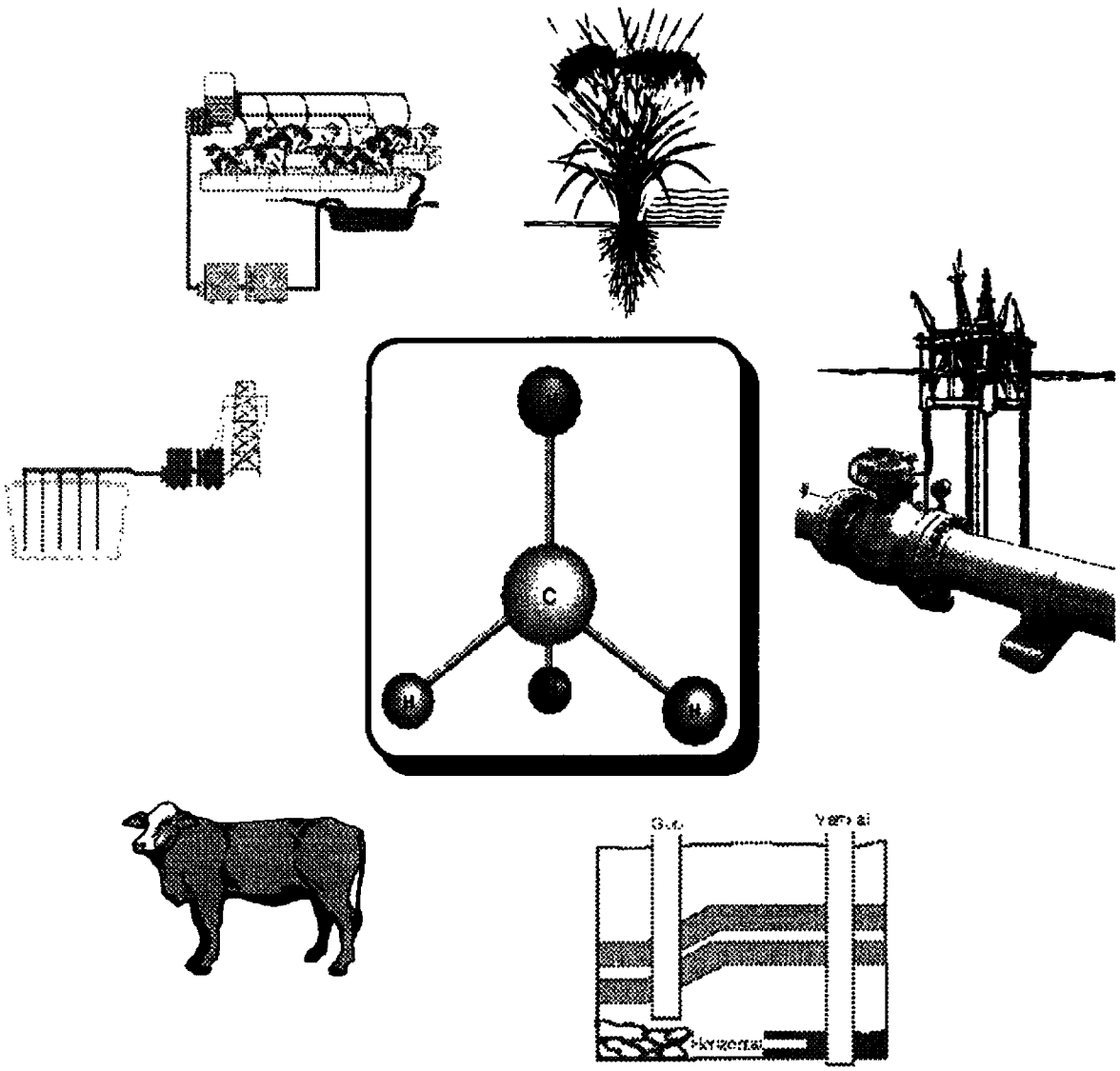
United States
Environmental Protection
Agency

Air And
Radiation
(ANR-445)

400/1-91/031
August 1991

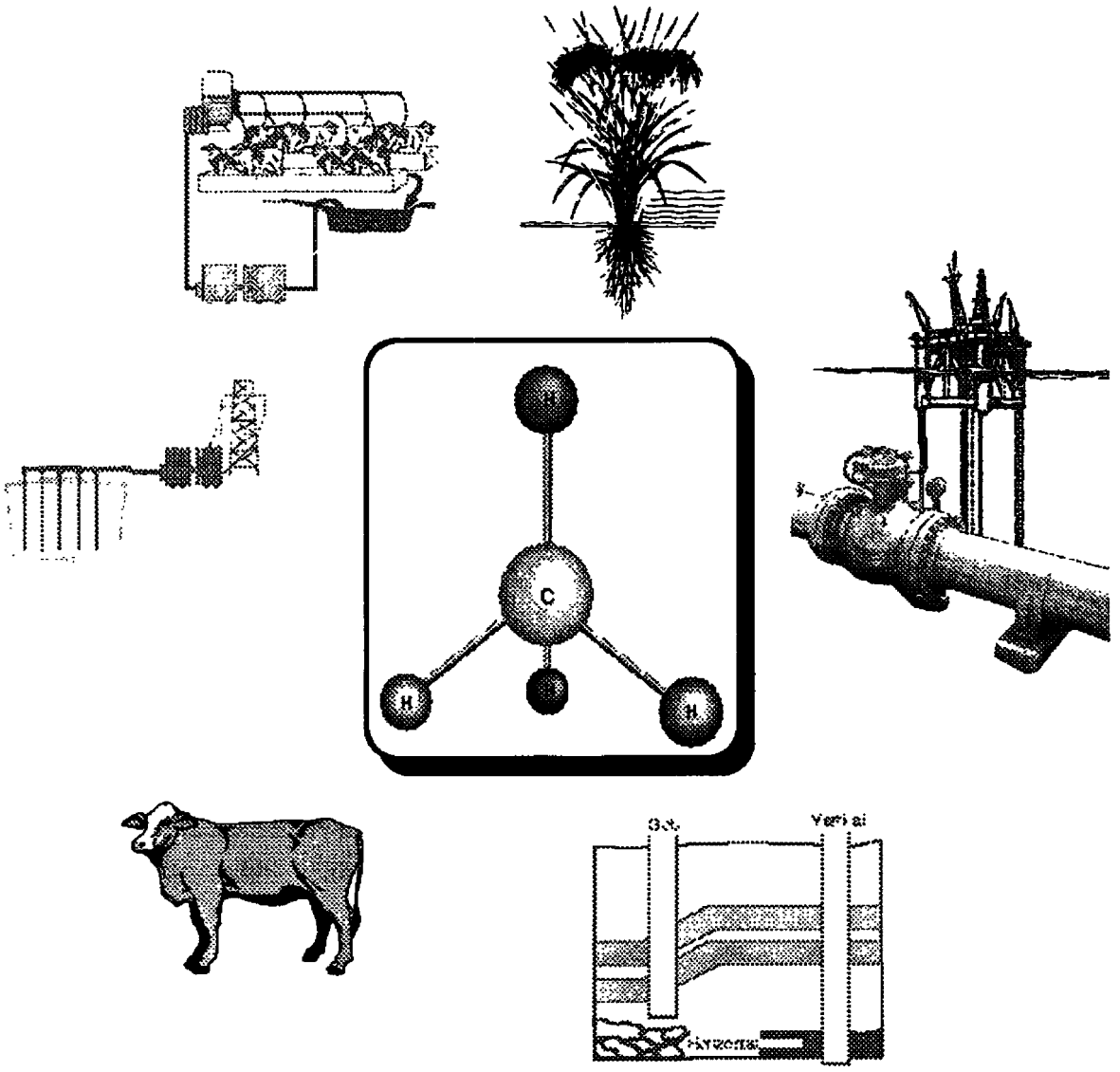
EPA

International Directory of Methane Related Activities



U.S./Japan Working Group on Methane

International Directory of Methane Related Activities



U.S./Japan Working Group on Methane

INTRODUCTION

Background

Methane is an important greenhouse gas that accounts for about 15 percent of the current increase in commitment to global warming. The global average methane concentration is currently increasing by about 1 percent per year. Continued increases in methane concentrations will lead to changes in the distribution and concentration of tropospheric ozone, which will also contribute to global warming. Furthermore, increasing concentrations will affect the oxidizing potential of the earth's atmosphere.

Methane's strong ability to absorb infrared radiation, combined with its relatively short atmospheric lifetime, makes methane control an important opportunity for addressing global climate change. There are numerous efforts underway that are rapidly expanding our knowledge of both methane emissions from the major anthropogenic sources and options for reducing these emissions. These sources include:

- coal mining;
- natural gas systems;
- landfills;
- managed ruminants;
- animal wastes;
- rice cultivation; and
- biomass burning.

This document is intended as an international directory of individuals and groups involved in these efforts. This document also provides information on individuals and groups involved in efforts to estimate emissions from natural systems and to study the role of methane in the atmosphere.

The International Methane Directory

The U.S./Japan Working Group on Methane was formed in early 1990 by the Japan Environment Agency and the United States Environmental Protection Agency, in order to support the Intergovernmental Panel on Climate Change (IPCC). The objective of the group was to compile all of the methane-related information from various IPCC Response Strategies Working Group subgroups and workshops into one document, Methane Emissions and Opportunities for Control: Workshop Results of the Response

Strategies Working Group. As a follow-up effort, the Working Group is now striving to keep the IPCC community and others abreast of developments in the areas of methane emission estimates and reduction options.

The Directory includes the following information:

- Emission Estimates. Information on efforts to measure and derive emission estimates from the different methane sources, including efforts to better understand the processes that affect the emissions.

- Emission Reductions. An update of efforts to examine the effectiveness and costs of different technological options and management practices, as well as descriptions of the types of activities underway to reduce emissions of methane.

- Studies of Methane in the Atmosphere. Analysis of the role of methane in atmospheric processes.

Requests for Additional Information

To develop this directory, we requested information from many involved with methane-related activities. If there is additional work that should be included in the next version of this directory, please use the form at the back of the directory to submit the requested descriptive information. Information forms can be submitted to:

U.S./Japan Working Group on Methane
c/o Global Change Division
ANR-445
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

(ph) 202-260-9304
(fax) 202-260-6344

USING THE DIRECTORY

Summary charts

Summary charts are provided in part one of the directory to provide a summary of the information in the directory. The summary charts list individuals and groups involved in methane-related activities in the following categories:

- Emission Estimates;
- Emission Reductions; and
- Atmospheric Studies.

These summary charts are organized by the major methane sources (landfills, coal mining, livestock, etc.). For work focused on reducing methane emissions, the chart indicates the status of the work, whether the work is at the research and development (R&D), demonstration, or commercial stage, or whether it is a study. Each person or group's country of residence is listed. In cases where the activity is carried out in a region different from the country of residence, this is specified under the column WORK REGION.

Data Listings

Part two of the directory consists of alphabetized data listings for every person or group that provided information. Each listing contains the following information:

- Name or group;
- Address;
- A brief description of each activity;
- Indication of entries in the bibliography; and
- Names of authors of related publications.

