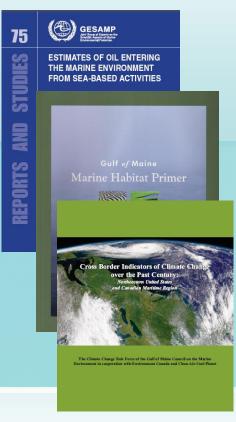
Bertrum H. MacDonald Dalhousie University



From Science to Decision Making: The Track Record of "Grey" Environmental Publications

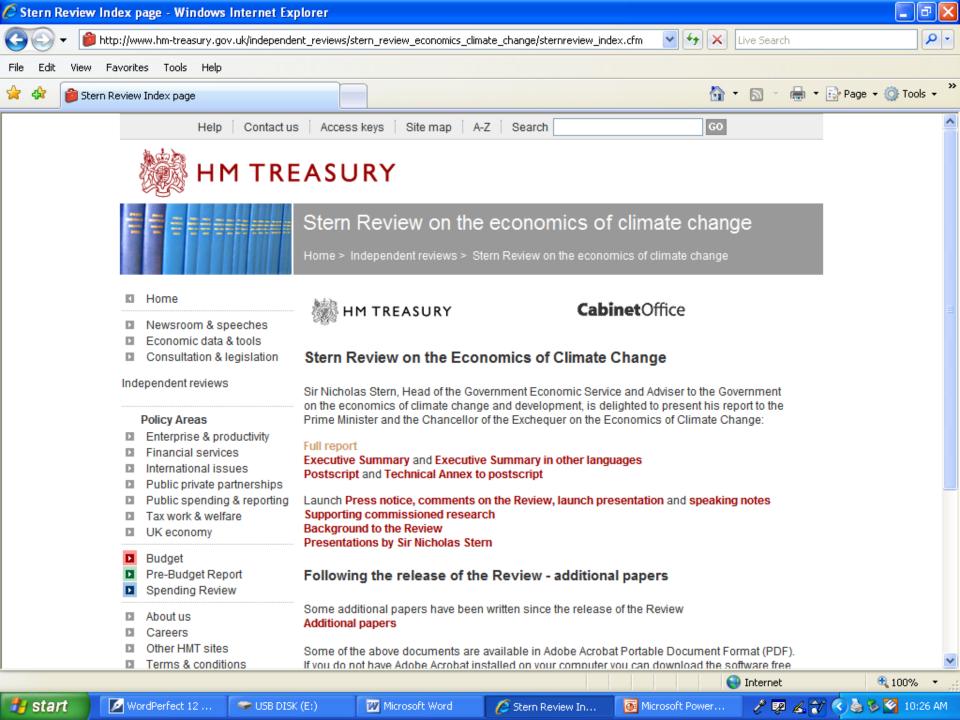
Faculty of Information Studies Colloquium University of Toronto 15th November 2007 The Economics of Climate Change: The Stern Review (October 2006)

The Economics of Climate Change

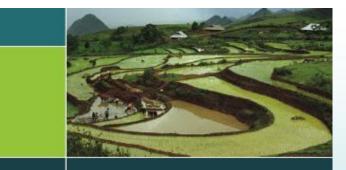
The Stem Review

MIGHQUAS STERN

COMPRESSOR







ECOSYSTEMS AND HUMAN Well-being

Synthesis

🍘 MILLENNIUM ECOSYSTEM ASSESSMENT



CURRENT STATE AND TRENDS



ECOSYSTEMS AND HUMAN WELL-BEING

SCENARIOS.



ECOSYSTEMS AND HUMAN WELL-BEING

POLICY RESPONSES



Parlings of the Rosponers Working Group

MILLINGUM ECONVILM ANDISHUST

LIVING BEYOND OUR MEANS



NATURAL ASSETS AND HUMAN WELL-BEING

Statement from the Board

MILLENNIUM ECOSYSTEM ASSESSMENT

Guiding Questions

- What have the agencies published, where and how?
- What methods will show regarding the distribution and use of their publications?
- What other approaches can be deployed to demonstrate the use and influence of their publications?
- What fundamental principles regarding the dissemination of grey literature from similar organizations are emerging from this study?

Ultimately

Are the oceans and the Gulf of Maine better off environmentally from all this publication effort?

Grey Literature is...

that which is produced at all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers

× Fourth International Conference on Grey Literature, 1999

not readily available through normal book selling channels, and therefore difficult to identify and obtain

× C. P. Auger, 1998, Information Sources in Grey Literature, p. 3

Grey Literature Spectrum*

Light greyTheses, standards, patentsTechnical reports in numbered seriesElectronic documents on the InternetGovernment documentsMedium greyCorporate annual reports, directoriesProduct information, cataloguesNewsletters, conference proceedings, pre-printsConsultants' reports, bibliographiesDark greyBrochures, non-commercial translationsBackground documents, drafts of technical reports

Black Internal documents of organizations, other inaccessible items

*R.E. Cordes



GESAMP

Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

Science for Sustainable Oceans



GESAMP – What is it?

IMO / FAO / UNESCO-IOC / WMO / WHO / IAEA / UN / UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

- ➤ active since 1969
- Committee of volunteer scientific experts
 working groups address specific questions
- ➤ internal and external peer review of reports
- > gives advice on marine environmental protection
 - ✗ to the UN agencies, and through them, to member governments
 - **x** to scientists, managers, other organizations



Administrative Secretary

Technical Secretaries of the Sponsoring Agencies

Mr. René Coenen

IMO Technical Secretary of GESAMP International Maritime Organization 4 Albert Embankment London SE1 7SR United Kingdom

Mr. Uwe Barg

FAO Technical Secretary of GESAMP Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy

Mr. Julian Barbière

UNESCO-IOC Technical Secretary of GESAMP UN Technical Secretary of GESAMP Intergovernmental Oceanographic Commission United Nations UNESCO 1, rue Miollis F-75732 Paris Cedex 15 France

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WMO Technical Secretary of GESAMP World Meteorological Organization 7 bis, avenue de la Paix P.O. Box No. 2300 CH-1211 Geneva 20 Switzerland

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Ms. Alice Hicuburundi

Division for Ocean Affairs and the Law of the Sea/OLA DC2-0414 United Nations New York, NY 10017 U.S.A.

Mr. Salif Diop

UNEP Technical Secretary of GESAMP Head, Ecosystems Section and Water Unit Division of Early Warning and Assessment (DEWA) UNEP P.O. Box 30552 Nairobi 00100 Kenya

Mr. Miguel Palomares

International Maritime Organization 4 Albert Embankment London SE1 7SR United Kingdom

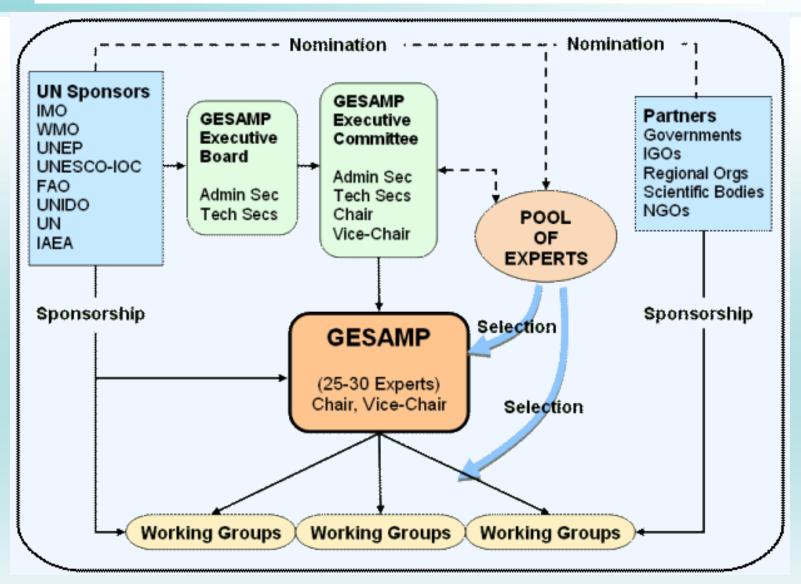
GESAMP Officer

Mr. Fredrik Haag International Maritime Organization 4 Albert Embankment London SE1 7SR United Kingdom

