woodall Cindy Shaw Conor Gately Curtis J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Aruk Darrel Cerkowniak Darren Pilcher Davie McGuire David Clow David J. Sailor Scientists Scientist Scienti			Robert Striegl SULUR-Z AUTHORS
Christopher Potter Christopher William Woodall Cindy Shaw Conor Gately Curtis J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Ricciuto Daniel Ricciuto Daniel Turk Darrel Cerkowniak Darren Pilcher David Low David J. Sailor David J. Wear David Lagomasino David J. Wear David Glefelt David Paré David Glefelt David Paré David Paré David Paré David Paré David Lagomasino David N. Wear David Paré Deborah Huntzinger Denis Angers Diane Pataki Dorothy M. Peteet Melissa S. Lucash Bilissebeth Larson Elisse Pendall Dorothy M. Peteet Melissa S. Lucash Elisse Pendall Dorothy May-Linn Paulsen Dorothy May		John Phillips	Rodney Allen CHimner
Christopher William Woodall Cindy Shaw Conor Gately Curtis J. richardson Daniel deB. Richter Daniel Ricciuro Daniel Ricciuro Daniel Ricciuro Daniel Ricciuro Daniel Ricciuro Daniel Turk Darrel Cerkowniak Darren Pilcher David Glow David J. Sailor David Alagomasino David Lagomasino David Alagomasino David Pare David Pare Deborah Huntzinger Deborah Huntzinger Deborah Huntzinger Deborah Huntzinger Dominique Bachelet Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elise Pendall Joshua S. Eisher Joshua K. Schimel Judith Drexler Karins MCFarlane Karins MCFarlane Karis MCFarlane Karth Hubbard Katja Fennel Scara Ohrel Sara Ohrel Sara Hughes Sara Ohrel Sarah Hughes Sara Ohrel Sarah Hughes Sara Ohrel Sarah Hughes Sara Ohrel Sarb Hughes Sarb	Christopher M. Gough	John W Coulston	
Sara Hughes Sara Ohrel Sara Alughes Sara Ohrel		•	
Cindy Shaw Conor Gately Coro Gately Curtis J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Ricciuto Daniel a Turk Darrel Cerkowniak Darrel Cerkowniak Darrel Pilcher David Butman David Clow David J. Sailor David J. Wear David J. Wear David Jagomasino David N. Wear David Paré Deborah Huntzinger Denis Angers Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisae Pendall Judith Drexler Karina VR Schäffer Sarah Cooley Sarah Hughes Sarah Stackpoole Sarah Stackpoole Sarah Hughes Sarah Stackpoole Sarah Stackpoole Sarah Hughes Sarah Hughes Sarah Cooley The Jugha May Luch Luch Luch Sarah Called Pare Scott D. Bridgham Scott D.			
Curtis J. richardson Daniel deB. Richter Daniel J. Hayes Daniel Ricciuto Daniel Ricciuto Daniel Turk Darrel Cerkowniak Darren Pilcher Dave McGuire David Butman David J. Sailor David Lagomasino David J. Wear David Paré Debirs Angers Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa Sarah Cooley Collaborative partinersnip Sarah Hughes Sarah Stackpoole Sasha Reed Scott D. Bridgham Scott V. Ollinger Sean Schaeffer Sen Scheeffer Sean Schaeffer Sean Schaeffer Sen Scheif S Scientists Scientistis Scienti			
Caillis J. Hardson Daniel deB. Richter Daniel J. Hayes Daniel Ricciuto Darler Cerkowniak Darrel Cerkowniak Darrel Piloher Dave McGuire Dave McGuire David Butman David Low David Low David Lagomasino David I. Sailor David Paré David Paré Deborah Huntzinger Deborah Huntzinger Denis Angers Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisse Pendall Name Lajiha Katherine E O Todd-Brown Kathy Hlbbard Katherine E O Todd-Brown Kathy Hlbbard Sarah Stackpoole Sasha Reed Scott D. Bridgham Scott V. Ollinger Serita D. Frey Sharon Billings Sheel Bansal Shuguang Liu Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen J Del Grosso Steven E. Lohrenz Ted Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			Sara Ohrel Collaborative narthership
Caillis J. Hardson Daniel deB. Richter Daniel J. Hayes Daniel Ricciuto Darler Cerkowniak Darrel Cerkowniak Darrel Piloher Dave McGuire Dave McGuire David Butman David Low David Low David Lagomasino David I. Sailor David Paré David Paré Deborah Huntzinger Deborah Huntzinger Denis Angers Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisse Pendall Name Lajiha Katherine E O Todd-Brown Kathy Hlbbard Katherine E O Todd-Brown Kathy Hlbbard Sarah Stackpoole Sasha Reed Scott D. Bridgham Scott V. Ollinger Serita D. Frey Sharon Billings Sheel Bansal Shuguang Liu Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen J Del Grosso Steven E. Lohrenz Ted Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			Sarah Cooley Collaborative partite Silip
Daniel J. Hayes Daniel Ricciuto Dariel Cerkowniak Estih Paustian Ketih Paustian Keith Paustian Keith Paustian Ken W. Krauss Kenneth Davis Serita D. Frey Sharon Billings Sheel Bansal Shuguang Liu Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephanie Pincetl Stephen Ogle Stephen Dogle Steven Davis Stev			Sarah Hughes
Daniela Turk Darrel Cerkowniak Darren Pilcher Dave McGuire David Butman David Clow David J. Sailor David J. Moore David J. Sailor David J. Sai			Sarah Stackpoole
Daniela Turk Darrel Cerkowniak Darren Pilcher Dave McGuire David Butman David Clow David J. Sailor David J. Moore David J. Sailor David J. Sai			Sout D. Bridgham WITH US. IVIX and CA
Darrel Cerkowniak Darren Pilcher Dave McGuire David Butman David J. Sailor David J. Sailor David J. Sailor David Lagomasino David N. Wear David Olefelt David Paré Deborah Huntzinger Deborah Huntzinger Denis Angers Dianne Pataki Dianna Hogan Dominique Bachelet Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Keith Paustian Ken W. Krauss Ken W. Krauss Ken W. Krauss Sean Schaeffer Sharron Billings Sharon Billings Sharon Billings Sharon Billings Sheel Bansal Sharon Billings Sharon Billings Sheel Bansal Sharon Billings Sheel Bansal Shoel Bansal Shoel Bansal Sheel Bansal Sharon Billings Sheel Bansal Sheel Bansal Sharon Billings Sheel Bansal Sheel Ba			Scott Denning