Bibliography

The bibliography at the end of the directory contains selected sources from lists provided by the directory participants. The bibliography entries are grouped by major methane source (landfills, coal mining, livestock, etc.).

Summary Charts

EMISSION ESTIMATES

		Country	Work Region*
Coal Mining	Banerjee, Bangsi D.	India	
	Barns, David W.	USA	Global
	Boyer, Charles M.	USA	Global
	Harriss, Robert C.	USA	
	Higuchi, Kiyoshi	Japan	
	Hindmarsh, W.E.	UK	
	Homer, John	USA	Poland & China
	Isei, Takehiro	Japan	
	Kruger, Dina	USA	Global
	Lunarzewski, Leszek	Australia	
	Popiolek, Mariusz	Poland	
	Soot, Peet	USA	USA & International
	Szuchs, Istvan	Hungary	
	Tilley, John W.	Australia	
	Zimmermeyer, G. & K. Noack	Germany	
Natural Gas Systems	Barns, David W.	USA	Global
	Bogner, Jean	USA	
	Campbell, Rex	Australia	
	Dub, Werner	Germany	
	Giles, Michael G.	Canada	North America
	Harriss, Robert C.	USA	
	Homer, John	USA	Poland & China

*If different from country of residence.

EMISSION ESTIMATES (continued)

		Country	Work Region*
Natural Gas Systems (continued)	Kolb, Charles E.	USA	
	Lamb, Brian	USA	
	Lott, Robert	USA	
	McManus, Barry	USA	
	Nakicenovic, Nebojsa	Austria	
	Nielen, R.J.	Netherlands	
	Picard, David J.	Canada	
	Popiolek, Mariusz	Poland	
	Tilkicioglu, Basat	USA	
	Tilley, John W.	Australia	
Landfills	Barns, David W.	USA	Global
	Bogner, Jean	USA	
	Douglas, Jeff	USA	Global
	Gaudioso, Domenico	Italy	
	Hanashima, Masataka	Japan	
	Harriss, Robert C.	USA	
	Hosomi, Masaaki	Japan	
	Pacey, John	USA	
	Patterson, John A.	USA	
	Popiolek, Mariusz	Poland	
	Szuchs, Istvan	Hungary	
	Tanaka, Masaru	Japan	

*If different from country of residence.

EMISSION ESTIMATES (continued)

		Country	Work Region*
Landfills (continued)	Thorneloe, Susan	USA	
	Tsuruta, Haruo	Japan	Japan/Tropical Asia
	Ybema, Remko	Netherlands	
Ruminants	Baldwin, Lee	USA	
	Gibbs, Michael	USA	
	Givens, D.I. & A.R. Moss	UK	
	Johnson, Don E.	USA	
	Lamb, Brian	USA	
	Sauer, Frank D.	Canada	
	Swift, David	USA	Global
Animal Wastes	Chandler, Jeff	USA	
	Gibbs, Michael	USA	
	Hashimoto, Andy	USA	
	Johnson, Don E.	USA	
	Patni, N.K.	Canada	
	Patterson, John A.	USA	
	Safley, L.M.	USA	Global
	Zimmerman, Patrick	USA	
Flooded Rice	Abrol, Y. & P. Deshmukh	India	
	Allen, L.H. Jr.	USA	
	Bandow, Hiroshi	Japan	Japan/Thailand/China
	Bouwman, A.F.	Netherlands	Global

*If different from country of residence.

EMISSION ESTIMATES (continued)

		Country	Work Region*
Flooded Rice (continued)	Byrnes, Bernard H.	USA	SE Asia/Africa
	Duxbury, John M.	USA	
	Inubushi, Kazuyuki	Japan	
	Minami, Katsuyuki	Japan	
	Neue, Heinz-Ulrich	Philippines	
	Patrick, W. & C. Lindau	USA	
	Ruiz Suarez, Luis G.	Mexico	
	Seiler, W. et al.	Germany	China/Philippines/Italy
	Tsuruta, Haruo	Japan	Japan/Tropical Asia
	Wang Mu-Lin	China	
	Yagi, Kazuyuki	Japan	Japan/Thailand/Global
General Agriculture	Bouwman, A.F.	Netherlands	Global
	Dollard, G.	UK	
	Fuhrer, Jurg	Switzerland	
	Hayashi, Masayasu	Japan	
	Menchaca, Leticia	Mexico	
	Parker, Miles M.	UK	
	Ruiz Suarez, Luis G.	Mexico	
	Smith, K. & J. Arah	Scotland	
	Sparrow, Stephen D.	USA	
	Yagi, Kazuyuki	Japan	Japan/Thailand/Global
Biomass Burning	Barns, David W.	USA	Global

*If different from country of residence.

EMISSION ESTIMATES (continued)

		Country	Work Region*
Biomass Burning (continued)	Fearnside, Philip M.	Brazil	
	Levine, Joel S.	USA	Global
Urban Sources	Ayusawa, Tadashi	Japan	
	Blake, Ronald	USA	
	Harriss, Robert C.	USA	
	Hiraki, Takatoshi	Japan	
	Ishikawa, Yoshinori	Japan	
	Kadyszewski, John	USA	Developing countries
	Nakicenovic, Nebojsa	Austria	
	Sakamoto, Takashi	Japan	
	Tilley, John W.	Australia	
	Tsuruta, Haruo	Japan	Japan/Tropical Asia
Natural Sources	Bouwman, A.F.	Netherlands	Global
	Fearnside, Philip M.	Brazil	
	Harriss, Robert C.	USA	
	Inoue, Yuzo	Japan	
	Inoue, G., M. Uchiyama & K. Izumi	Japan	Siberia
	Ito, Shiro	Japan	
	Levine, Joel S.	USA	Global
	Nakamura, K. et al.	Japan	
	Nojiri, Yukihiro	Japan	
	Patrick,W. & C. Lindau	USA	

*If different from country of residence.

EMISSION ESTIMATES (continued)

		Country	Work Region*
Natural Sources (continued)	Smith, Lowell	USA	
	Sparrow, Stephen D.	USA	
General/All	Assarsson, Bo	Sweden	
	Callender, Bruce	UK	
	Cayless, S.M.	UK	Global
	Evans, Gary	USA	
	Fisher, Diane	USA	
	Galbally, I.E.	Australia	Australia/New Zealand/Antarctica
	Gaudioso, Domenico	Italy	
	Hayashi, Masayasu	Japan	
	Heneidi, Abdulkarim M.	Saudi Arabia	
	Japan Environment Agency	Japan	Global
	Jaques, Art	Canada	
	Khalil, M & R.Rasmussen	USA	Global
	Okken, P.A.	Netherlands	
	Parashar, D.C.	India	
	Sato, Katsuya	Japan	
	Trout, Dennis A.	USA	
	van den Born, G.J.	Netherlands	
	Williams, David J.	Australia	
	Williams, M.L.	UK	
	Ybema, Remko	Netherlands	

*If different from country of residence.

EMISSION REDUCTIONS

		Status				Country	Work Region*
		R & D	Demo.	Comm.	Study		
Coal Mining	Boyer, Charles M.	x	x	x		USA	International
	Chandler, William				x	USA	International
	Granatstein, D.L.				x	Canada	
	Hindmarsh, W.E.	x				UK	
	Homer, John				x	USA	Poland and China
	Kruger, Dina		x		x	USA	Eastern Europe and China
	Lunarzewski, Leszek			x		Australia	
	MacLean, A. Roy				x	Canada	
	Masszi, Denes			x	x	Canada	
	Miao Fen	x				China	
	Pilcher, Ray				x	USA	Poland/China/Czechoslovakia
	Schwochow, Stephen				x	USA	
	Somos, Laszlo				x	Hungary	
	Soot, Peet	x	x			USA	
	Su Wenshu	x	x	x		China	
	Zimmermeyer,G. & K. Noack	x	x	x		Germany	
Natural Gas Systems	Campbell, Rex			x		Australia	
	Hogan, Kathleen	x			x	USA	USSR/Global
	Homer, John				x	USA	
	Kurata, Osamu	x				Japan	
	Lott, Robert				x	USA	
	Mizuno, K., A. Obuchi & A. Ogata	x				Japan	
	Picard, David J.				x	Canada	
	Tilkicioglu, Basat	x			x	USA	

*If different from country of residence.

EMISSION REDUCTIONS (continued)

		Status				Country	Work Region*
		R & D	Demo.	Comm.	Study		
Landfills	Barlaz, Morton A.	x				USA	
	Bhide, A.D.	x				India	
	Bogner, Jean	x				US.	
	Campbell, Dawn			x		USA	
	Douglas, Jeff			x		USA	USA and Canada
	Echols, Richard	x		x		USA	USA and UK
	Goodman, Barbara J.	x				USA	
	Hosomi, Masaaki	x				Japan	
	Kadyszewski, John	x		x		USA	Developing countries
	Morrison, William L.			x		USA	
	Moser, Mark A.	x		x		USA	Japan/USA/Europe/Costa Rica
	Pacey, John		x	x		USA	
	Richards, Keith	x				UK	
	Roos, Kurt				x	USA	USA/Europe/India/Global
	Thorneloe, Susan				x	USA	
	Walter, Donald K.				x	USA	
	Yasuda, Kenji	x			x	Japan	
Ruminants	Baldwin, Lee	x			x	USA	
	Cheng, K.J.	x				Canada	
	Gibbs, Michael	x			x	USA	
	Givens, D.I. & A.R. Moss	x				UK	
	Leng, Ronald	x	x			Australia	India
	Mir, Zahir	x				Canada	
	Patterson, John A.	x				USA	

*If different from country of residence.

EMISSION REDUCTIONS (continued)

		Status				Country	Work Region*
		R & D	Demo.	Comm.	Study		
Ruminants (continued)	Sauer, Frank D.	x				Canada	
Animal Wastes	Balagot, Beta P.			x		Philippines	
	Chandler, Jeff	x	x			USA	
	Day, Donald L.	x				USA	USA and Kenya
	Moser, Mark A.	x		x		USA	
	Richards, Keith	x				UK	
	Roos, Kurt		x		x	USA	
	Safley, L.M.		x	x		USA	
Flooded Rice	Allen, L.H. Jr.	x			x	USA	
	Bouwman, Lex	x			x	Netherlands	Global
	Braatz, Barbara				x	USA	Global
	Breitenbeck, Gary				x	USA	
	Byrnes, Bernard				x	USA	Global
	Cicerone, Ralph J.				x	USA	Global
	Guenther, Alex				x	USA	Global
	Hills, Alan J.				x	USA	Global
	Hogan, Kathleen				x	USA	Global
	Inubushi, Kazuyuki	x				Japan	
	Klinger, Lee				x	USA	Global
	Law, Victor				x	USA	Global
	Liang S. & Chen Z.				x	China	
	Minami, Katsuyuki				x	Japan	Global
	Mosier, Arvin				x	USA	Global
	Neue, Heinz-Ulrich				x	Phillipines	Global

*If different from country of residence.