GESAMP Meetings



Organizational relationships in GESAMP



Report of a GESAMP Session



EP NAITONS

UNITED NATIONS NEW YORK



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS ROAF



HOME UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CLETURAL ORGANIZATION



PARES WORLD HEALTH ORGANIZATION GENEVA



WORLD METEOROLOGICAL ORGANIZATION GENEVA



INTERNATIONAL MARITIME GRGANIZATION LONDON



INTERNATIONAL ATOMIC ENERGY AGENCY VIENNA



Report of the

of GESAMP

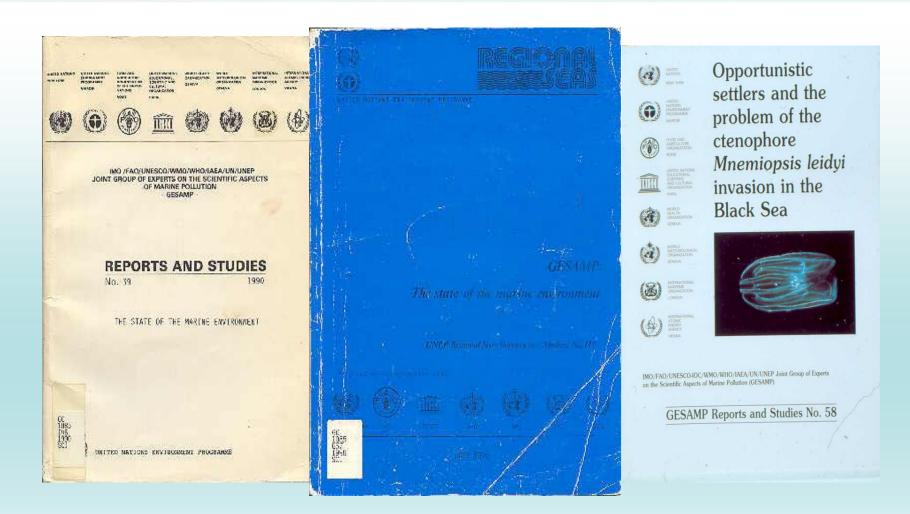
twenty-seventh session

Nairobi, Kenya, 14 - 18 April 1997

IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)

GESAMP REPORTS AND STUDIES No. 63

Selected earlier GESAMP Reports



2002 Guidelines that inform the application of MARPOL



NEW YORK



NATIONS ENVIRONMENT PROGRAMME NAIROBI

FOOD AND AGRICULTURE ORGANIZATION

UNITED NATIONS



UNITED NATIONS AND CULTURAL ORGANIZATION

ROME



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION



HEALTH GENEVA







ONDON







IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)

The Revised GESAMP

Chemical Substances

Hazard Evaluation

Carried by Ships

Procedure for

SAMP Reports and Studies No. 64



Reports and Studies

IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)

Protecting the Oceans from Land-based Activities

Land-based sources and activities affecting the quality and uses of the marine, coastal and associated freshwater environment



the Marine Environment from Land-based Activities (UNEP) - The Hague Division of Environmental Conventions (UNEP) - Nairobi Advisory Committee on Protection of the Sea (ACOPS) - London

Reports available at gesamp.imo.org



GESAMP Reports and Studies IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)



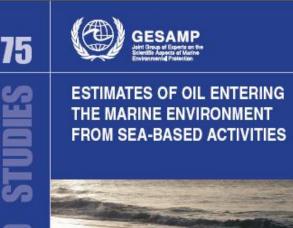
A Sea of Troubles



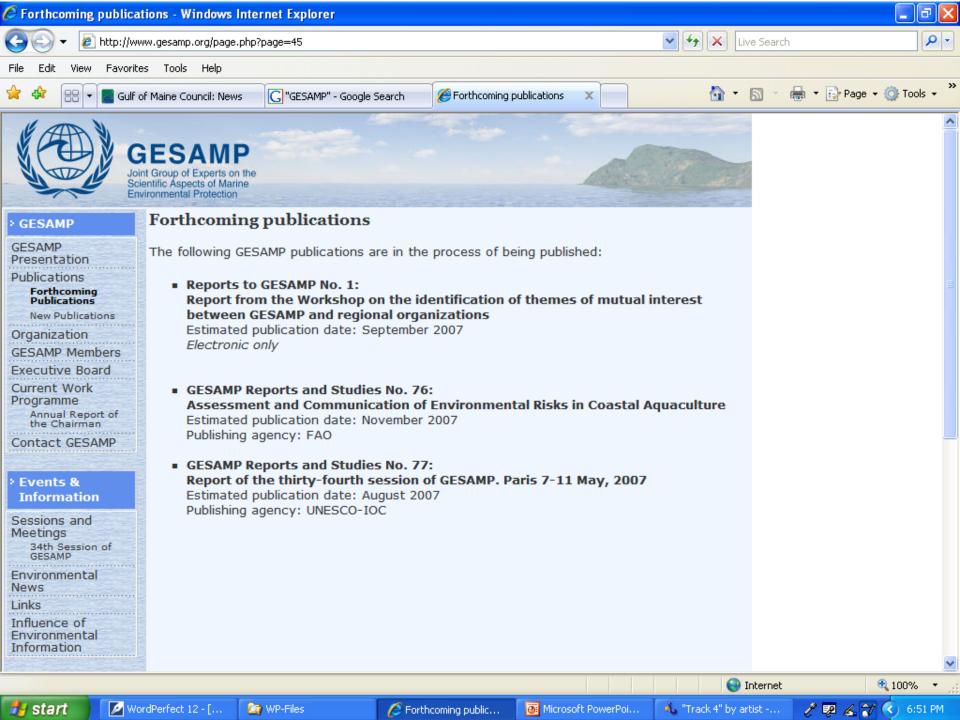
Coordination Office of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP) - The Hague Division of Environmental Conventions (UNEP) - Natrobi Advisory Committee on Protection of the Sea (ACOPS) - London

Report # 70 Prepared with assistance of a science journalist

REPORT







Types of GESAMP Publications

Type of Content	Type of Publication	ltems in English	Translations Identified
Session Reports	GESAMP Reports and Studies	25	59
	Early sessions - documents	6	15
	Early sessions - other series	1	4
	Related journal articles	7	
Thematic Reports	Thematic Reports GESAMP Reports and Studies		7
	Supplements to early session reports		4
	Identical versions in other series	14	2
	Only published in other series	2	
	Report drafts and other working documents (# not determined)		
	Related books (commercial publishers)		
	Related journal articles (primary literature)	6	
About GESAMP	ESAMP Histories of GESAMP		
	Journal articles describing GESAMP (not included as targets in the citation study)	6	

Variations in Bibliographic Elements — Title Page, Cover, and Recommended Citation Format

Report	Element	Location	Contents
#61 (1996)	Corporate author	Title page	IMO/FAO/Unesco-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection - GESAMP -
		Cover	IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)
		Citation format	GESAMP(IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection)
	Series	Title page	Reports and Studies No. 61
		Cover	GESAMP Reports and Studies No. 61
		Citation format	Rep.Stud.GESAMP, (61):66 p.
	Title	Title page	The contributions of science to integrated coastal management
		Cover	The contributions of science to integrated coastal management
		Citation format	The contributions of science to coastal zone management
#67 (1999)			Report of the twenty-ninth session, London, United Kingdom, 23-26 August 1999
		Cover	Report of the twenty-ninth session of GESAMP London, 23-26 August 1999
		Citation format	Report of the Twenty-Ninth Session, London, United Kingdom, 23-26 August 1999

Locating GESAMP Citations

Web of Science / Web of Knowledge

- An interdisciplinary citation index
- Compact format for representing citations
- * no standard way of entering Grey Literature citations

Multiple searches required

- searches based on GESAMP sponsoring agencies
- × report series, titles
- × searches for books and papers

"J*GR*EX" in Cited Author

	Hits	Cited Author	Cited Work	Volume	Page	Year
	1	*JOINT GROUP EXP S	115 JOINT GROUP EXP			1990
	1	*JOINT GROUP EXP S	115 UNEP			1990
	1	*JOINT GROUP EXP S	30 REP STUD			1986
	1	*JOINT GROUP EXP S	39 REP STUD			1990
	1	*JOINT GROUP EXP S	78887IM WHOWA UN ED			1987
	1	*JOINT GROUP EXP S	GESAMP	50	1	1993
	1	*JOINT GROUP EXP S	GESAMP REP STUD	39		1990
	1	*JOINT GROUP EXP S	REP STUD	115		1990
	1	*JOINT GROUP EXP S	REP STUD	32		1987
	1	*JOINT GROUP EXP S	REV POT HARMF SUBST			1986
	1	*JOINT GROUP EXP S	SEA SURF MICR ITS RO			1995
	2	*JOINT GROUP EXP S	UNEP REG SEAS REP ST	115		1990
	1	*JOINT GRP EXP SCI	IAEA REP STUD	19	1	1983
	1	*JOINT GRP EXP SCI	REG SEA REP STUD	115		1990
Γ	1	*JOINT GRUP EXP SC	UNEP REG SES REP STU	115		1990