Darren Pilcher David McGuire David Butman David Clow David J. Sailor Sheel Bansal Sheel Bansal Sheel Bansal Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephanie Pincetl Stephen J Del Grosso Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Thea Whitman Thea Whitman Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
David Butman David Clow David Clow David J. Sailor Simone Alin Simone Alin Sourish Basu Siephanie Pincetl Stephanie Pincetl Stephen J Del Grosso Stephen J Del Grosso Stephen Ogle Steven Davis Steven E. Lohrenz Daina Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall May-Linn Paulsen Sharon Billings Sharon Simple Sharon Billings Sharon Billings Sharon Simple Sharon Shuguas In Sharon Simple Manea Sian Mooney Sian M			Sean Schaeffer SCIENTISTS
David Butman David Clow David J. Sailor David JP Moore David Lagomasino David Olefelt David Paré David Paré David Paré Deborah Huntzinger Denis Angers Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Kevin Robert Gurney Kimberly P. Wickland Kristofer Johnson Kristofer Johnson Sheuguang Liu Sharon Billings Sheel Bansal Sheel Bansal Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Steven Davis Steven E. Lohrenz Ted Schuur Tristram O. West Umakant Mishra Upendra M. Sainju			Serita D. Frey
David J. Sailor David J. Moore David Lagomasino David N. Wear David Olefelt David Paré Deborah Huntzinger Denis Angers Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisa Poten Elisa Poten David J. Sailor Lawrence B. Flanagan Lawrence B. Flanagan Sian Mooney Simone Alin Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju	David Butman	Kevin Robert Gurney	
David JP Moore David Lagomasino David N. Wear David Olefelt David Paré Deborah Huntzinger Denis Angers Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisa Pendall David JP Moore Lawrence B. Flanagan Lesley Ott Simone Alin Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju	David Clow	Kimberly P. Wickland	Sheel Bansal
David Lagomasino David N. Wear David Olefelt David Paré Deborah Huntzinger Denis Angers Dianne Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elise Pendall Lesley Ott Leticia Barbero Loti Barbero Sourish Basu Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Stephen Davis Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
David N. Wear David Olefelt David Paré Deborah Huntzinger Denis Angers Diane Pataki Dominique Bachelet Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elise Pendall Lisa Robbins Lisa Robbins Lisa Robbins Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Tristram O. West Umakant Mishra Upendra M. Sainju			
David Olefelt David Paré David Paré Deborah Huntzinger Denis Angers Dianne Pataki Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Lisa Robbins Lisa Robbins Lisa Robbins Lisa Robbins Stephanie Pincetl Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
David Paré Deborah Huntzinger Deborah Huntzinger Denis Angers Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Lisamarie Windham-Myers Loren Lutzenhiser Loren Lutzenhiser Stephen J Del Grosso Stephen Ogle Steven Davis Steven Davis Steven E. Lohrenz Ted Schuur Tred Schuur Thea Whitman Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
Deborah Huntzinger Denis Angers Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Loren Lutzenhiser Loren Lutzenhiser Loren Lutzenhiser Stephen Ogle Steven Davis Steven E. Lohrenz Ted Schuur Thea Whitman Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			•
Denis Angers Diane Pataki Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Lori Bruhwiler Lucy R. Hutyra Margaret M Skutsch Margaret M Skutsch Ted Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
Diane Pataki Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Lucy R. Hutyra Margaret M Skutsch Margaret M Skutsch Margaret M Skutsch Maria Janowiak Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
Dianna Hogan Dominique Bachelet Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Baria Tzortziou Mark P. Waldrop Maureen I. McCarthy Elise Pendall Margaret M Skutsch Maria Janowiak Maria Tzortziou Mark P. Waldrop Maureen I. McCarthy May-Linn Paulsen Tried Schuur Thea Whitman Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
Dominique Bachelet Maria Janowiak Thea Whitman Dorothy M. Peteet Melissa Maria Tzortziou Timothée Bourgeois S. Lucash Mark P. Waldrop Tristram O. West Elisabeth Larson Maureen I. McCarthy Umakant Mishra Elise Pendall May-Linn Paulsen Upendra M. Sainju			
Dorothy M. Peteet Melissa S. Lucash Elisabeth Larson Elise Pendall Maria Tzortziou Mark P. Waldrop Maureen I. McCarthy May-Linn Paulsen Timothée Bourgeois Tristram O. West Umakant Mishra Upendra M. Sainju			
S. Lucash Mark P. Waldrop Tristram O. West Elisabeth Larson Maureen I. McCarthy Elise Pendall May-Linn Paulsen Upendra M. Sainju	-		
Elisabeth Larson Maureen I. McCarthy Umakant Mishra Elise Pendall May-Linn Paulsen Upendra M. Sainju			
Elise Pendall May-Linn Paulsen Upendra M. Sainju			
Dischart D. Wassen Mand Allian No. 1			Upendra M. Sainju
	Elizabeth B. Watson	Mead Allison	Vanessa Bailey
Elizabeth H. Shadwick Melanie A. Mayes Vladimir Romanovsky	Elizabeth H. Shadwick	Melanie A. Mayes	Vladimir Romanovsky