EMISSION REDUCTIONS (continued)

		Status				Country	Work Region*
		R & D	Demo.	Comm.	Study		
Flooded Rice (continued)	Olszyk, David				x	USA	Global
	Patrick, W. & C.Lindau	x			x	USA	Global
	Rennenberg, Heinz				x	Germany	Global
	Rogers, John				x	USA	Global
	Roos, Kurt				x	USA	Global
	Sass, Ronald				x	USA	Global
	Steen, William C.				x	USA	Global
	Zimmerman, Patrick R.				x	USA	Global
General Agriculture	Harper, Lowry A.	x				USA	USA/Europe/New Zealand
	Mori, Yasuhumi				x	Japan	
	Parker, Miles				x	UK	
	Smith, Lowell	x				USA	
Biomass Burning	Kadyszewski, John	x		x		USA	
	Richards, Keith	x				UK	
General / All	Evans, Gary	x			x	USA	
	Fisher, Diane				x	USA	
	Galbally, I.E.				x	Australia	
	Hayakawa, T. & H. Orita	x				Japan	
	Hogan, Kathleen				x	USA	Global
	Lohani, Bindu				x	Philippines	
	Morita, T. & M. Kainuma				x	Japan	Asia/Pacific
	Okken, Peter A.				x	Netherlands	
	Saito, Masahiro	x			x	Japan	
	Trout, Dennis A.	x			x	USA	

*If different from country of residence.

ATMOSPHERIC STUDIES

Name	Country
Breitenbeck, Gary	USA
Khalil, M. and R. Rasmussen	USA
Marland, Gregg	USA
Ohta, Sachio	Japan
Trout, Dennis A.	USA
Tsuruta, Haruo	Japan
Wang Mu-Lin	China
Washida, Nobuaki	Japan

Data Listings

Y.P. Abrol and P.S. Deshmukh
Division of Plant Physiology- IARI
Indian Agricultural Research Institute
New Delhi 110012,
India

Tel: 91-582815/652147

Emission source: Rice cultivation

Perform wetland rice experiments to determine the causes and magnitude of methane emissions

Main language: English

Bibliography entry: no

L.H. Allen Jr.
U.S.Department of Agriculture
Agricultural Research Service
Bldg. 164 IFAS-0621, University of Florida,
Gainesville, FL 32611-0621
U.S.A.

Tel: 904-392-6180 Fax: 904-374-5852

Emission source: Rice cultivation

Measure emissions from rice grown in controlled-environment chambers as a function of CO2 concentration and temperature

Study options for emission reduction by soil amendments and other management practices

Main language: English

Bibliography entry: no

Bo Assarsson
National Swedish Energy Administration
Statens Energiverk, 30 Liljeholmsvogen, 117 87 Stockholm,
Sweden

Tel: 46-8-744-9500 Fax: 46-8-744-0980

Emission source: All sources

Estimate greenhouse gas emissions from human activity and their climatic effects

Main language: Swedish/English

Bibliography entry: no
Related bibliography entry: National Swedish Energy Administration

Tadashi Ayusawa
Environment Survey Division
Japan Automobile Research Institute Inc.
2530 Karima, Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-56-1111 Fax: 81-298-56-1122/1124

Emission source: Urban sources

Chassis-dynomometer measuring method for exhaust methane and NO (analyze exhaust gases within 20 minutes with 100cc sample gas)

Main language: JapaneseEnglish

Bibliography entry: yes

Beta P. Balagot
Environmental Management Bureau
Dept. of Environment and Nat. Resources
6th Floor- Philippine Heart Center Bldg., East Avenue
Diliman Quezon City, 3008 Metro Manila,
Philipines

Tel: 97-32-54
TLX: 2507NEPC PU

Emission source: Animal wastes

Biogas digesters installed in piggeries to reduce air and water pollution; provide fuel for home power generation or cooking

Main language: English

Bibliography entry: no

Lee Baldwin
University of California at Davis
Department of Animal Sciences
2223 Meyer Hall, Davis, CA 95616
U.S.A.

Tel: 916-752-1050

Emission source: Ruminants

Develop model to determine methane emissions from ruminant animals

Main language: English

Bibliography entry: no

Hiroshi Bandow
Global Environment Division
The National Institute for Environmental Studies, Onogawa 16-2 Tsukuba, Ibaraki 305, Japan

Tel: 81-298-51-6111 Fax: 81-298-51-4732

Emission source: Rice cultivation

Measure emissions from rice paddies

Main language: Japanese/English

Bibliography entry: no

Bangsi Dhar Banerjee
Central Mining Research Station
Barwa Road, Dhanbad 826001,
India

Tel: 2587-89

Emission source: Coal mining

Estimate methane emissions from Indian coal mines

Main language: English

Bibliography entry: yes

Morton A. Barlaz
Department of Civil Engineering
N.C. State University
P.O.Box 7908, Raleigh, NC 27695-7908
U.S.A.

Tel: 919-737-7676 Fax: 919-737-7908

Net Address: Barlaz @ CE.NCSU.EDU,

Emission source: Landfills

Research to enhance methane production to make the economics of recovery more favorable

Main language: English

Bibliography entry: yes
Related bibliography entries: Ham, Simpkin et al.

David W. Barns
Pacific Northwest Laboratory for
Department of Energy
901 D Street SW, Suite 900,
Washington, DC 20024-2115
U.S.A.

Tel: 202-646-5242 Fax: 202-646-5233

Emission source: Natural gas/Coal mining/Biomass burning/Landfills/All sources

Evaluate the relationship between the production and use of energy and methane emissions

Main language: English

Bibliography entry: yes

A.D. Bhide
Solid Waste Division
National Environmental Engineering
Research Institute, Nehru Marg, Nagpur, 440 020
India

Tel: 526252/526071 ex.287 Fax: 0712-523893

Emission source: Landfills/Solid waste

Optimize gas withdrawal system for biogas from solid waste and sanitary landfills

Main language: English

Bibliography entry: no

Ronald Blake
Department of Chemistry
University of California at Irvine
Irvine, CA 9271
U.S.A.

Tel: 714-856-5011

Emission source: Urban sources

Field measuring programs: comprehensive global tropospheric sampling and analyses of urban methane concentrations and sources

Main language: English

Bibliography entry: no

Jean Bogner
Argonne National Laboratory
ES/362 9700 S. Cass Ave., Argonne, IL 60439
U.S.A.

Tel: 708-972-3359 Fax: 708-972-7288

Emission source: Landfills/Natural gas

Take field measurements of emissions from landfills and natural gas pipeline leaks

Work on methane oxidizers in soil; soil gas methane transport modeling

Laboratory studies of landfill gas generation and microbial activity in soils

Main language: English

Bibliography entry: yes
Related bibliography entries: Shirra, Massman, SCS, Donaldson, Lockman, EMCON

A.F. Bouwman
National Institute of Public Health and
Environmental Protection
P.O. Box 3720, BA Bilthoven,
Netherlands

Tel: 31-30-743635 Fax: 31-30-250740

Net Address: LAELB @RIVM24.RIVM.NL,

Emission source: Rice cultivation/Natural sources

Land use model projections to predict future emissions (based on projected best management practices and populations)

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: yes
Related bibliography entry: Braatz

Charles M. Boyer II
ICF Resources Incorporated
9300 Lee Highway, #2-158, Fairfax, VA 22031-1207
U.S.A.

Tel: 703-934-3866 Fax: 703-691-3349

Emission source: Coal mining

Design, model, implement and test methods to recover methane prior to or during mining

Main language: English

Bibliography entry: yes
Related bibliography entries: Decker, Zuber, Sawyer, Malone, Ely, Diamond, Wicks

Barbara Braatz
ICF Incorporated
9300 Lee Highway
Fairfax, VA 22031-1207
U.S.A.

Tel: 703-934-3603 Fax: 703-934-9740

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: yes

Gary A. Breitenbeck
Department of Agronomy
Louisiana State University Agric. Center
Baton Rouge, LA 70803-2110
U.S.A.

Tel: 504-388-1362 Fax: 504-388-1403

Emission source: Rice cultivation/Atmospheric studies

Study ability of soils to serve as sinks for methane, taking into account land use, soil characteristics, temperature, moisture and nutrients

Assess value of nitrificaton inhibitors to reduce methane production from flooded rice fields

Main language: English

Bibliography entry: yes
Related bibliography entries: Takayama, Yagi, Nesbit

Bernard H. Byrnes
International Fertilizer Development
Center (IFDC)
P.O. Box 2040, Muscle Shoals, AL 35662
CGI031 or IFDC MODEL,
U.S.A.

Tel: 205-381-6600 Fax: 205-381-7408

Emission source: Rice cultivation

Determine the effects of chemical fertilizer use and management on methane emissions from flooded rice fields

Run computer simulation models for emissions estimates (integrate process models and GIS-type systems)

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Bruce Callander
Intergovernmental Panel on Climate
Change (WG1)
Hadley Centre (Room H202), Meteorological Office,
Bracknell, RG12 2SY
United Kingdom

Tel: 44-344-856615 Fax: 44-344-856912

Emission source: All sources

Coordinate IPCC Scientific Assessment reviews and workshops on sources and sinks/GWPs of all greenhouse gases; emissions scenarios

Workshops planned for 1991/1992; Reports published 1992

Inventory work coordinated with the OECD; Initiative begun at Paris Meeting of Experts- February 1991

Main language: English

Bibliography entry: no

Dawn Campbell
Solid Waste Association of North America
P.O. Box 7219, Silver Spring, MD 20910U.S.A.

Tel: 301-585-2898 Fax: 301-589-7068

Net Address: 8750 Georgia Ave. Suite E-140 Silver Sp,

Emission source: Landfills

Symposia (for officials/consultants/vendors) that provide information and insight on landfill gas management

Main language: English

Bibliography entry: no
Related bibliography entry: Solid Waste Association of North America

Rex Campbell
AGL Gas Companies
Research and Development Department
P.O. Box 944, North Sydney NSW, 2059
Australia

Tel: 61-2-9228521 Fax: 61-2-9228487

Emission source: Natural gas systems

Goldline project: replace corroded pipes with nylon 11 piping (insert into existing pipe) to stop 85% leaks

Estimate methane losses in energy industry of New South Wales

Main language: English

Bibliography entry: no
Related bibliography entries: Dixon, Hargraves (coal mining), Williams

S.M. Cayless
Department of Environment
B453 Romney House
43 Marsham Street, London, SWIP 3PY
United Kingdom

Tel: 44-71-276-8396 Fax: 44-71-276-8299

Emission source: All sources

Measure radiatively important trace gases, including methane

Main language: English

Bibliography entry: no
Related bibliography entry: Prinn

William U. Chandler

Battelle Pacific Northwest Laboratories
for Office of Technology Assessment
901 D Street SW, Suite 900,
Washington, DC 20024-2115
U.S.A.

Tel: 202-646-5424 Fax: 202-646-5233

Emission source: Coal mining

Evaluate international measures for controlling fossil energy carbon emissions

Facilitate international information exchange

Main language: English

Bibliography entry: no

Jeff Chandler

Jeff Chandler and Associates
P.O. Box 896, Elk Grove, CA 95759
U.S.A.

Tel: 916-456-0126

Emission source: Animal wastes

Demonstrate covered lagoon system for dairy/hog/poultry and processing wastes

Perform field monitoring of methane emissions

Main language: English

Bibliography entry: no

K.J. Cheng

Lethbridge Research Station
Livestock Science Section
Agriculture Canada Research Station, P.O. Box 3000
Main, Lethbridge Alberta, T1J 4B1
Canada

Tel: 403-327-4561 Fax: 403-382-3156

Net Address: OTTB::EM387ADMN,

Emission source: Livestock

Manipulate microbial ecology and feeding systems to minimize bovine methane production

Main language: English

Bibliography entry: yes

Ralph J. Cicerone

Geosciences Department
229 Physical Sciences 1
University of California at Irvine, Irvine, CA 92717
U.S.A.