IMO*FAO* in Cited Work

	Hits	Cited Author	Cited Work	Volume	Page	Year
	1	*GESAMP	IMO FAO UNESCO IOC W			1997
Г	1	*GESAMP	IMO FAO UNESCO WHO I	46		1991
Γ	1	*GESAMP	IMO FAO UNESCO WMO I	50		1993
Γ	1	*GESAMP	IMO FAO UNESCO WMO W			1995
Γ	1	*GESAMP	IMO FAO UNESCO WMO W			1990
Г	2	*GESAMP	IMO FAO UNESCO WMO W			1989
	1	*GESAMP	IMOA FAO UNESCO WMO	34	40	1990
Γ	1		IMO FAO UNESCO WMO W		17	1986
Г	1		IMO FAO UNESCO WMO W	28	1	1986
Г	1		IMOFACUNESCOMMOWHOIA			1989
Г	1		IMOFACUNESCOMMOWHOIA			1986

Search Strategies – Cited Work

٠	FAO* REP*	n*FAO* REP*	(n=0,9)
•	GESAMP*	i*gesamp*	(i=0,9 and A-Z)
•	G* REP* STUD*	n*G* REP* STUD*	(n=0,9)
•	GR* EX* SC*	n*GR* EX* SC*	(n=0,9)
•	IMCO*FAO* or IMCO* REP*	n*IMCO*	(n=0,9)
•	IMO*FAO* or IMO* REP*	n* IMO*	(n=0,9)
•	J* GR* EX*	n*J* GR* EX*	(n=0,9)
•	REG* SEA*	n*REG* SEA*	(n=0,9)
•	REP STUD*		
•	REPORTS STUDIES*	n*REP* STUD*	(n=0,9)
•	UN ENV* PR*	n*UN ENV* PR*	(n=0,9)
•	UN REP* ST*	n*UN REP* ST*	(n=0,9)
•	UNEP* REG*	n*UNEP*	(n=0,9)
•	UNESCO* REP* ST*	n*UNESCO* REP* ST	* (n=0,9)
•	UNEP* REP* ST*	n*UNEP* REP* ST*	(n=0,9)
•	WHO* REP* ST*	n*WHO* REP* ST*	(n=0,9)
•	WMO* REP* ST*	n*WMO* REP* ST*	(n=0,9)

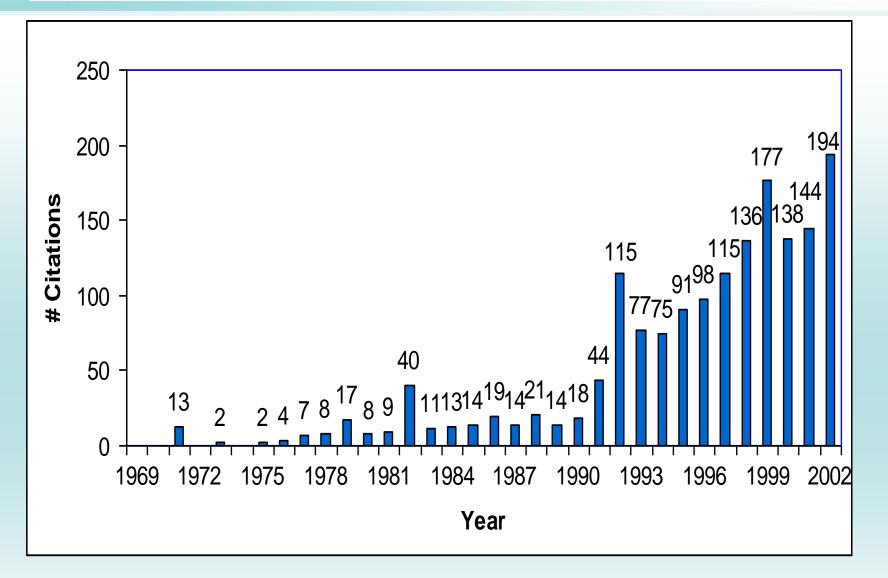
Citations Located

1518 citations in 1251 papers 88% of citations list only one GESAMP publication

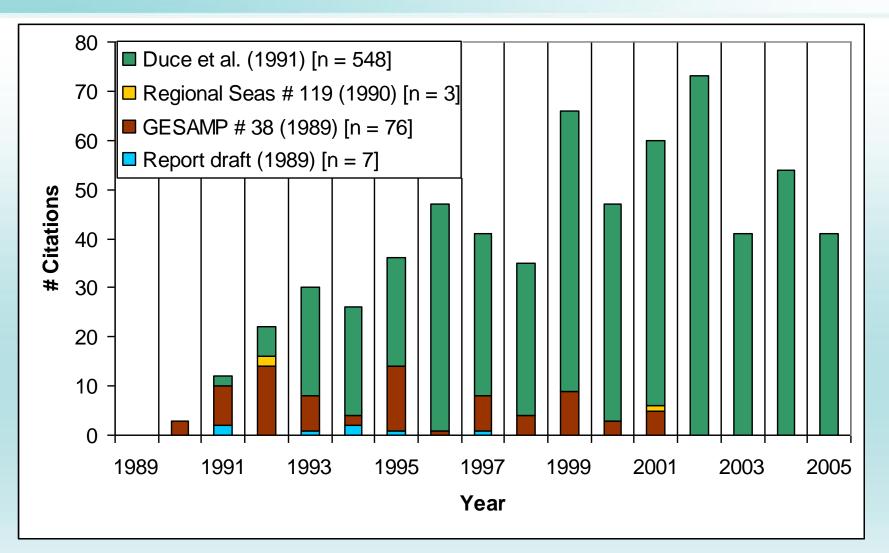
96% of citations are to thematic reports

61% of citations are to true grey literature

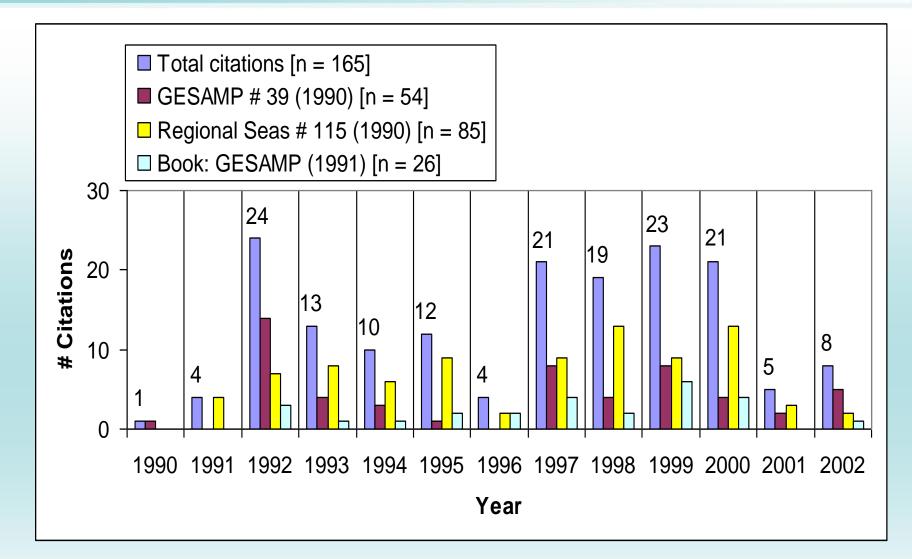
Frequency of Citations to GESAMP Publications (to the end of 2002)



Citations to Versions of The Atmospheric Input of Trace Species to the World Ocean (GESAMP Report)



Citations to Versions of The State of the Marine Environment (to 28 July 2002)



Self-citation within GESAMP

Identified 690 people connected to GESAMP

- members, administrators, observers at sessions
- working group members, reviewers (6 reports)
- × year when they joined GESAMP
- 146 of them cite GESAMP
- In 363 citing papers

Who Cites GESAMP Reports?

