

T3-001

**CARBON SEQUESTRATION THROUGH SILVOPASTORAL SYSTEMS UNDER SEMI ARID TROPICAL ENVIRONMENT**

Ram Krishna Bhatt, Sharmila Roy, H.S. Tiwari (Jhansi/IN), R.B. Yadava (Varanasi/IN), M.J. Baig (Cuttack/IN)

T3-002

**The role of carbon cycle observations and knowledge in carbon management**

Bienvenu Mbiye Kalumbu (Kinshasa/CG, Cape Town/ZA)

T3-003

**Effect of Land Cover Changes on Soil Physico-chemical Properties in Northern Iran**

Mostafa Emadi, Majid Baghernejad (Shiraz/IR)

T3-004

**Comperative ecophysiological study of C3 and C4 weed stands considering the climate change**

Zoltán Németh, Szilárd Czóbel (Gödöll/HU)

T3-005

**Impact of afforestation and climate to the carbon balance of a Japanese cypress forest: a synthesis of ecosystem model, eddy covariance measurements, and tree ring analysis**

Masahito Ueyama, Atsushi Kai, Ken Hamotani, Nobutaka Monji (Osaka/JP), Kazuhito Ichii (Fukushima/JP), Yoshiko Kosugi (Kyoto/JP)

T3-006

**Modelling carbon sequestration and carbon dioxide emission in boreal forest ecosystems of Central Russia under different climate change scenarios and forest management regimes**

Vladimir Shanin, Alexander Komarov, Alexey Mikhailov, Sergey Bykhovets (Pushchino/RU)

T3-007

**Terrestrial greenhouse gas budget using a coupled carbon and nitrogen cycles model VISIT: global simulation and site-scale validation**

Motoko Inatomi (Yokohama/JP), Akihiko Ito (Tsukuba/JP)

T3-008

**Could be the root system of cultured plants an important carbon sink under global change conditions?**

Robert Savé (Caldes de Montbui/ES), Santiago Sabaté (Barcelona/ES), Felicidad de Herralde, Carme Biel, Carolina Miguel (Caldes de Montbui/ES)

T3-009

**Bayesian calibration of the Biome-BGC model for Hungarian grassland ecosystems**

Dora Hidy (Gödöll/HU), Zoltán Barcza (Budapest/HU), László Haszpra (Budapest/HU), Galina Churkina (Müncheberg/DE), Zoltán Nagy, Krisztina Pintér (Gödöll/HU)

T3-010

**Future Ocean Carbonate Compensation Depth and Calcite Saturation Changes: The Hidden Face of Ocean Acidification**

Guy Munhoven (Liege/BE)

T3-011

**Evaluation and improvement of a terrestrial ecosystem model included in an Earth System Model using fluxnet observations**

Takashi Suzuki, Kazuhito Ichii (Fukushima/JP)

T3-012

**Projection of carbon cycle and climate change using spatially explicit individual based dynamic vegetation model coupled to AGCM**

Tomohiro Hajima (Showa-machi/JP)

T3-013

**Global integrated modeling framework for assessing mitigation options in the land-use sector**

Hannes Böttcher, Petr Havlík, Georg Kindermann, Mykola Gusti, Sylvain Leduc, Steffen Fritz, Kentaro Aoki, Florian Kraxner, Ian McCallum, Aline Mosnier, Michael Obersteiner (Laxenburg/AT), Erwin Schmied (Vienna/AT), Uwe Schneider (Hamburg/DE)

T3-014

**Quantification of fossil fuel CO<sub>2</sub> emissions from East Asia using atmospheric observations of Delta 14CO<sub>2</sub>**

Jocelyn Turnbull, Pieter Tans, John Miller, Scott Lehman, Gabrielle Petron (Boulder/US), Jay Gregg (College Park/US)

T3-015

**Response of soil micro flora and fauna associated with semiarid tropical grasses under conditions of elevated CO<sub>2</sub>**

Sharmila Roy, R.K. Bhatt (Jhansi/IN)

T3-016

**Global mapping of terrestrial emissions from biomass burning and land-use change for the use of climate projection**

Etsushi Kato, Michio Kawamiya (Yokohama/JP), Akihiko Ito (Tsukuba, Yokohama/JP)

T3-017

**Technical research and development of environmental assessment for Carbon dioxide Capture and Storage (CCS)**

Kiminori Shitashima (Abiko/JP)

T3-018

**Changes in dead wood temperature, moisture and respiration with burial in the organic layer in old growth high-boreal black spruce stands in Labrador, Canada**