Tel: 714-725-2157 Fax: 714-725-2261

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Donald L. Day

University of Illinois
Department of Agricultural Engineering
1304 W. Pennsylvania Avenue, Urbana, IL 61801
U.S.A.

Tel: 217-333-2693 Fax: 217-244-0323

Emission source: Animal wastes

Laboratory and full-scale research and development of anaerobic digestion of livestock wastes

Main language: English

Bibliography entry: yes
Related bibliography entries: Chen, Fedler, North, Zhang

G. Dollard

AEA Technology
Harwell Laboratory
Didcot, Oxon, OX11 ORA
United Kingdom

Tel: 44-235-82-11-11 Fax: 44-235-43-21-34

Emission source: General agriculture

Use gradient technique to study methane flux from pasture before/during/after sheep grazing; part of crop flux study

Main language: English

Bibliography entry: no

Jeff Douglas
Waste Management of North America
3003 Butterfield Rd., Oak Brook, IL 60521
U.S.A.

Tel: 708-572-8800 Fax: 708-572-3094

Emission source: Landfills

Create gas collection systems and recovery facilities (each facility provides energy for 10,000 households)

Develop methodology for estimating global landfill methane emissions (project with U.S. EPA)

Main language: English

Bibliography entry: no

Werner Dub
Head of Environment and Engineering Section
Ruhrgas Aktiengesellschaft
Huttropstrasse 60, D-4300 Essen 1,
Germany

Tel: 49-201-184-4382 Fax: 49-201-184-3766

Emission source: Natural gas systems

Study methane releases by gas and oil-producing industries

Main language: German

Bibliography entry: yes
Related bibliography entry: Klaus Werner

John M. Duxbury
Department of Agronomy
Cornell University
917 Bradfield Hall, Ithaca, NY 14853
U.S.A.

Tel: 607-255-1732 Fax: 607-255-2106

Emission source: Rice cultivation

Research to determine whether emissions from rice cultivation are derived from soil carbon or current photosynthate

Research to determine the impacts of green manuring on methane emissions from flooded rice fields

Main language: English

Bibliography entry: no

Richard Echols
Director of Gas Systems
Browning-Ferris Industries Inc.
757 N. Eldridge, Houston, TX 77079
U.S.A.

Tel: 713-870-7801 Fax: 713-584-8043

Emission source: Landfills

Build methane-control landfill systems including wells, incinerators, and blowers

Research and development on methods using methane from landfills for electricity plants

Main language: English

Bibliography entry: no

Gary R. Evans
Special Asst. for Global Climate Change
USDA-Office of Asst. Secretary
Science and Education, Administration Building Room 217W, Washington, DC 20250
U.S.A.

Tel: 202-447-5979 Fax: 202-755-7842

Net Address: g.evans.usda,

Emission source: All sources

Chairperson of CEES/MARS Subcommittee: Studies mitigation and adaptation technology

MARS Subcommittee: cost-benefit analysis of methane reduction

Main language: English

Bibliography entry: no

Philip M. Fearnside

National Institute for Research in the
Amazon (INPA)
C.P. 478, 69.011 Manaus-Amazonas,
Brazil

Tel: 55-92-236-9683 ex120 Fax: 55-92-236-3822

Emission source: Biomass burning/Hydroelectric power

Study impacts of deforestation; biomass and carbon partitioning in burning (and decomposition)

Study soil changes from land use conversions (including carbon pools)

Study methane release from Amazonian hydroelectric development

Main language: English/Portuguese/Spanish/French/Hindi

Bibliography entry: yes

Diane Fisher

Environmental Defense Fund
5655 College Ave., Oakland, CA 94618
U.S.A.

Tel: 415-658-8008 Fax: 415-658-0630

Emission source: All sources

Estimate emissions from all sources

Study options for reducing emissions

Main language: English

Bibliography entry: yes
Related bibliography entries: Jager, Clark, Rijsberman

Jurg Fuhrer

Swiss Federal Research Station for Agric
Chemistry and Environmental Hygiene
Schwarzenburgstrasse 155, CH-3097 Liebefeld-Bern,
Switzerland

Tel: 41-31-59-83-71 Fax: 41-31-59-84-15

Emission source: General agriculture

Estimate emissions of trace gases from agriculture and natural sources

Main language: German

Bibliography entry: no
Related bibliography entry: L'Office Federal de la Protection de l'Environment

I.E. Galbally

Commonwealth Scientific and Industrial
Research Organisation (CSIRO)
Division of Atmospheric Research, Private Bag No. 1,
Mordialloc Victoria, 3195
Australia

Tel: 03-586-7666 Fax: 03-586-7600
Telex: AA34463

Emission source: All sources

Determine historical concentrations of greenhouse gases from Antarctic ice-core analysis

Inventory greenhouse gas emissions in Australia and New Zealand

Review options for reducing greenhouse gases in Australia

Main language: English

Bibliography entry: no
Related bibliography entries: Pearman, ANZEC

Domenico Gaudioso

ENEA (Italian Commission for Nuclear and
Alternative Energy)
C.R.E. Casaccia - via Anguillarese 301, 00060 S. Maria
di Galeria, Rome,
Italy

Tel: 39-6-3048-3571 Fax: 39-6-3048-4925

Emission source: Landfills/all sources

Analyze and select emission factors for methane and NMVOCs (framework of Italian estimates & EC Corinair Project)

Determine emission factors for methane from landfills

Main language: Italian/English/French

Bibliography entry: yes

Michael Gibbs
ICF Consulting Associates Inc.
10 Universal City Plaza Suite 2400
Universal City, CA 91608-1097
U.S.A.

Tel: 818-509-3186 Fax: 818-509-3137

Emission source: Ruminants/Animal wastes/ Landfills/Natural gas

Investigate methane emissions from ruminant animals, landfills, and natural gas systems

Predict total emissions from animal wastes in the United States

Investigate emission reduction options from ruminant animals, animal wastes, landfills, and natural gas systems

Main language: English

Bibliography entry: yes

Michael G. Giles
Canadian Gas Association
55 Scarsdale Road, Don Mills, Ontario, M3B 2R3
Canada

Tel: 416-447-6465 Fax: 416-447-7067

Emission source: Natural gas

Study methane releases in the North American gas industry (Gas Research Institute and Canadian Gas Association)

Main language: English

Bibliography entry: no

D.I. Givens and Mrs. A.R. Moss
ADAS Feed Evaluation Unit
Drayton Manor Drive- Alcester Road, Stratford on Avon, Warwickshire, CV37 9RQ
United Kingdom

Tel: 44-789-266-704 Fax: 44-789-414-393

Emission source: Livestock

Estimate emissions from managed ruminants on numerous diets

Investigate effects of mixing rations on levels of methane production

Main language: English

Bibliography entry: no

Barbara J. Goodman
Solar Energy Research Institute
1617 Cole Blvd., Golden, CO 80401
U.S.A.

Tel: 303-231-1005 Fax: 303-231-1352.

Emission source: Landfills

Convert municipal solid waste to energy (thermochemical and biochemical conversion)

Data collection/analysis and technology transfer for waste- to-energy conversion

Main language: English

Bibliography entry: yes

D.L. Granatstein
Nova Scotia Power Corporation
Generation Studies, P.O. Box 910, Halifax Nova Scotia, B3J2W5
Canada

Tel: 902-428-6039 Fax: 902-428-6100

Emission source: Coal mining

Study options for reducing/utilizing methane from coal mines (to be used at power stations as combustion air)

Main language: English

Bibliography entry: no

Alex Guenther
National Center for Atmospheric Research
P.O. Box 3000, 1850 Table Mesa Drive, Boulder, CO 80307
U.S.A.

Tel: 303-497-1447 Fax: 303-497-1411/1400

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Masataka Hanashima
Hydraulic and Sanitary Engineering Laboratory
Department of Civil Engineering
Faculty of Engineering, Fukuoka University
Fukuoka 814-01
Japan

Tel: 81-92-871-6631 ext. 6461 Fax: 81-92-862-4431

Emission source: Landfills

Develop techniques to measure emissions of methane and other greenhouse gases from sanitary landfills

Main language: Japanese

Bibliography entry: yes

Lowry A. Harper
Southern Piedmont Conservation Research Center
U.S.Department of Agriculture, Agricultural Research Service, Watkinsville, GA 30677
U.S.A.

Tel: 404-769-5631 Fax: 404-769-8962

Emission source: General agriculture

Study effects of methane transport on and by agricultural systems (wheat, corn, forage grass)

Main language: English

Bibliography entry: no

Robert C. Harriss
Institute for the Study of Earth
Oceans and Space
University of New Hampshire, Durham, NH 03824
U.S.A.

Tel: 603-862-3875 Fax: 603-862-1915

Net Address: RCHARRISS/NASAMAIL CSRC/OMNET,

Emission source: Coal mining/Landfills/Natural gas/Urban source/Wetlands

Carry out field measurement programs for different emission sources; emission estimates from natural gas systems

Modeling studies on landfill sources of methane

Main language: English

Bibliography entry: no

Andrew G. Hashimoto
Department of Bioresource Engineering
Oregon State University
Gilmore Hall, Room 116, Corvallis, OR 97331-3906
U.S.A.

Tel: 503-737-2041 Fax: 503-737-2082

Emission source: Animal wastes

Research methane emissions associated with animal wastes and livestock waste management

Main language: English

Bibliography entry: no

Takashi Hayakawa and Hideo Orita
National Chemical Laboratory for Industry
Tsukuba Research Center, Tsukuba, Ibaraki 305
Japan

Tel: 81-298-54-4634 Fax: 81-298-55-1397

Emission source: All sources

Research and develop activities to reduce methane emissions and utilize methane for higher hydrocarbon production

Main language: Japanese

Bibliography entry: no

Masayasu Hayashi
National Research Institute for Pollution and Resources
16-3 Onogawa, Tsukuba City, Ibaraki Prefecture, 305
Japan

Tel: 81-298-54-3084 Fax: 81-298-54-3049

Emission source: All sources

Estimate methane emissions from all sources; develop models for emissions estimates

Main language: Japanese/English

Bibliography entry: no

Abdulkarim M. Heneidi
Climate Department
Meteorology and Environmental Protection
Administration, P.O. Box 1358, Jeddah 21431,
Saudi Arabia

Tel: 651-2312 Fax: 651-1424

Emission source: All sources

Estimate methane emissions from landfills, ruminants, sewage, natural gas and vehicles during 1970-1990

Main language: Arabic/English

Bibliography entry: no

Kiyoshi Higuchi
Faculty of Engineering
Hokkaido University
Kita-13 Jyo Nisi-8 Chome, Kita-ku, Sapporo 060,
Japan

Tel: 81-716-2111 ex.6304 Fax: 81-716-4745

Emission source: Coal mining

Study seam gas drainage and behavior of methane gas in coal seams

Main language: Japanese/English

Bibliography entry: yes
Related bibliography entries: Tominaga, Ohga

Alan J. Hills
National Center for Atmospheric Research
P.O. Box 3000
1850 Table Mesa Drive, Boulder, CO 80307
U.S.A.