Individuals Associated with GESAMP

- × 28% of the citing papers
- ✗ 34% of the citations

All Others

× More than 70% of the citing papers

Geographic Distribution of Citing Authors

Western Europe — 43% North America & Caribbean — 31% Asia — 8% Australia & New Zealand — 6% Eastern Europe — 5% Middle East — 4% Africa — 2% South America — 1%

Categories from Journal Citation Reports

Top Science Categories	# citations	# journals
 Environmental Sciences 	641	58
 Marine & Freshwater Biology 	385	43
 Oceanography 	223	27
 Geosciences, Interdisciplinary 	135	28
 Meteorology & Atmospheric Sciences 	115	11
Top Social Science Categories		
 International Relations 	64	8
 Environmental Studies 	52	5
• Law	26	7
Other Diverse Science Categories		
 Engineering, Environmental 	78	8
 Fisheries 	51	14
 Public, Environmental & Occup. Health 	17	7
 Food Science & Technology 	10	6



Gulf of Maine Council on the Marine Environment



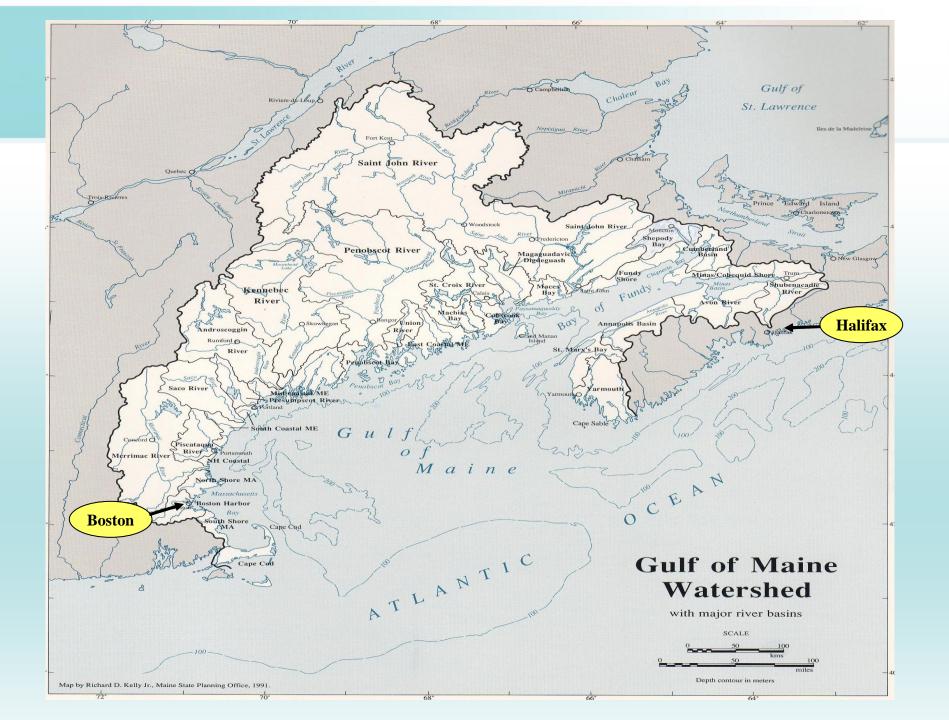
Gulf of Maine Habitat Restoration Web Portal

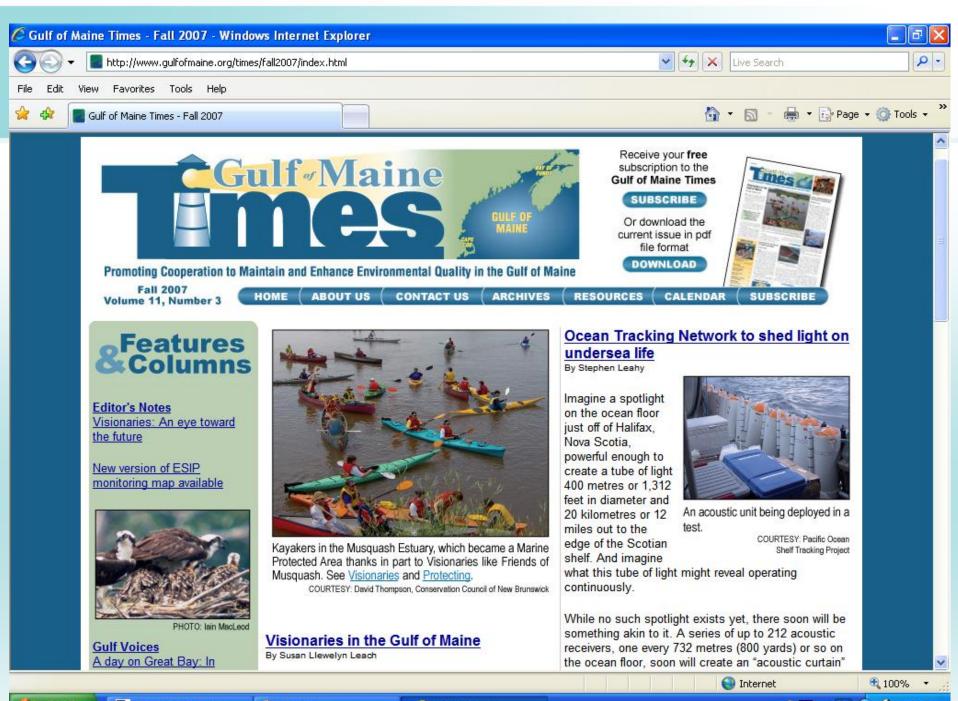
Salt Marshes of the Gulf of Maine m Monitoring to Assess Human Impacts and Ecological Condition



Workshop Report 2001: Managing Nitrogen Impacts in the Gulf of Maine Prepared by the NOAAVLINJ Cooperative Institute Jr. Constat and Estuarine Environmental Technology (CICEET), the Galf of Maire Council on the Marine Environment, and NOAA's National Oces Service







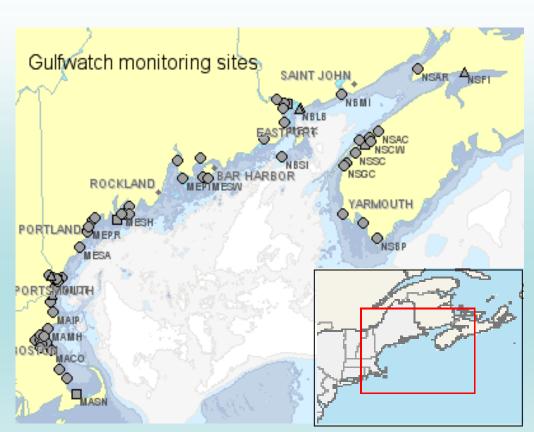
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🖉 Gulf of Maine Times -

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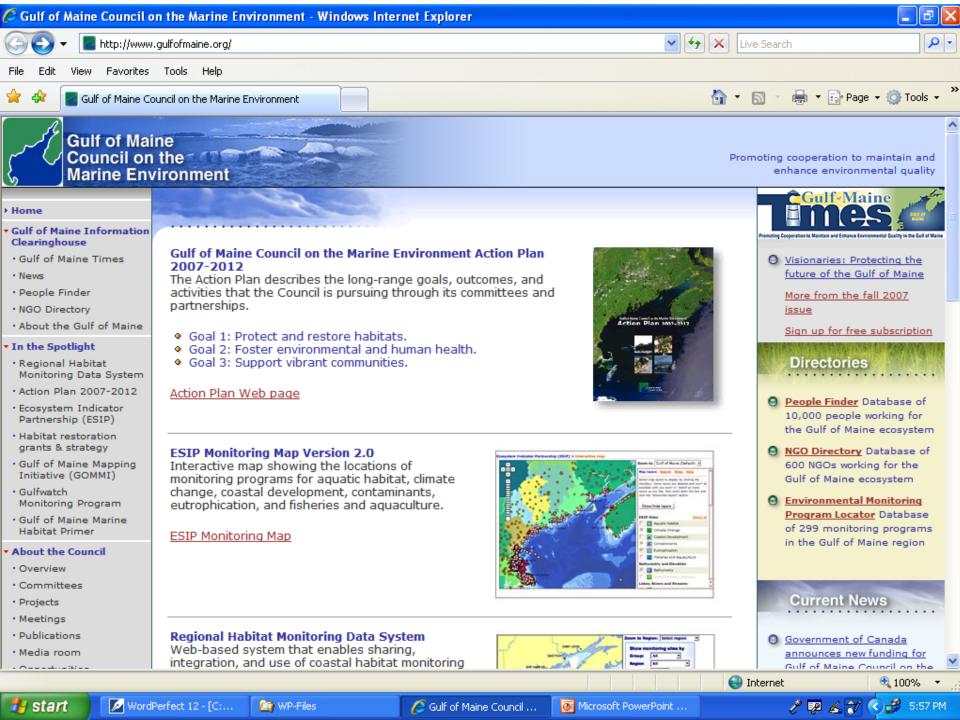
GOMC Gulfwatch Program