Johanna Gleißner (Freiburg/DE), Ulrike Hagemann (Tharandt/DE), Martin M. Moroni (Corner Brook/CA), Franz Makeschin (Tharandt/DE)

T3-019

**Water-Use Efficiency of forests exposed to elevated tropospheric ozone and/or elevated carbon dioxide**

Sabine U. Barth, Johan Uddling (Göteborg/SE), Ronald M. Teclaw, Mark E. Kubiske (Rhineland/US)

T3-020

**Controls on soil respiration at different scales in old-growth black spruce stands in Labrador, Canada**

Ulrike Hagemann (Tharandt/DE), Martin M. Moroni (Corner Brook/CA), Franz Makeschin (Tharandt/DE)

T3-021

**High CO<sub>2</sub> retained fraction in ocean sequestration estimated by a high resolution model**

Yoshio Masuda (Chiba/JP), Yasuhiro Yamanaka (Sapporo/JP)

T3-022

**Mapping hotspots of soil carbon vulnerability to land use and climatic change**

Axel Don, Annette Freibauer (Braunschweig/DE), Michiel van der Molen, Han Dolman (Amsterdam/NL), Martin Koechy (Braunschweig/DE)

T3-023

**Carbon storage in geological formations: experimental and numerical simulation studies**

Christian Ihrig, Vikram Unnithan (Bremen/DE)

T3-024

**Effects of olive grove management on carbon sequestration in south of Italy**

Ramona Magno, Silvia Baronti, Franco Miglietta (Florence/IT)

T3-025

**Sensitivity of the climate-carbon feedback to CO<sub>2</sub> atmospheric concentration increase rate**

Patricia Cadule (Gif-sur-Yvette/FR), Pierre Friedlingstein (Gif-sur-Yvette/FR), Laurent Bopp (Gif-sur-Yvette/FR)

T3-026

**Requirements for a Global Greenhouse Gas Information System**

Charles Miller (Pasadena/US), Stacey Boland (Pasadena/US), Riley Duren (Pasadena/US)

T3-027

**Water use efficiency as a measure to assess forest carbon uptake for different management strategies**

Maj-Lena Linderson (Roskilde/DK), Teis N. Mikkelsen (Roskilde/DK), Andreas Ibrom (Roskilde/DK), Anders Lindroth (Lund/SE), Kim Pilegaard (Roskilde/DK)

T3-028

**Long-term effects of elevated atmospheric CO<sub>2</sub> on fast-growing Eucalyptus: a case of homeostasis?**

David Ellsworth (Richmond/AU), Craig Barton (Pennant Hills/AU), Markus Loew, Yan-shih Lin, David Tissue (Richmond/AU), Ross McMurtrie (Sydney/AU), Marion Liberloo (Richmond/AU, Antwerp/BE)

T3-029

**Impacts of climatic changes on CO<sub>2</sub> and H<sub>2</sub>O fluxes of boreal forest ecosystems in European part of Russia**

Alexander Olchev, Elena Novenko, Olga Desherevskaya (Moscow/RU), Christina Krasnorutskaya (Rostov-on-Don/RU), Juliya Kurbatova (Moscow/RU)

T3-030

**Carbon Dioxide Emission from Crop- and Grasslands as Influenced by Management Practices**

Upendra Sainju (Sidney/US), William Stevens (Sidney/US) Thecan Caesar-TonThat (Sidney/US), Jalal Jabro (Sidney/US)

T3-031

**Carbon sequestration in Russian Chernozems as a result of land use change**

Irina Kurganova, Valentin Lopes de Gerenyu (Pushchino/RU), Yakov Kurganova (Bayreuth/DE)

T3-032

**Speedup carbon cycle by simulating nature: rapid conversion of CO<sub>2</sub> and biomass into fuel and chemicals by hydrothermal reactions**

Fangming Jin, Jianglin Cao (Shanghai City/CN), Bing Wu (Shanghai City/CN), Heiji Enomoto (Sendai/JP)

T3-033

**Annex1 vs non-annex1 emissions – implications for global greenhouse gas trends**

Alice Bows, Kevin Anderson, R.Shrestha and B.I.Ouedraogo (Manchester/GB)

T3-034

**Nitrous oxide emissions may offset carbon sequestration in urban lawns**

Claudia Czimczik, Amy Townsend-Small, Susan Trumbore (Irvine/US)

T3-035

**A New U.S. Carbon Cycle Science Plan**

Gregg Marland (Oak Ridge/US), Anna Michalak (Ann Arbor/US), Robert Jackson (Durham/US), Chris Sabine (Seattle/US)