Tel: 303-497-1489 Fax: 303-497-1411/1400

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

W.E. Hindmarsh
British Coal Corporation
Eastwood Hall
Mansfield Road, Eastwood, Notts., NG16 3EB
United Kingdom

Tel: 0773-531313 Fax: 0773-531313 ex.32643

Emission source: Coal mining

Weekly sampling of mine fan drift (including air velocity) and surface mine vent pipes (including flow measurements)

Research mine methane reduction options: methods of pre-drainage (surface & underground) and conventional drainage

Utilize mine gas in combined heat and power schemes

Main language: English

Bibliography entry: no

Takatoshi Hiraki
Hyogo-Prefectural
Institute of Environmental Studies
3-1-27, Yukihiracho, Sumaku
Kobe 654
Japan

Tel: 81-78-735-6911 Fax: 81-78-735-7817

Emission source: Urban sources

Estimate methane emissions and study emission factors from urban sources

Main language: Japanese

Bibliography entry: no

Kathleen B. Hogan
Methane Programs
Global Change Division ANR-445
U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460
U.S.A.

Tel: 202-475-9304 Fax: 202-382-6344

Emission source: Natural gas/Rice cultivation/ All sources

Facilitate programs to reduce leakage from natural gas pipelines in the USSR

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Study estimates and reduction options for all major sources of methane emissions

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

John Homer
Energy Sector Operations Division
The World Bank
1818 H Street NW, Washington, DC 20433
U.S.A.

Tel: 202-473-6973 Fax: 202-676-0436

Emission source: Natural gas/Coal mining

Selected reviews of methane emissions from gas pipelines in developing countries (Poland)

Selected reviews of methane emissions from coal mining in developing countries (Poland, China)

Study feasibility of emission reduction from gas and coal as part of Energy Sector loan and Global Environment Facility program

Main language: English

Bibliography entry: no

Masaaki Hosomi
Water and Soil Environment Division
National Institute for Environmental Studies, 16-2 Onogawa Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-51-6111 ex471 Fax: 81-298-51-4732

Emission source: Landfills

Develop methods for measuring emissions from landfills (in cooperation with Kyushu University)

Continuous monitoring of emissions from landfill area in Yokohama

Research into efficient technologies to reduce emissions from landfills

Main language: Japanese/English

Bibliography entry: no

Gen Inoue, Masahiro Uchiyama and Katsuyuki Izumi
National Institute of Environmental Studies
16-2 Onogawa, Tsukuba
Ibaraki 305
Japan

Tel: 81-298-51-6111 Fax: 81-298-51-4732

Emission source: Natural sources

Estimate methane emissions from permafrost areas in Siberia

Main language: Japanese

Bibliography entry: no

Yuzo Inoue
Department of Sanitary and Environmental Engineering
Hokkaido University, Kita-13 Nishi-8 Kita-Ku, Sapporo 060,
Japan

Tel: 81-11-716-2111ex6830 Fax: 81-11-707-9750

Emission source: Wastewater/Natural sources

Search for psychrophilic methanogens in Arctic peat bogs; treat wastewater with microbes

Model the methane emission process in wet soil layers in the Arctic tundra area

Main language: Japanese/English

Bibliography entry: no

Kazuyuki Inubushi
Faculty of Bioresources
Mie University
Tsu 514,
Japan

Tel: 81-592-32-1211 x3644 Fax: 81-592-31-1503

Net Address: 1515 Kamihama-cho Tsu-city Mie prefect.,

Emission source: Rice cultivation

Research the effects of sulfate and heavy metals on methane formation and emission from rice paddies

Study the practicability of reducing methane emissions from paddy fields

Main language: Japanese

Bibliography entry: yes
Related bibliography entries: Ueki, Hori

Takehiro Isei
System Safety Laboratory
Industrial Safety Department
National Research Institute for Pollution and Resources
16-3 Onogawa, Tsukuba City, Ibaraki Prefecture, 305
Japan

Tel: 81-298-54-3054 Fax: 81-298-54-3049

Emission source: Coal mining

Estimate methane emission rates from coal mining activities

Main language: Japanese/English

Bibliography entry: no

Yoshinori Ishikawa
Department of Traffic Pollution
Environmental Bureau
Osaka Prefectural Government, Otemae-2 Chuo-ku,
Osaka City 540,
Japan

Tel: 06-941-0351 ext.3895

Emission source: Urban sources

Estimate emissions of methane and other pollutants from automobiles

Main language: Japanese

Bibliography entry: no
Related bibliography entry: Japan Environment Agency

Shiro Ito
Geological Survey of Japan
1-1-3 Higashi, Tsukuba
Ibaraki 305
Japan

Tel: 81-298-54-3724 Fax: 81-298-54-3533

Emission source: Natural sources

Study behavior of and simulate upward movement of underground methane

Main language: Japanese

Bibliography entry: no

Japan Environment Agency
Global Environment Department
1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo 100,
Japan

Tel: 81-3-3580-4982 Fax: 81-3-3504-1634

Emission source: All sources

Global Environment Research Program and Global Environment Monitoring Program for Fiscal Year 1990

Main language: Japanese/English

Bibliography entry: yes

Art Jaques
Environment Canada
Pollution Data Analysis Division
18th Floor- PVM, 351 St. Joseph Blvd.,
Hull Quebec, KIA OH3
Canada

Tel: 819-994-3098 Fax: 819-953-9542

Emission source: All sources

Create emission inventories for Canada

Main language: English

Bibliography entry: yes

Don E. Johnson
Colorado State University
Department of Animal Sciences
Ft. Collins, CO 80523
U.S.A.

Tel: 303-491-7833 Fax: 303-491-5326

Emission source: Ruminants/Animal wastes

Assess magnitude of livestock emissions using an animal coefficient model (development based on literature surveys)

Measure persistence of ionophore supression of methane with indirect respiration calorimetry

Field observations of methane production from feedlot animals and manure packs

Main language: English

Bibliography entry: yes
Related bibliography entries: Ward, Lodman, Gunther, Branine, Carmean et al.

John Kadyszewski
Winrock International Institute for
Agricultural Development (BEST)
Biomass Energy Systems and Tech. Project, 1611 North Kent Street- Suite 600, Arlington, VA 22209
E-Mail(Dialcom):41:TCN408,
U.S.A.

Tel: 703-525-9430 Fax: 703-243-1175

Emission source: Biomass burning

Burn agricultural (sugar and rice) residues under managed conditions to reduce methane emissions and generate power

Perform a feasibility study of methane recovery from landfills and waste streams in developing countries

Study urban solid wastes to provide information for policy makers in developing countries

Main language: English/Spanish

Bibliography entry: no
Related bibliography entry: Winrock International

M.A.K. Khalil and R.A. Rasmussen
Dept. of Environmental Sciences and Engineering
Oregon Graduate Institute, Beaverton, OR 97006
U.S.A.

Tel: 503-690-1078/1093 Fax: 503-690-1029

Emission source: All sources

Study global budgets, mass balances, and flux measurements

Create an atmospheric global network for global methane measurements

Main language: English

Bibliography entry: yes
Related bibliography entries: Steele, Crutzen

Lee Klinger
National Center for Atmospheric Research
P.O. Box 3000
1850 Table Mesa Drive, Boulder, CO 80307
U.S.A.

Tel: 303-497-1474 Fax: 303-497-1411/1400

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Charles E. Kolb
Aerodyne Research Inc.
45 Manning Rd.
Bellerica, MA 01821-3976
U.S.A.

Tel: 508-663-9500 Fax: 508-663-4918

Emission source: Natural gas systems

Estimate emissions from natural gas systems in the United States

Main language: English

Bibliography entry: no

Dina Kruger
Methane Programs
Global Change Division ANR-445
U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460
U.S.A.

Tel: 202-245-3958 Fax: 202-382-6344

Emission source: Coal mining

Develop pilot project and training program on coalbed methane (CBM) in China; Assess China's CBM resource energy potential

Evaluate Poland's potential for recovery and use of coalbed methane; develop a training program/CBM clearinghouse in Poland

Assess coalbed methane resource in Czechoslovakia and its potential contribution to the country's energy economy

Estimate global methane emissions from coal mining

Main language: English

Bibliography entry: yes
Related bibliography entry: Boyer et al.

Osamu Kurata
Mechanical Engineering Laboratory, AIST, MITI
Namiki 1-2, Tsukuba 305
Japan

Tel: 81-298-54-2564 Fax: 81-298-54-2549

Emission source: Natural gas systems

Ceramic Gas Turbine Project: develop natural gas combustion techniques in turbines that reduce methane emissions

Main language: Japanese/English

Bibliography entry: no

Brian Lamb
306 Dana Hall
Washington State University, Laboratory for Atmospheric Research, Civil & Environmental Engineering
Pullman, WA 99164-2730
U.S.A.

Tel: 509-335-5702 Fax: 509-335-7632

Emission source: Natural gas/Ruminants

Estimate methane emissions from natural gas systems

Develop instrumentation to measure methane emissions from ruminants in the field

Main language: English

Bibliography entry: no

Victor Law
Tulane University
Chemical Engineering Department
New Orleans, LA 70118
U.S.A.

Tel: 504-865-5773 Fax: 504-865-6744

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Ronald A. Leng
Department of Biochemistry Microbiology and Nutrition
University of New England, Armidale NSW, 2351
Australia

Tel: 61-67-73-2707 Fax: 61-67-73-3122

Emission source: Ruminants

Develop methods to reduce methane emissions and enhance productivity in cows using Molasses Urea Blocks as feed supplements

Main language: English

Bibliography entry: yes

Joel S. Levine
Atmospheric Sciences Division
NASA Langley Research Center
Hampton, VA 23665
U.S.A.

Tel: 804-864-5692 Fax: 804-864-6326

Emission source: Biomass burning/Natural sources

Estimate methane emissions from biomass burning; assess distribution of burning according to forest/ grasslands

Estimate and enhance methane emissions from wetlands after burning

Main language: English

Bibliography entry: yes

Liang Sicui and Chen Zongliang
National Environmental Protection Agency
115 Xizhimennei Nanxiaojie, Beijing, 100035
China

Tel: 602-45-53 Fax: 601-11-94

Emission source: Rice cultivation

Study effects of different cultivation practices on rice paddy methane emissions (e.g. scientific irrigation)

Main language: English

Bibliography entry: no

Bindu N. Lohani
Office of the Environment
Asian Development Bank
#6 ADB Avenue, Mandaluyong- Pasig, Metro Manila, Phillipines

Tel: 632-4444 Fax: 632-7417961/6326816

Emission source: All sources

Set Environmental Guidelines for developmental and infrastructural projects

Suggest economic policies for sustainable development

Main language: English

Bibliography entry: no
Related bibliography entry: Asian Development Bank

Robert A. Lott
Air Quality
Gas Research Institute
8600 West Bryn Mawr Avenue, Chicago, IL 60631
U.S.A.