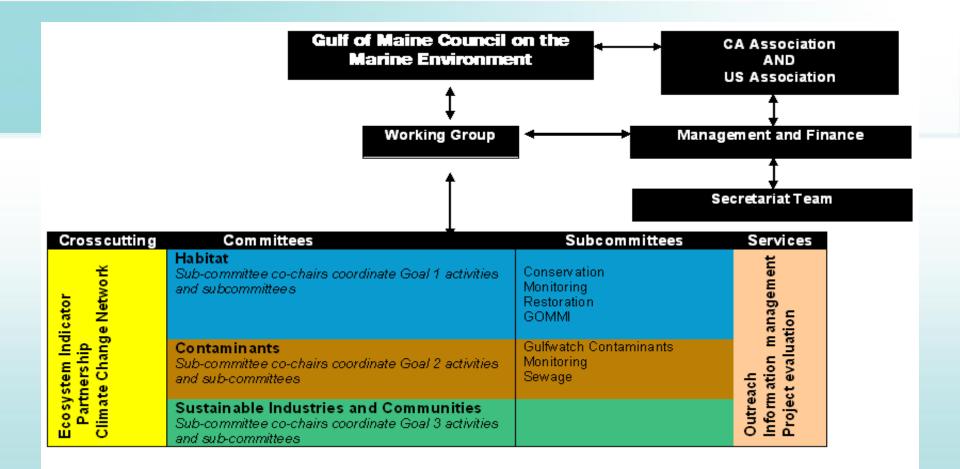




International monitoring program of contaminants

Indicator species — blue mussels (*Mytilus edulis*) collected, each fall, from intertidal areas in coastal embayments





Partnerships

GOM Ocean Data Partnership Northeast Aquatic Nuisance Species Panel

	Potential Strategic Alliances
BoFE	P
Censu	is for Marine Life
GoMC	OOS
RARG	OM
Place	-based Groups (ACAP, NEP, NERR)

Gulf *of* Maine Marine Habitat Primer





Gulf of Maine Council on

the Marine Environment

TIDES OF CHANGE ACROSS THE GULF

An Environmental Report on the Gulf of Maine and Bay of Fundy



Prepared for the Gulf of Maine Summit: Committing to Change, Fairmont Algonquin Hotel, St. Andrews, New Brunswick, Canada, October 26-29th, 2004

Editors: Gerald G. Pesch United States Environmental Protection Agency, ORD/NHEERL/AED, Narragansett, Rhode Island

Peter G. Wells Environmental Conservation Branch, Environment Canada, Dartmouth, Nova Scotia Published by: Gulf of Maine Council on the Marine Environment and Global Programme of Action Coalition for the Gulf of M



Gulf of Maine Council

on the Marine Environment

ACTION PLAN 2001-2006

Gulf of Maine Marine Habitat Primer







Gulf of Maine Council on

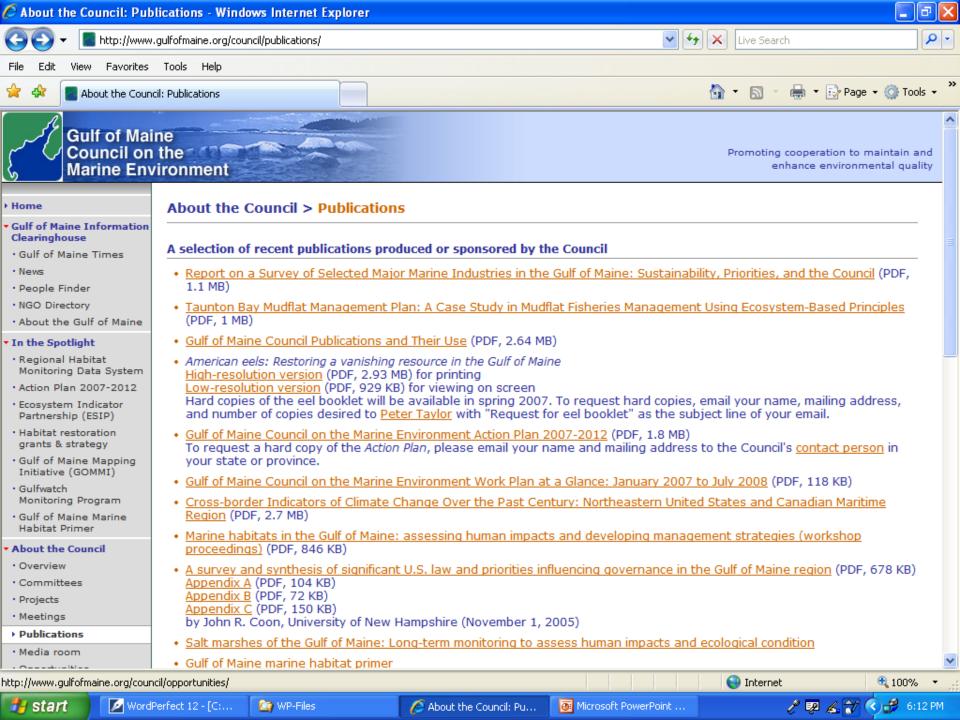
the Marine Environment

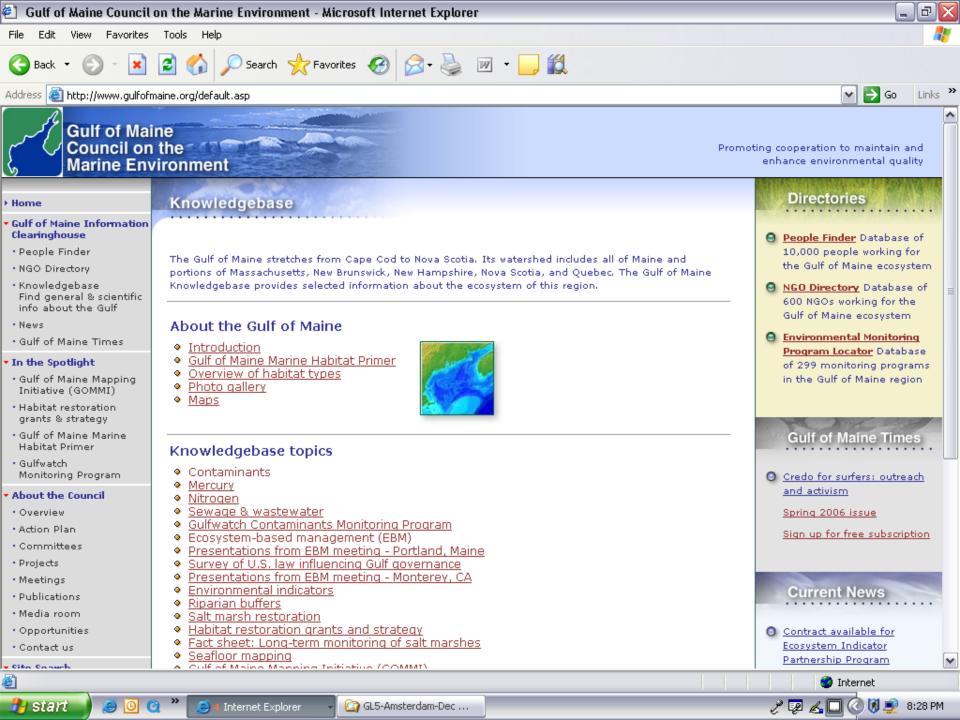
Cross Border Indicators of Climate Change over the Past Century: Northeastern United States and Canadian Maritime Region

The Climate Change Task Force of the Gulf of Maine Council on the Marine Environment in cooperation with Environment Canada and Clean Air-Cool Planet

Published in print, 2005

Published online, 2006





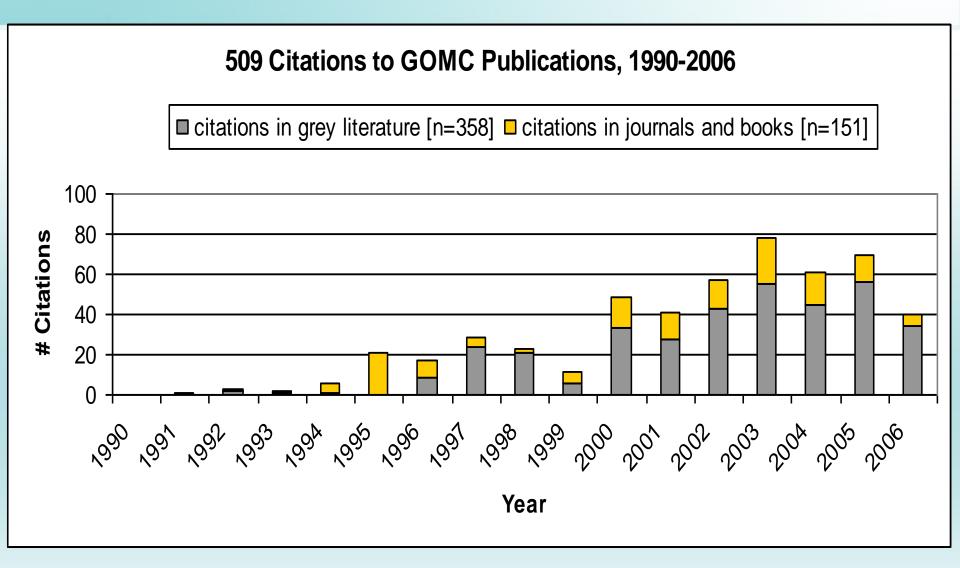
GOMC Publications – (Total 312)*

Council Publications		
Reports and fact sheets	122	
Background documents	38	
Action plans and annual reports	29	
Brochures and posters	10	
Serials	4	
Miscellaneous	9	
Council-supported publications		
Reports and background documents	24	
Miscellaneous documents	25	
Reprints of Council authored documents		
Conference papers, journal articles and abstracts		