T3-036

**Assessment of regional climate-carbon cycle feedbacks using the Bergen earth system model**

Jerry Tjiputra, Karen Assmann, Mats Bentsen, Ingo Bethke, Odd Helge Otterå, Christophe Sturm, Christoph Heinze (Bergen/NO)

T3-037

**The Absorption and Desorption Processes of CO<sub>2</sub> in Aqueous Diethanolamine (DEA) and N-Methyl-diethanolamine (MDEA) Investigated by <sup>13</sup>C NMR Spectroscopy**

Fabrizio Mani, Maurizio Peruzzini, Francesco Barzagli (Sesto Fiorentino/IT)

T3-038

**The Hestia Project: High Spatial Resolution Fossil Fuel Carbon Dioxide Emission Quantification at Hourly Scale in Indianapolis, USA**

Yuyu Zhou, Kevin Gurney (West Lafayette/US), Jim Stout (Indianapolis/US), Daniel Mendoza (West Lafayette/US)

T3-039

**Stability and Solubility of CO<sub>2</sub>-Hydrate in Seawater**

Pavel Tishchenko, Chi Shing Wong, Wm. Keith Johnson (Vladivostok/RU), Matthias Häckel, Klaus Wallmann, Giovanni Aloisi (Kiel/DE)

T3-040

**Carbon dioxide capture at gas emission site by carbonic anhydrase**

Giordano Francechini (Perugia/IT)

T3-041

**How crop management intensities influence GHG emissions and production costs?**

Claudia Di Bene, Enrico Bonari, Simona Bosco, Nicoletta Nassi o Di Nassi, Antonio Coli (Pisa/IT)

T3-042

**Indian dry tropical forest and savanna ecosystems show contrasting responses of nutrient input on carbon and nutrient dynamics**

ShriKant Tripathi, KP Singh (Aizawl/IN)

T3-043

**Natural carbon cycle controls on recovery of atmospheric CO<sub>2</sub>**

Chris Jones (Exeter/GB), Jason Lowe, Spencer Liddicoat (Exeter/GB), Laila Gohar (Exeter/GB)

T3-045

**Natural carbon cycle controls on recovery of CO<sub>2</sub>**

Chris Jones (Exeter/GB), Peter Cox (Exeter/GB)

T3-046

**Large variation in terrestrial ecosystem response to radiatively-equivalent changes in different atmospheric gases**

Chris Huntingford (Wallingford/GB), Peter Cox (Exeter/GB), Lina Mercado (Wallingford/GB), Stephen Sitch (Leeds/GB), Nicolas Bellouin, Olivier Boucher (Exeter/GB)

T3-047

**Anthropogenic impact on the CO<sub>2</sub> and CH<sub>4</sub> exchange and the carbon balance of fen peatlands in NE-Germany**

Jürgen Augustin, Michael Giebels, Merten Minke, Michael Sommer, Madlen Beyer, Baerbel Ehrig, Eva Leitholdt (Müncheberg/DE), Bogdan Chojnicki, Radoslaw Juszczak, Tomasz Serba, Janusz Olejnik (Poznan/PL)

T3-048

**Energy generation and reduction of GHGs by anaerobic treatment of municipal wastes**

Srinivasan S.V., Ravindranath E. (Chennai/IN)

T3-049

**Upscaling of landscape-scale knowledge to improve national-scale soil organic carbon inventories**

Catharina Schulp (Wageningen/NL), Peter Verburg (Wageningen/NL), Gert-Jan Nabuurs (Wageningen/NL), Jos Olivier (Bilthoven/NL)

T3-050

**Coupled nitrogen - carbon cycle simulations for the 21st century with JSBACH-CN**

Bikash Ranjan Parida (Hamburg/DE), Christian Reick (Hamburg/DE), Jens Kattge (Jena/DE), Martin Claussen (Hamburg/DE)

T3-051

**Impacts of changes in tropospheric ozone on land carbon sink - implications for climate change**

Stephen Sitch (Leeds/GB), Peter M. Cox, William J. Collins (Exeter/GB), Chris Huntingford (Wallingford/GB), Olivier Boucher (Exeter/GB)

T3-052

**Variation in soil C output and inputs as influenced by addition of soil amendments with contrasting resource quality in a tropical dryland agroecosystem**

Nandita Ghoshal, S. Singh, KP. Singh (Varanasi/IN)

T3-054

**Response of the carbon fluxes in US croplands to changing climates**

Erandathie Lokupitiya, Scott Denning, Keith Paustian, Ian Baker (Fort Collins/US), Kevin Schaefer (Boulder/US), Katherine Corbin (Clayton South/US), Andrew Schuh (Fort Collins/US)