Tel: 312-399-8227 Fax: 312-399-8170

Emission source: Natural gas systems

Estimate methane emissions from natural gas systems

Study options for reducing methane emissions from natural gas systems

Main language: English

Bibliography entry: no

Leszek Lunarzewski
Lunagas Pty. Limited
P.O. Box 222
The Junction, New South Wales, 2291
Australia

Tel: 61-49-29-66-46 Fax: 61-49-29-66-06

Net Address: 115 Darby StNewcastle NSW 2291-Australia,

Emission source: Coal mining

Plan and manage seam gas emissions in coal mines' underground environments

Measure methane/CO2 gas emissions from underground coal mines

Develop gas drainage engineering to capture and utilize seam gas methane from coal mining
Main language: Polish/English

Bibliography entry: yes
Related bibliography entries: Myszor, Matuszewski, Grebski, Hargraves, Budzinski, Battino

A. Roy MacLean
Cape Breton Development Corporation
P.O. Box 2500, Sydney, Nova Scotia, B1P 6K9
Canada

Tel: 902-564-2803 Fax: 902-564-2589

Emission source: Coal mining

Study options to utilize ventilation air with .7% methane as combustion air for power plant (2.5 km away)

Main language: English

Bibliography entry: no

Gregg Marland
Environmental Sciences Division
Oak Ridge National Laboratory
P.O. Box 2008, Oak Ridge, TN 37831-6335
U.S.A.

Tel: 615-574-0390 Fax: 615-574-2232

Emission source: All sources

Compile climate data packages which include data on methane's atmospheric chemistry

Main language: English

Bibliography entry: no

Denes Masszi
D. Masszi Consulting Ltd.
44 Glen Rd., Toronto Ontario, M4W 2VI
Canada

Tel: 416-925-9548 Fax: 416-925-9548

Emission source: Coal mining

Study and develop systems for mine ventilation air system methane recovery

Virgin Coal Demethanization (VCD): surface drainage before mining starts

Virgin Coal Demethanization in gob area

Main language: English

Bibliography entry: no

Barry McManus
Aerodyne Research Inc.
45 Manning Rd., Bellerica, MA 01821-3976
U.S.A.

Tel: 508-663-9500

Emission source: Natural gas systems

Estimate methane emissions from natural gas systems in the United States

Main language: English

Bibliography entry: no

Leticia Menchaca
Centro de Ciencias de la Atmosfera UNAM
Dept. of Climatography
Circuito Exterior C.U., C.P. 04510, Ciudad Universitaria, Mexico

Tel: 550-52-15 ext. 4387 Fax: 525-548-97-81

Net Address: MENCHACA @ UNAMVM1 (BITNET), Mexico D.F.

Emission source: General agriculture

Estimate emissions from and effects of methane on tropical agriculture

Develop proxy methods in paleoclimatology

Main language: Spanish/English

Bibliography entry: no

Miao Fen
Central Coal Mining Research Institute
Xian Branch
44 Yanta Road, 710054 Xian, Shaanxi,
China

Tel: 29-71-41-17 ext.337 Fax: 29-71-93-57

Net Address: 44 Yanta Rd. 710054 Xian-Shaanxi-China,

Emission source: Coal mining

Develop methane recovery methods from coal mining in the use stage

Recover methane from coal seams by extracting gas through bore holes from the coalbed to the surface

Main language: English/Chinese

Bibliography entry: no

Katsuyuki Minami
National Institute of Agro-Environmental Sciences
Kannondai 3-1-1, P.O. Box 2, Tsukuba 305,
Japan

Tel: 81-298-38-8273 Fax: 81-298-38-8199

Emission source: Rice cultivation

Study effects of water percolation and organic matter application on methane emissions from paddy fields

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: Japanese/English

Bibliography entry: yes
Related bibliography entry: Yagi

Zahir Mir
Agriculture Canada
3015 Ord Road, Kamloops, British Columbia, V2B 8A9
Canada

Tel: 604-376-5565 Fax: 604-376-7334

Emission source: Ruminants

Research using feed additives (ionophores/yeast) and speeding digestion in order to decrease methanogenic rumen bacteria

Main language: English

Bibliography entry: yes
Related bibliography entry: Beacom

Koichi Mizuno, Akira Obuchi and Atsushi Ogata
Environmental Technology Laboratory
Atmospheric Environmental Protection Department
National Research Institute for Pollution and Resources
Agency of Industrial Science and Technology
Ministry of International Trade and Industry
16-3 Onogawa, Tsukuba, Ibaraki 305
Japan

Tel: 81-298-54-3093/3126 Fax: 81-298-54-3049

Emission source: Natural gas and oil systems

Reduce emissions from industrial sources (oil and gas wells, industrial waste) by catalytic conversion of methane at lower temperatures, assisted by photo-irradiation and electrochemistry

Main language: Japanese/English

Bibliography entry: no

Yasuhumi Mori
National Institute for Environmental Studies- Japan Environment Agency
Onogawa 16-2, Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-51-6120 Fax: 81-298-51-4732

Emission source: General agriculture

Develop methods for controlling substances transfer in agricultural land

Estimate and analyze emissions of methane and other gases from agriculture

Main language: Japanese/English

Bibliography entry: no
Related bibliography entry: Japan Environment Agency

Tsuneyuki Morita and Mikiko Kainuma
Global Environment Division
National Institute for Environmental
Studies, 16-2 Onogawa Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-51-6111 ex393 Fax: 81-298-51-4732

Emission source: All sources

AIM (Asian-Pacific Integrated Model): evaluate options to stabilize global climate (includes methane emissions models)

Main language: Japanese/English

Bibliography entry: no

William L. Morrison
1023 West Crescent Avenue, Park Ridge, IL 60068
U.S.A.

Tel: 708-825-6871

Emission source: Landfills

Source reduction of methane-producing wastes in landfills by using wastes as compost: "vented tent" method

Main language: English

Bibliography entry: no

Mark A. Moser
Resource Conservation Management Inc.
P.O. Box 4715, Berkeley, CA 94704
U.S.A.

Tel: 415-658-4466 Fax: 415-658-2729

Emission source: Animal wastes/Landfills

Design and construct methane recovery and cogeneration systems: biogas digesters to produce methane

Applied engineering: study of methane recovery from anaerobic covered lagoons in Texas

Main language: English

Bibliography entry: yes

Alvin Mosier
U.S. Department of Agriculture
Agricultural Research Service
P.O. Box E, Fort Collins, CO 80522
U.S.A.

Tel: 303-482-5733 Fax: 303-229-5531

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Kazunori Nakamura, Eiichi Mikami, Tadashi Hashinaga, Kazuhiro Tanaka and Yoichi Kamagata
Fermentation Research Institute
Agency of Industrial Science and Technology, MITI
Higashi 1-1-3, Tsukuba City
Ibaraki 305
Japan

Tel: 81-298-54-6026 Fax: 81-298-54-6009

Emission source: Natural sources

Study mechanisms for release of methane into the atmosphere by microorganisms, estimate quantity of microorganisms, and amount of organic matter which they can transform to methane in aquatic environments

Main language: Japanese/English

Bibliography entry: yes
Related bibliography entry: Kobayashi

Nebojsa Nakicenovic
International Institute for Applied
Systems Analysis (IIASA)
A-2361 Laxenburg,
Austria

Tel: 02236-71521-411 Fax: 02236-71313

Emission source: Natural gas/Urban sources

Study emissions from high-demand natural gas-intensive energy scenarios

Study implications of leaking methane from natural gas vehicles/ prospects for natural gas

Main language: English

Bibliography entry: no
Related bibliography entries: Grubler, Victor

Heinz-Ulrich Neue
International Rice Research Institute
(IRRI)
20th Floor BPI-Family Bank- Center Bldg, 8753 Paseo de Roxas Street, Makati Metro Manila,
Phillipines

Tel: 63-2-8182007 Fax: 63-2-8178470

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Estimate methane emissions from rice cultivation

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

R.J. Nielen
Dept. of Air Pollution Control
TNO Institute of Environmental and
Energy Technology, Postbox 342, 7300 AH Apeldoorn,
Netherlands

Tel: 31-55-49-39-29 Fax:

Emission source: Natural gas systems

Estimate methane emissions from natural gas systems in the Netherlands (for Institute of Public Health and Environmental Protection)

Main language: Dutch

Bibliography entry: no

Yukihiro Nojiri
Global Environment Division
The National Institute for Environmental
Studies, Onogawa 16-2 Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-51-6111 Fax: 81-298-51-4732

Emission source: Natural sources

Estimate CH4 flux by measuring concentration of dissolved methane in water; study bacterial oxidation of dissolved methane

Estimate seasonal variability of methane flux from Lake Kasumigaseki

Measure methane flux from coastal sea surface of Tokyo Bay

Main language: Japanese/English

Bibliography entry: no

Sachio Ohta
Department of Sanitary and Environmental
Engineering
Hokkaido University, Kita-13 Nishi-8, Sapporo 060,
Japan

Tel: 81-11-716-2111ex6832 Fax: 81-11-707-9750

Emission source: All sources

Use 2-D radiative-photochemical-transport model to determine effects of increased atmospheric methane on global climate

Main language: Japanese/English

Bibliography entry: no

Peter A. Okken
Netherlands Energy Research Foundation
ESC/ Energy Studies
P.O. Box 1, 1755 26 Petten,
Netherlands

Tel: 31-2246-4430/4347 Fax: 31-2246-3338

Emission source: All sources

Carry out desk studies of energy and materials scenarios to reduce greenhouse gas emissions

1990-1993 project: part of national research program on air pollution and climate change

Energy Technology Systems Analysis Program: aims to include material flows into energy models

Main language: Dutch/English

Bibliography entry: yes
Related bibliography entry: Ybema

David Olszyk
U.S. Environmental Protection Agency
Environmental Research Laboratory
200 S.W. 35th Street, Corvallis, OR 97333
U.S.A.

Tel: 503-757-4311 Fax: 503-757-4799

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

John Pacey
EMCON Associates
1921 Ringwood Avenue, San Jose, CA 95131
U.S.A.

Tel: 408-453-7300 Fax: 408-436-9425

Emission source: Landfills

Estimate landfill emissions, using case histories, for international book on emissions to be published in 1992

Planning field-scale demonstration project to enhance methane generation and recovery

Active design activity with specialty in gas migration and emission management

Main language: English

Bibliography entry: yes
Related bibliography entries: Augenstein, Van Heuit

D.C. Parashar
National Physical Laboratory
Dr. K.S. Krishnan Road, New Delhi 110 012,
India

Tel: 91—588227/587162 Fax: 91-11-5752678

Net Address: N.P.O. New Delhi-110012 India,

Emission source: All sources

Measure and estimate emissions of greenhouse gases in India

Main language: English

Bibliography entry: no

Miles M. Parker
Ministry of Agriculture; Fisheries and
Food
Nobel House- Room G13, 17 Smith Square, London,
SWIP 3JR
United Kingdom

Tel: 44-71-238-5504 Fax: 44-71-238-5597

Emission source: General agriculture

Fund research and development on estimates and control of methane emissions from agriculture

Main language: English

Bibliography entry: no

N.K. Patni
Animal Research Centre
Building 59, Central Experimental Farm, Ottowa Ontario,
K1A OC6
Canada

Tel: 613-993-6002 Fax: 613-995-8175

Emission source: Animal wastes

Estimate emissions of greenhouse gases from livestock wastes in Canada

Determine loss of carbon in dairy cattle waste stored in farm tanks

Main language: English

Bibliography entry: yes

W.H. Patrick Jr. and C.W. Lindau
Louisiana State University
Center for Wetland Resources
Baton Rouge, LA 70803
U.S.A.