* As of 15 November 2006

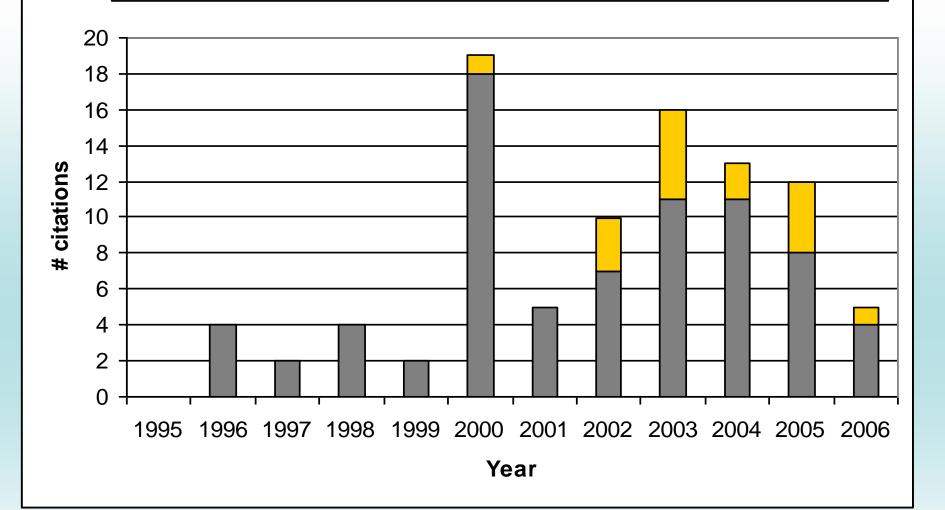
Citations to GOMC Publications

	Online	Print
Gulf of Maine Region	151	164
United States (outside Gulf region)	61	30
Canada (outside of Gulf region)	24	35
Europe	23	1
Rest of world	13	7
Total	272	237



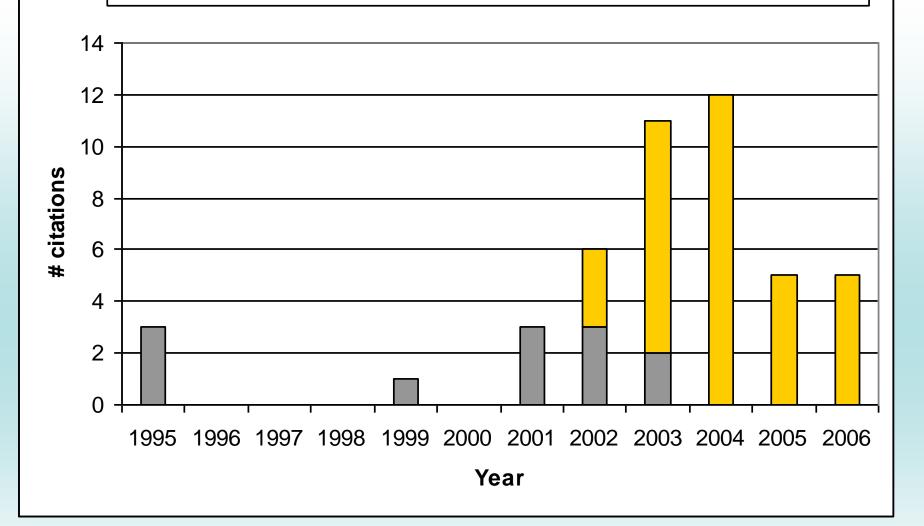
GOMC Gulfwatch: 92 Citations in Grey Literature

■ citations to grey literature [n=76] ■ citations to journal articles [n=16]

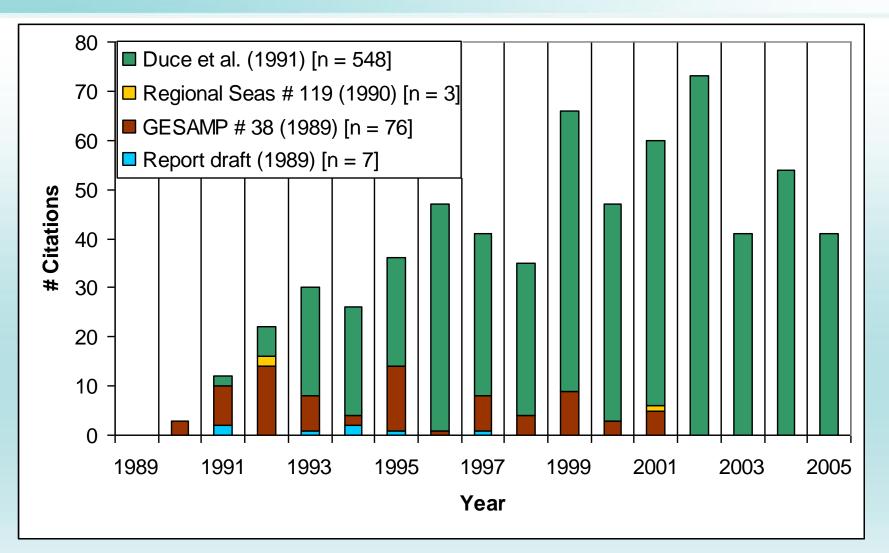


GOMC Gulfwatch: 46 Citations in journals

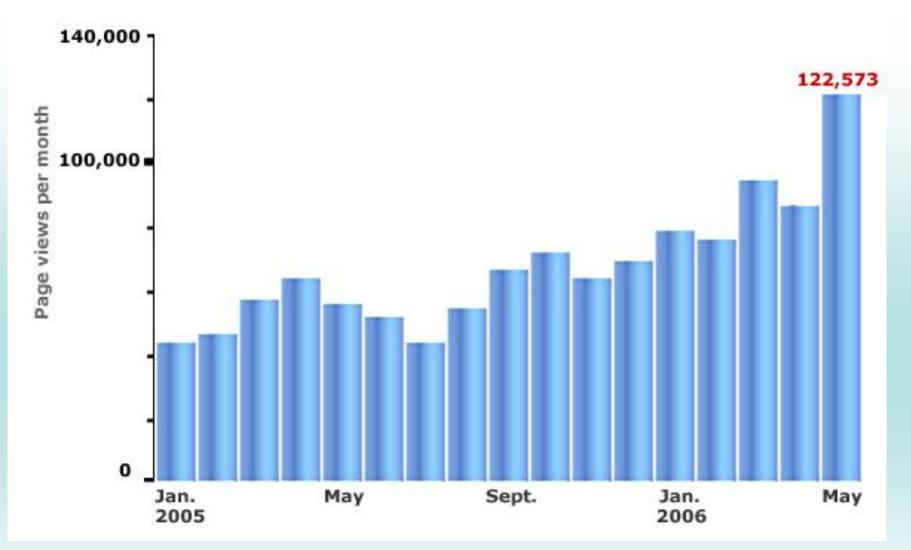




Citations to Versions of The Atmospheric Input of Trace Species to the World Ocean (GESAMP Report)