T3-055

**Earth System Modeling Activities in Japan for CO<sub>2</sub> stabilization**

Michio Kawamiya, Toru Miyama (Yokohama/JP)

T3-056

**Global Forest Carbon Monitoring System for evaluating the carbon emission from forest reduction and degradation: toward a work-site operation**

Akihiko Ito, Minako Adachi, Yoshiki Yamagata (Tsukuba/JP)

T3-057

**Productivity and Carbon Sequestration of Oak Forests in Central Europe: Effects of Management**

Sishir Gautam, Stephan Pietsch, Hubert Hasenauer (Vienna/AT)

T3-058

**Wood burial and storage for permanent carbon sequestration**

Ning Zeng, Jay Gregg (College Park/US), Ben Zaitchik (Baltimore/US), Brian Cook (Washington DC/US)

T3-059

**Conversion of cropland to grassland: increasing or decreasing soil organic carbon?**

Christof Ammann, Jens Leifeld, Pierluigi Calanca, Albrecht Neftel, Jürg Fuhrer (Zürich/CH)

T3-060

**Carbon Stored in Human Settlements: the Conterminous US**

Galina Churkina (Ann Arbor/US, Jena,Müncheberg/DE), Daniel Brown, Gregory Keoleian (Ann Arbor/US)

T3-061

**Dead wood respiration in harvested, burned and old-growth high-boreal black spruce stands in Labrador, Canada**

Ulrike Hagemann (Tharandt/DE), Johanna Gleißner (Freiburg/DE), Martin T. Moroni(Corner Brook/CA), Franz Makeschin (Tharandt/DE)

T3-062

**Soil carbon dynamics under agricultural systems in Australia**

Enli Wang (Canberra/AU), Zhongkui Luo (Canberra/AU,Beijing/CN), Chris J. Smith (Canberra/AU), Osbert J. Sun (Beijing/CN)

T3-063

**Emissions of CO<sub>2</sub> and CH<sub>4</sub> from decomposition of permafrost soil organic carbon under future climate scenarios in ORCHIDEE**

Charles Koven, Pierre Friedlingstein, Philippe Ciais (Gif-sur-Yvette/F), Dmitry Khvorostyanov (Palaiseau/F), Gerhard Krinner (Grenoble/F)

T3-064

**Calcification mediated redistribution of oceanic CO<sub>2</sub> sources and sinks under modelled 21st century ocean acidification**

Paul Halloran, Ian Totterdell (Exeter/GB)

T3-065

**The closed-loop character of a climate - society system under mitigation**

Andrew Jarvis (Lancaster/GB)

T3-066

**Using the ecosys mathematical model to simulate sustainable productivity and greenhouse gas exchange of short rotation willow for biofuel**

Kimlin Metivier, Robert Grant (Edmonton/CA), Ken Van Rees (Saskatoon/CA)

T3-067

**Carbon dynamics along the rotation period of a Quercus cerris forest under coppice management in central Italy**

Luca Beilelli Marchesini (Viterbo/IT), Ana Rey (Almeria/ES), Dario Papale, Riccardo Valentini (Viterbo/IT)

T3-068

**21st Century Carbon-Climate Change as Simulated by the Canadian Earth System Model CanESM1**

C.L. Curry, J.R. Christian, V.K. Arora, G.J. Boer, K.L. Denman, G.M. Flato, J.F. Scinocca, W.J. Merryfield, W.G. Lee (Victoria/CA)

T3-069

**Modeling the Future Global Carbon Balance: Is There a Threshold from Terrestrial Sink to Source in the Near Future? Can We Focus Key Questions and Uncertainties?**

Ronald P Neilson, James M. Lenihan, Dominique Bachelet, Raymond J. Drapek, John Wells (Corvallis/US)

T3-070

**Carbon emission partitioning (CO<sub>2</sub> and CH<sub>4</sub>) from rice paddy in China. Role of management practices**

Alberte Bondeau, Christoph Müller, Sibyll Schaphoff (Potsdam/DE), Alexandre Bouvet, Thuy Le Toan (Toulouse/F), Yao Huang, Wen Zhang, Wenjuan Sun (Beijing/CN), Bingbai Li, Shenbin Yang (Jiangsu/CN)

T3-071

**Carbon dioxide fixation in Mediterranean tree fruit agro-ecosystems**

Adriano Sofo, Christo Xiloyannis, A.M. Palese, G. Celano, G. Montanaro (Potenza/IT)