Tel: 504-388-8810 Fax: 504-388-6423

Emission source: Rice cultivation/Flooded systems

Measure methane emissions and fluxes from rice fields; measure emissions from swamps/marshes/ bottomland forest

Develop methods to reduce methane emissions from rice fields (e.g. adding sulfate/control of organic matter/water management)

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

John A. Patterson
Purdue University
Department of Animal Sciences
3-101 Lilly Hall, West Lafayette, IN 47907
U.S.A.

Tel: (317)494-4826 Fax: (317)494-9346

Emission source: Ruminants/Animal wastes/ Solid wastes

Develop models for methane emissions from drylots and solid waste storage systems

Measure emissions from lagoons under controlled conditions, feedlots, and applied waste

Develop techniques to divert ruminally produced hydrogen from conversion to methane

Main language: English

Bibliography entry: no

David J. Picard
Clearstone Engineering Ltd.
Suite 2050
205 Fifth Avenue S.W., Calgary, Alberta, T2P 2V7
Canada

Tel: 403-266-8820 Fax: 403-269-5858

Emission source: Natural gas systems

Assess methane & VOC emissions from upstream oil and gas industry in Alberta

Produce emission audit manual for oil and gas operators in British Columbia that includes emission control procedures

Main language: English

Bibliography entry: yes

Raymond C. Pilcher
Raven Ridge Resources Inc.
584 25 Road, P.O. Box 55187,
Grand Junction, CO 81505
U.S.A.

Tel: 303-245-4088 Fax: 303-245-2514

Emission source: Coal mining

Study Poland's coalbed methane resource and opportunities for its development; assess options for recovery and use

Study Czechoslovakia's coalbed methane resource and opportunities for its development

Evaluate coalbed methane recovery potential in China

Main language: English

Bibliography entry: no
Related bibliography entry: Bibler

Mariusz Popiolek
Dept. of Air & Soil Protection/International Cooperation/ Ministry of Environmental Protection Natural Resources & Forestry,
52/54 ul. Wawelska, 00-922 Warsaw,
Poland

Tel: 48-25-11-33 Fax: 48-25-39-72
Tlx: 81-28-16 wodro pl, Poland

Emission source: Coal mining/Natural gas/ Landfills

Estimate coalbed methane production from hard coal and methane emissions from natural gas systems and municipal waste in Poland

Main language: Polish/English

Bibliography entry: no

Heinz Rennenberg
Fraunhofer Institute for Atmospheric Environmental Research
Kreuzeckbahnstrasse 19, D-8100 Garmisch-Partenkirchen,
Tel: 49-8821-183120 Fax: 49-8821-73573
Germany

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: German

Bibliography entry: no
Related bibliography entry: Braatz

Keith M. Richards
Energy Technology Support Unit
Building 156- Harwell Laboratories,
Didcot, Oxon OX11 ORA,
United Kingdom

Tel: 235-43-3506 Fax: 235-43-2923

Emission source: Landfills/Animal wastes

Develop techniques to reduce methane emissions from biofuels (landfills, waste management and digestion, biomass combustion)

Perform feasibility/cost study of methane recovery from the anaerobic digestion of municipal wastes

Main language: English

Bibliography entry: no
Related bibliography entry: Coombs

John Rogers
U.S. Environmental Protection Agency
Office of Research and Development
College Station Road, Athens, GA 30613-7799
U.S.A.

Tel: 404-546-3128 Fax: 404-546-2018

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Kurt Roos
Methane Programs
Global Change Division ANR-445
U.S. Environmental Protection Agency, 410 M Street SW, Washington, DC 20460
U.S.A.

Tel: 202-475-8232 Fax: 202-382-6344

Emission source: Landfills/Ruminants/Animal wastes/Rice cultivation

Identify profitable/least cost opportunities for mitigating emissions from landfills; estimate emissions from landfills

Identify options/develop large-scale programs for reducing emissions from animal wastes (energy recovery); emission estimates

Study feasibility of expanding feed supplementation in India and other less developed countries to reduce livestock emissions

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity.

Main language: English

Bibliography entry: no
Related bibliography entries: Casada, Braatz

Luis G. Ruiz Suarez
Centro de Ciencias de la Atmosfera UNAM
Universidad Nacional Autonoma de Mexico
Circuito Exterior, Ciudad Universitaria, Mexico D.F. 04510,

Tel: 525-548-97-81 Fax: 525-548-97-81

Net Address: MENCHACA at UNAMVM1, Mexico

Emission source: Rice cultivation/General agriculture

Use field measurements to estimate emissions of methane and other light hydrocarbons from rice, sugar cane, and other crops

Main language: Spanish

Bibliography entry: no

L.M. Safley Jr.
North Carolina State University
Biological and Agricultural Engineering
Department, Box 7625, Raleigh, NC 27695-7625
U.S.A.

Tel: 919-737-3121 Fax: 919-737-7760

Emission source: Animal wastes

Design low-temperature covered lagoon reactors for treatment of livestock wastes; captured biogas used as onsite fuel

Estimate emissions from animal wastes

Main language: English

Bibliography entry: yes
Related bibliography entry: Casada

Masahiro Saito
National Research Institute for Pollution and Resources
16-3 Onogawa, Tsukuba-shi, Ibaraki-ken, 305
Japan

Tel: 81-298-54-3133 Fax: 81-298-54-3049

Emission source: All sources

Develop techniques to reduce methane emissions with catalytic reactions on solid catalysts (hydrogenation of CO_2; oxidative coupling of methane)

Main language: Japanese

Bibliography entry: no

Takashi Sakamoto
Traffic Safety and Nuisance Research Institute
Ministry of Transport, 6-38-1 Shinkawa Mitaka City, Tokyo 181,
2-394-2-116 Morooka Oume City- Tokyo 198,
Japan

Tel: 81-422-41-3219/7 Fax: 81-422-41-3233/2

Emission source: Urban sources

Research traffic exhaust emissions, energy saving, and emissions estimates for mobile sources

Main language: Japanese/English

Bibliography entry: yes

Ronald Sass
Rice University
Ecology Department
P.O. Box 1892, Houston, TX 77251
U.S.A.

Tel: 713-527-4066 Fax: 713-285-5232

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Katsuya Sato
Control and Cooperation Division
Global Environment Department
Japan Environment Agency, 1-2-2 Kasumigaseki,
Chiyoda-ku Tokyo 100,
Japan

Tel: 81-3-3581-7244 Fax: 81-3-3504-1632

Emission source: All sources

Estimate methane emissions in Japan

Main language: Japanese

Bibliography entry: no
Related bibliography entry: Japan Environmental Sanitation Center

Frank D. Sauer
Animal Research Centre
Agriculture Canada
K.W. Neatby Building Room 2050,
Ottawa, Ontario, K1A OC6
Canada

Tel: 613-993-6002 ex.7901 Fax: 613-995-8175

Emission source: Ruminants

Research on the quantitation and mechanism of metabolic pathways of ruminant methane

Develop methods for reducing methane emissions from cattle without damaging animal performance or well-being

Test cost-effective methods of reducing methane production in ruminants (e.g. incorporate ionophores into feed)

Main language: English

Bibliography entry: yes
Related bibliography entries: Marsden, Kramer, Teather

Steven Schwochow
Institute for Energy Resource Studies
Colorado School of Mines
Campus Box 22, Golden, CO 80401-1887
U.S.A.

Tel: 303-273-3888 Fax: 303-273-3574

Emission source: Coal mining

Study methods for coal degasification and methane recovery; design and field testing (drilling/completion/stimulation)

Field and laboratory studies in geology/hydrology/coal characterization/reservoir modeling

Main language: English

Bibliography entry: no
Related bibliography entry: Institute for Energy Resource Studies

W.Seiler/H.Rennenberg/ H.Papen/R.Wassmann
Fraunhofer Institute for Atmospheric Research
Kreuzeckbahnstrasse 19,8100, Garmisch-Partenkirchen, Germany

Tel: 49-8821-183-0 Fax: 49-8821-73573

Emission source: Rice cultivation

Monitor methane emissions from Chinese rice paddies

Field measurement/laboratory studies (enclosure and Scanning Electron Microscopy) to quantify plant-mediated methane transport

Measure methane from varying cultivation practices (organic/inorganic fertilizers; flooding/drought; cultivars)

Main language: English/German

Bibliography entry: yes
Related bibliography entries: Holzapfel-Pschorn, Schutz, Wang

Lowell Smith
Office of Research and Development
U.S. Environmental Protection Agency
RD-682, 401 M Street SW, Washington, DC 20460
U.S.A.

Tel: 202-382-5717 Fax: 202-382-6370

Emission source: Natural sources

Research to improve understanding of release and uptake of methane from soils and other ecosystems

Reduce emissions from soils and other ecosystems

Main language: English

Bibliography entry: no

K.A. Smith and J.R.M. Arah
The Scottish Agricultural College-Edinburgh
West Mains Road, Edinburgh EH9 3JG, Scotland

Tel: 31-667-1041 Fax: 31-667-2601

Emission source: General agriculture

Develop process-based models of methane emissions from flooded soils taking into account production/transport/aerobic oxidation factors

Main language: English

Bibliography entry: no

Laszlo Somos
Hungarian Geological Institute
XIV Nepstadion ut 14, 1143 Budapest, Hungary
Tel: 36-1-251-6769 Fax: 36-1-251-0703

Net Address: Bimbo ut 96/a. fsz.1. 1022 Budapest-Hung,

Emission source: Coal mining

Planning feasibility study for pre-mining degasification and gas utilization at Mecsek mines in southern Hungary

Create computerized databank of all Hungarian coal deposits' natural characteristics

Main language: English

Bibliography entry: no

Peet M. Soot
Northwest Fuel Development Inc.
P.O. Box 25562, Portland, OR 97225
Net Address: 7675 SW Miner Way,
U.S.A.

Tel: 503-297-6291 Fax: 503-297-1802

Emission source: Coal mining

Demonstration project (NW Fuel/U.S.DOE): methane from gob wells and abandoned mines fuels engines which drive generators

Perform analysis/field testing of emissions from underground and surface and abandoned mines

Develop an ultra-lean fuel burning gas turbine which is self-sufficient at methane concentrations as low as 2%

Main language: English

Bibliography entry: yes

Stephen D. Sparrow
Agricultural and Forestry Experiment Station
University of Alaska, 309 O'Neill,
Fairbanks, AK 99775-0080
U.S.A.

Tel: 907-474-7620 Fax: 907-474-2677

Emission source: General agriculture/Natural sources

Compare methane fluxes in undisturbed taiga and agricultural soils in Alaska during summer 1991

Main language: English

Bibliography entry: no

William C. Steen
U.S. Environmental Protection Agency
Office of Research and Development
College Station Road, Athens, GA 30613-7799
U.S.A.