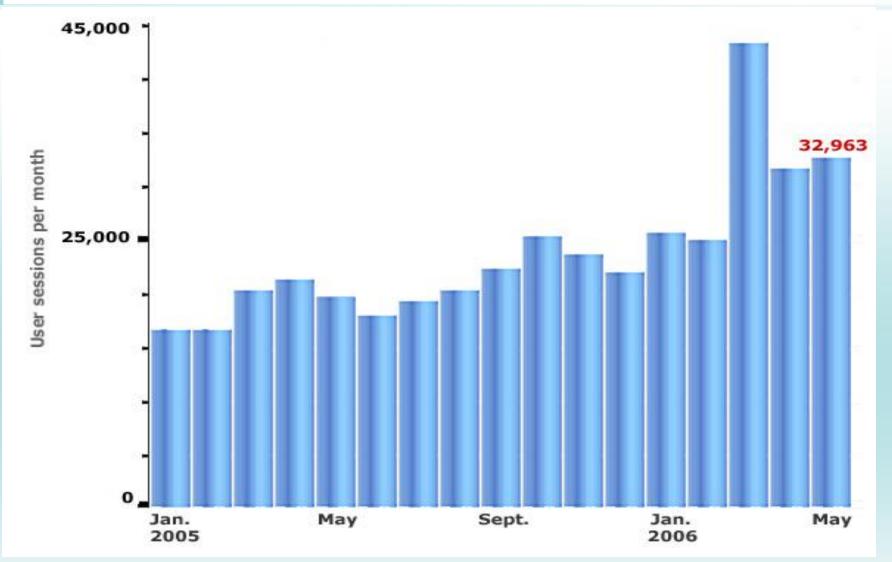


Page views per month www.gulfofmaine.org January 2005-May2006



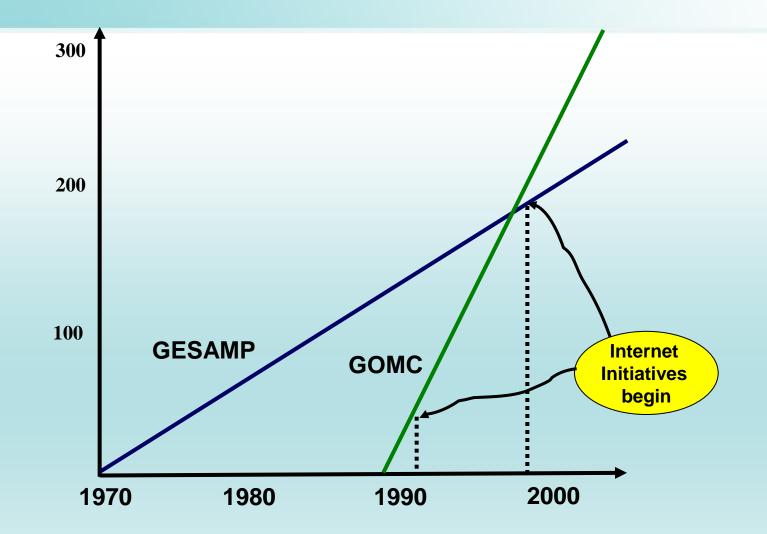
Slide, courtesy of P. Taylor & J. Craddock

User sessions per month www.gulfofmaine.org January 2005-May2006



Slide, courtesy of P. Taylor & J. Craddock

Cumulative Rise in Publications of GESAMP & GOMC







United Nations Environment Programme Natroli



Food and Agriculture Organization of the United Nations Rome



Solucition, Scientific and Cultural Organization Peris



Intergovernmental Oceanographic Commasion Paris



(3)

World Meteorological Organization Geneva



Maritime Organization London



International Atomic Energy Agency Vienna

THE NEW GESAMP

SCIENCE FOR SUSTAINABLE OCEANS

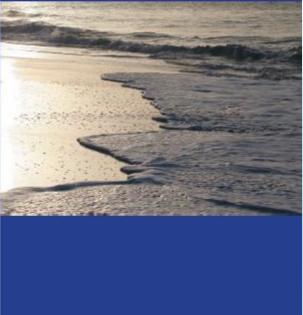
A strategic vision for the IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection







ESTIMATES OF OIL ENTERING THE MARINE ENVIRONMENT FROM SEA-BASED ACTIVITIES



Notes

 GESAMP is an advisory body consisting of specialized experts nominated by the Sponsoring Agencies (IMO, FAO, UNESCO-IOC, UNIDO, WMO, IAEA, UN, UNEP). Its principal task is to provide scientific advice concerning the prevention, reduction and control of the degradation of the marine environment to the Sponsoring Agencies.

2. This study is available in English only from any of the Sponsoring Agencies.

The report contains views expressed or endorsed by members of GESAMP who act in their individual capacities; their views may not necessarily correspond with those of the Sponsoring Agencies.

4. Permission may be granted by any of the Sponsoring Agencies for the report to be wholly or partially reproduced in publication by any individual who is not a staff member of a Sponsoring Agency of GESAMP, provided that the source of the extract and the condition mentioned in 3 above are indicated.

ISSN 1020-4873 ISBN 978-92-801-4236-5

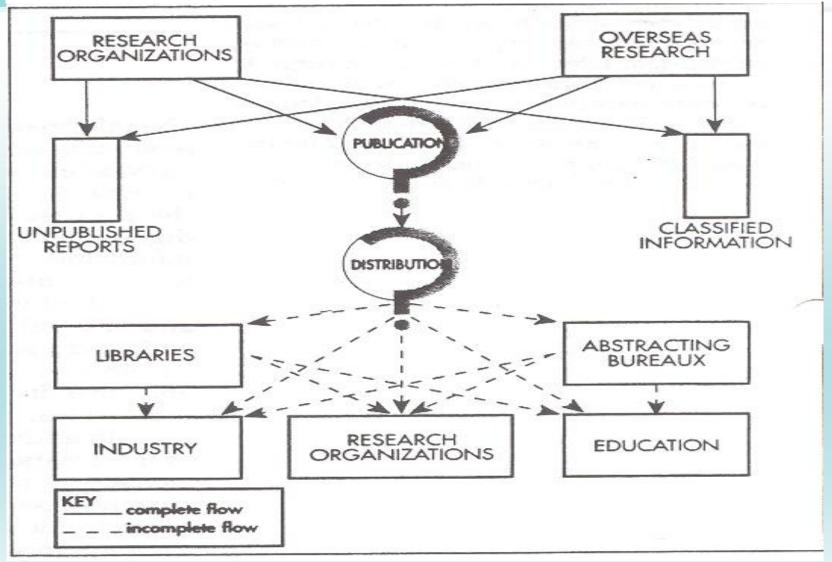
© UN, UNEP, FAO, UNESCO-IOC, WMO, UNIDO, IMO, IAEA 2007

For bibliographic purposes this document should be cited as:

GESAMP (IMO/FAC/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). 2007. Estimates of oil entering the marine environment from sea-based activities. Rep. Stud. GESAMP No. 75, 96 pp.

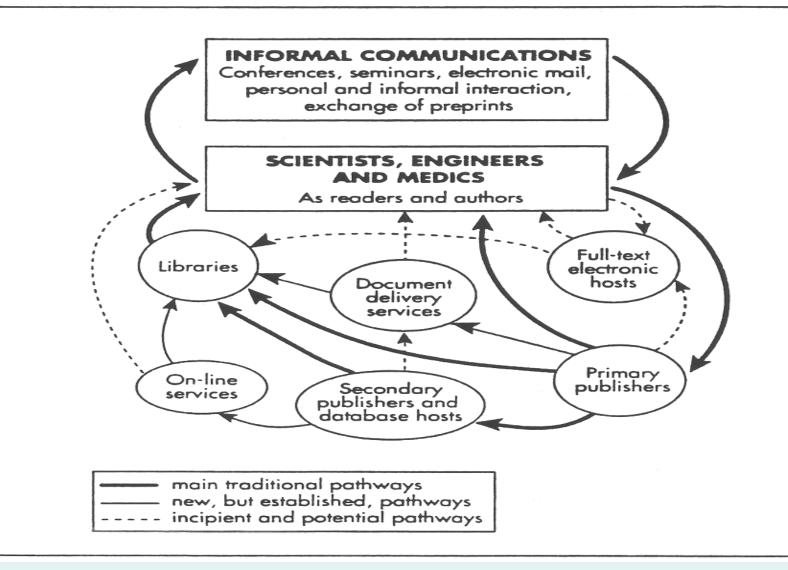


Distribution of Scientific Information (Urquhart, 1948)

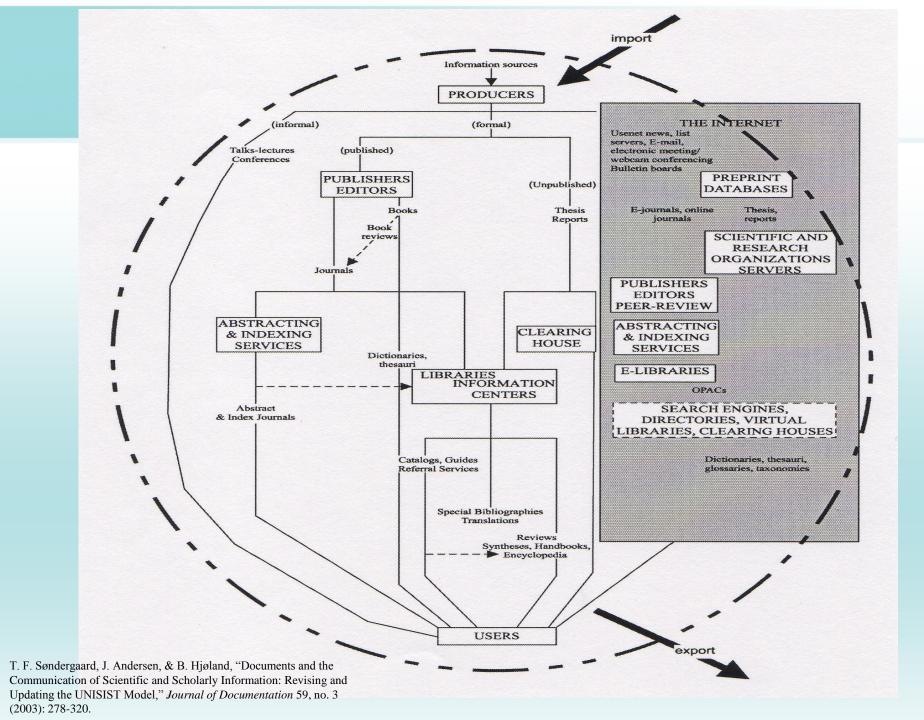


A.S. Duff, "Some post-war models of the information chain," Journal of Librarianship and Information Science 29, no. 4 (Dec. 1997): 179-187.