Major SOCCR-2 PROCESS & MILESTONES (As of June 14, 2017)

Draft Prospectus + Approval by SGCR Principals

May 20, 2015

1st scoping workshop with community scientists

May 27-28, 2015

Public Forum & 1st kick-off preliminary authors' workshop

Feb 2-3, 2016

30-day FRN released by USDA NIFA Feb 12, 2016

FRN closed, Nominations reviewed, Outline revised

March 14, 2016 - April 2016 Decisions
Invitations to
chapter leads +
contributors
May-June 2016

Intro process webinars with Chapter Leads May-June 2016 **Drafting chapters**

June 2016 - June 2017

1st Order Draft Review by CCIWG Sept 2016

2nd Order Draft Review by CCIWG, SGCR Principals Nov 2016

3rd Order Draft Reviews by CCIWG, SGCR Principals, and Author revisions Feb 2017- July 2017

Final Report Release Spring 2018

More Author Revisions with CCIWG and USGCRP agency reviews Sept 2017-Feb 2018



NRC + public review July-Sept 2017 (approx.)

NAS Committee to Review SOCCR-2: Released for comments May 11, 2017

The review will provide an overall critique of the draft SOCCR-2 and will address the following questions: (In http://dels.nas.edu/basc/Studies-In-Progress)

- Are the goals, objectives and intended audience of the product clearly described in the document? Does the report meet its stated goals?

 Does the report accurately reflect the scientific literature? Are there any critical content areas missing from the report?
- Are the findings documented in a consistent, transparent and credible way?
- Are the report's key messages and graphics clear and appropriate? Specifically, do they reflect supporting evidence, include an assessment of likelihood, and communicate effectively?
 - Are the research needs identified in the report appropriate? Are the data and analyses handled in a competent manner? Are statistical methods applied appropriately?
- Are the document's presentation, level of technicality, and organization effective? What other significant improvements, if any, might be made in the document?

Ongoing: Internal SOCCR-2 Writing and Reviews, other prep

- Planned June 23, 2017 start of 4-week 3rd order draft review prior to NAS + Public Review
- Iterative Federal feedback
- Iterations with chapter leads
- Revisions
- Deliberations with USGCRP regarding

SGCR and OSTP Clearance needs for public and NRC review



contact:

gshrestha@usgcrp.gov

https://CarbonCycleScience.us