Tel: 404-546-3103 Fax: 404-546-2018

Emission source: Rice cultivation

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Su Wenshu
Chongqing Branch
Central Coal Mining Research Institute
Shangqiao, Chongqing 630037,
China

Tel: 66-17-71 Fax: 1411 cable

Emission source: Coal mining

Develop prevention and control technology for methane outburst in coal mines

Develop techniques for mine methane drainage and utilization

Main language: Chinese

Bibliography entry: no
Related bibliography entries: Central Coal Mining Research Inst., China Coal Society

David Swift
Natural Resource Ecology Laboratory
Colorado State University
Fort Collins, CO 80523
U.S.A.

Tel: 303-491-1982

Emission source: Ruminants

Estimate global emissions from ruminants

Main language: English

Bibliography entry: no
Related bibliography entry: Reuss

Istvan Szucs
GEOPARD Research Dev. and Services Co. for Geotechnique and Environmental Protection Ltd., H-7629 PECS, Gyorgy-Akna, Hungary

Tel: 36-72-25930/11153 Fax: 36-72-25930

Emission source: Coal mining/Landfills

Study preliminary gas drainage from coal seams

Test gas hazard and drainage of industrial and public refuse dumps

Manufacture device to measure pressure and flow in boreholes

Main language: Hungarian/English/Russian

Bibliography entry: no

Masaru Tanaka
The Institute of Public Health
6-1 Shiroganedai
4 Chome, Minato-ku, Tokyo 108,
Japan

Tel: 81-3-3441-7111 ex.37 Fax: 81-3-3446-4314

Emission source: Landfills/Solid waste incinerators

Estimate methane emissions based on yearly survey by the Ministry of Health and Welfare

Main language: Japanse

Bibliography entry: no

Susan Thorneloe
Office of Research and Development
U.S. Environmental Protection Agency
MD-63, Research Triangle Park, NC 27711
U.S.A.

Tel: 919-629-2709 Fax: 919-629-2382

Emission source: Landfills

Estimate methane emissions from landfills

Analyze options for reducing methane emissions from landfills

Main language: English

Bibliography entry: yes

Basat H. Tilkicioglu
Pipeline Systems Incorporated (PSI)
460 N. Wiget Lane
Walnut Creek, CA 94598
U.S.A.

Tel: 415-939-4420 Fax: 415-937-8875

Emission source: Natural gas systems

Annual emission estimates from natural gas systems in the United States

Study and develop options for reducing methane emissions from natural gas systems

Main language: English

Bibliography entry: yes

John W. Tilley
Department of Primary Industries and Energy
GPO Box 858, Canberra ACT 2601,
Australia

Tel: 61-62-72-5811 Fax: 61-62-72-5926

Emission source: Coal mining/Natural gas/Urban sources

Estimate methane emissions from the Australian energy sector

Study methane drainage in Australian coal mines

Main language: English

Bibliography entry: yes
Related bibliography entries: Scaife, Commonwealth Department of Primary Industries

Dennis A. Trout
Atmospheric Sciences Research Program
Global Change Research Program- U.S.EPA
RD-682 Room WT 611H, 401 M Street SW,
Washington, DC 20460
U.S.A.

Tel: 202-382-5991 Fax: 202-382-6370

Emission source: All sources

Emissions estimates for sources and sinks of methane

Study control technology and management options for methane: planning and oversight

Atmospheric sciences research on transport and transformation of methane

Main language: English

Bibliography entry: no

Haruo Tsuruta
National Institute of Agro-Environmental Sciences
3-1-1 Kannondai, Tsukuba Scientific City,
Ibaraki-ken 305,
Japan

Tel: 81-298-38-8276 Fax: 81-298-38-8199

Emission source: Rice cultivation/Landfills/Urban sources

Measure methane flux from rice paddy fields by chamber method and use to obtain global paddy emission estimates

Analyze monitoring data of atmospheric methane from landfills and other sources in the Tokyo metropolitan area

Estimate emissions of methane from all sources in Japan/Asia

Main language: Japanese/English

Bibliography entry: yes

G.J. van den Born
National Institute of Public Health and
Environmental Protection (R.I.V.M.)
P.O. Box 1, 3720 BA Bilthoven,
Netherlands

Tel: 31-30-743026/743704 Fax: 31-30-250740

Emission source: All sources

Estimate and predict greenhouse gas emissions in the Netherlands (with existing policies and other response options)

Main language: English

Bibliography entry: no

Donald K. Walter
Waste Material Management
Conservation and Renewable Energy
Department of Energy, Washington, DC 20585
U.S.A.

Emission source: Landfills

Increase utilization of landfills for energy recovery using gas enhancement techniques/methane recovery/utilization

Main language: English

Bibliography entry: no
Related bibliography entries: Lockman, PG & E, Johns Hopkins Industries, Adams County, Los Angeles County

Wang Mu-lin
Atmospheric Chemistry Laboratory
Academy of Meteorological Science
State Meteorological Administration, 46 Baishigiao Road,
100081 Beijing,
China

Tel: 831-22-77 ext. 2646

Emission source: Rice cultivation/All sources

Study sampling and measurement procedures for methane in air (Model HP-5880 gas chromatography with flame ionization detector)

Measure methane concentration in the troposphere for different ecological environments and elevations

Measure methane fluxes from rice paddies using enclosure and gradient techniques during different growing seasons

Main language: Chinese

Bibliography entry: yes

Nobuaki Washida
National Institute for Environmental
Studies
16-2 Onogawa, Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-51-6111 Fax: 81-298-51-4732

Emission source: All sources

Reasearch chemistry of atmospheric sinks of methane

Main language: English

Bibliography entry: no

M.L. Williams
Warren Spring Laboratory
Gunnels Wood Road
Stevenage, Herts, SG1 2BX
United Kingdom

Tel: 44-438-74-11-22 Fax: 44-438-36-08-58

Emission source: All sources

Compile emissions inventories of methane and other gases for the United Kingdom (from all human-influenced sources)

Main language: English

Bibliography entry: yes
Related bibliography entry: Munday

David J. Williams
Commonwealth Scientific and Industrial
Research Organisation (CSIRO)
Coal and Energy Technology Division, 51 Delhi Road-
P.O. Box 136, North Ryde Sydney NSW, 2113
Australia

Tel: 02-887-8666 Fax: 02-887-8909
Telex: 25817

Emission source: All sources

Evaluate methane emissions from major known sources in Australia

Formulate goals and strategies for Australia to limit emissions of greenhouse gases

Main language: English

Bibliography entry: yes

Kazuyuki Yagi
National Institute of Agro-Environmental Sciences
Kannondai 3-1-1, Tsukuba, Ibaraki 305,
Japan

Tel: 81-298-38-8276 Fax: 81-298-38-8199

Emission source: Rice cultivation/Flooded systems

Measure methane flux from paddy fields

Estimate global emissions from flooded soils using field measurement and laboratory incubation techniques

Main language: Japanese/English

Bibliography entry: yes
Related bibliography entry: Minami

Kenji Yasuda
Air Quality Department
Environmental Research Center of
Kanagawa Prefecture- 842 Simojuku, Nakahara-Kanagawa Prefecture 254, Hiratsuka-City,

Tel: 81-463-24-3311 Fax: 81-463-24-3300

Net Address: 842 Simojuku- Nakahara- Hiratsuka-City, Japan

Emission source: Landfills (waste incineration)

Develop methods for controlling air pollution from waste incineration and waste management

Main language: Japanese/English

Bibliography entry: no

Remko Ybema
Netherlands Energy Research Foundation
P.O. Box 1, 1755 Z6, Petten,
Netherlands

Tel: 31-2246-4428 Fax: 31-2246-3338

Emission source: Landfills/Fossil fuels/All sources

Collect information on energy-related sources of methane (technological options for dynamic LP model of energy system)

Compare emissions of different greenhouse gases

Main language: Dutch/English

Bibliography entry: yes
Related bibliography entry: Okken

Patrick R. Zimmerman
National Center for Atmospheric Research
(NCAR) P.O. Box 3000
1850 Table Mesa Drive, Boulder, CO 80307
U.S.A.

Tel: 303-497-1406 Fax: 303-497-1411/1400

Emission source: Rice cultivation/Animal wastes

Review knowledge and options for reducing methane emissions from flooded rice fields without decreasing productivity

Estimate methane emissions from animal wastes

Main language: English

Bibliography entry: no
Related bibliography entry: Braatz

Gunter Zimmermeyer & Klaus Noack
Gesamtverband des Deutschen
Steinkohlenbergbaus
Friedrichstrasse 1, 4300 Essen 1,
Germany

Tel: 49-201-1805-447 Fax: 49-201-1805-444

Emission source: Coal mining

Increase use of mine gas for energy use: use an additional 49 mcm over next four years (commitment by German Mining Industry)

Create programs to support development of methane use facilities with support by regional governments

Estimate coalbed methane emissions from the German coal mining industry

Main language: German

Bibliography entry: no

Bibliography

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COAL MINING

Banerjee, B.D. et al. 1987. "Investigation on Methane Emission in Indian Coal Mines." J. of Mines, Metals and Fuels. August. pp 386-390

Battino, S., L. Lunarzewski and D. Truong. 1988. "Towards a Reliable Gas Emission Prediction Method for Australian Longwall Mining." The Aust. I.M.M. Illwarra Branch, 21st Century Higher Production Coal Mining Systems - Their Implications. Wollongong, Australia. April

Bibler, Carol J., Roger Glickert, Lawrence Machesky, Raymond C. Pilcher, and James Williams. 1991. Assessment of Potential for Coalbed Methane Development in Poland. Colorado: Raven Ridge Resources, Inc. February

Boyer, C.M., J.R. Kelafant, V.A. Kuuskraa and K.C. Manger. 1990. Methane Emissions From Coal Mining: Issues and Opportunities for Reduction. ICF Resources Incorporated. with Dina Kruger, U.S. Environmental Protection Agency. September

Boyer, C.M., F.H. Briscoe, B.S. Camp, F.X. Dobscha and P. Malone. 1986. Rock Creek Methane from Multiple Coal Seam Completion Project- Demonstrated Drilling and Completion Technology for the Multiple Seams Completion Project. Topical report Mar 83-Dec 86. Monroeville, PA: USX Corp., USS Technical Center. Report no. GRI-87/0084

Boyer, C.M. II, G.S. Popvich and R.A. Schraufnagel. 1986. "Rock Creek Methane from Multiple Coal Seams Completion Project." U.S. Steel Corp. Proceedings SPE Unconventional Gas Technology Symposium. Louisville, Kentucky. May 18-21. in Society of Petroleum Engineers of AIME (paper). USA SPE 15259 pp 599-606

Boyer, C.M. and F.C. Schwerer. 1985. "Drainage and Recovery of Methane from Coalbed Reservoirs." Proceedings International Conference of Safety in Mines Research Institutes. Sydney, Australia. October 21-25

Boyer, C.M. and P.B. Stubbs. 1983. Measurement of Dynamic Coalbed Reservoir Conditions Required to Design Near-Mine Methane Control Activities in the Warrior Coal Basin. Final report. DOE/ET/14204-1477. TIC no.: DE84000226

Budzinski, A. and L. Lunarzewski. 1985. "Application of Centralized Gas Drainage System for Longwall with Caving." 21st International Conference on Safety in Mines Research Institutes. Sydney, Australia. October

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