Pathways of Information Flow (Royal Society, 1993)



A.S. Duff, "Some post-war models of the information chain," Journal of Librarianship and Information Science 29, no. 4 (Dec. 1997): 179-187.



"In-Depth" Case Studies

- Environment Canada
- Gulf of Maine Council on the Marine Environment (GOMC)
- Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP)

Research Methodology

Suite of methodologies

- **×** Citation analysis
- * Content analysis of policy documents
- **×** Interviews with key informants
- **×** Surveys

Acknowledgements

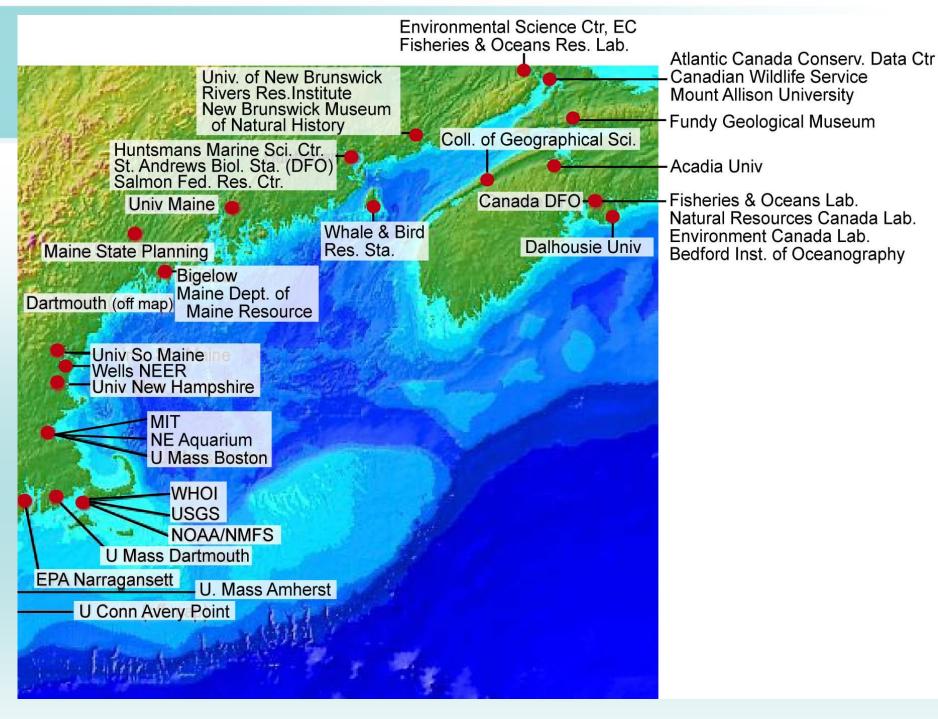
Our research has benefited from financial support or assistance from:

- **★** GESAMP
- **×** Gulf of Maine Council on the Marine Environment
- ★ Environment Canada
- School of Information Management and Faculty of Management
- ★ Patricia Hinch, N. S. Dept. of the Environment & Labour
- ★ Michele Tremblay, David Keeley, & Peter Taylor, GOMC
- ★ Librarians in the Gulf of Maine region
- ★ SSHRC



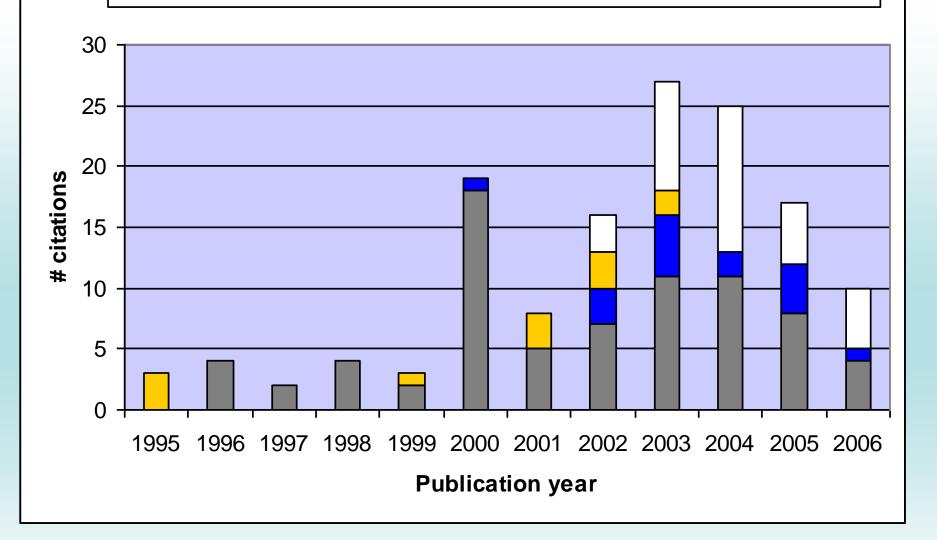
Questions Guiding Next Initiatives

- Do publication characteristics of grey literature influence its discovery, use, & impact?
- In public policy settings are research reports published as grey literature perceived differently than research published in peer-reviewed journals?
- How should the impact of grey literature be measured and assessed?
- How should publications be designed for effective discovery and ultimately for impact?



Citations to GOMC Gulfwatch publications

■ grey cites grey ■ grey cites white ■ White cites grey □ white cites white



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Publishing Recommendations Sent to GESAMP

- Emphasize the acronym GESAMP
- Establish a standardized name for the series
- Ensure that each title is consistently applied
- Obtain a new ISSN with each name change
- Always include an ISBN, along with the ISSN
- Distribute reports widely
- Send copies of reports to indexing agencies

Publishing Recommendations Sent to GESAMP (cont.)

- Outline the peer review process in each report
- Consider establishing two series
- Give greater attention to translation of the reports
- Keep the website up to date
- Continue creating digital versions of older reports
- Centralize publication and distribution of the reports

Ten Most Frequently Cited GESAMP Publications

Report Title	Total
Versions' and Publication Dates	Citations
The Atmospheric Input of Trace Species to the World Ocean	410
A: # 38 (1989), B: # 119 (1990), C: Duce et al. (1991)	
The State of the Marine Environment	
A: # 39 (1990), B: # 115 (1990) (also in Spanish), C: GESAMP (1991b) ²	165
Technical Annexes to the Report of the State of the Marine Environment	108
B:#114(1990), C: Fowler(1990)	
The Sea-Surface Microlayer and its Role in Global Change	76
A: #59 (1995), C: Liss & Duce (1997)	
Land/Sea Boundary Flux of Contaminants: Contributions from Rivers	60
A: # 32 (1987)	
The Review of the Health of the Oceans	47
A: # 15 (1982), B: # 16 (1982)	
Impact of Oil on the Marine Environment	44
A: # 6 (1977)	
Review of Potentially Harmful Substances: Arsenic, Mercury and Selenium®	43
A: # 28 (1986), B: # 92 (1988)	
Impact of Oil and Related Chemicals on the Marine Environment	42
A: # 50 (1993)	
Global Strategies for Marine Environmental Protection	42
A: # 45 (1991), C: Gray et al. (1991)	

"Grey" Features of GESAMP Reports and Studies

Inconsistencies in...

- X Corporate author name, series title, report title
- Inclusion of ISSN, ISBN, date
- × Indexing

Eight publishing agencies

- **X** Two Report # "11"s
- Some reports reprinted in other series

Difficult to locate in catalogues and indexes

Most Highly Cited Reports

Title	Year	# citations GESAMP version	# citations UNEP version	# citations book / journal	# citations draft version	Total # citations	Total # citing papers
The Atmospheric Input of Trace Species to the World Ocean	1989 1990 1991	76	3	324	7	410	394
The State of the Marine Environment	1990 1990 1991	54	85	26		165	164
Technical Annexes to the Report on the State of the Marine Environment	1990		11	67		78	78
Land/Sea Boundary Flux of Contaminants: Contribution from Rivers	1987	57			3	60	60
The Review of the Health of the Oceans	1982 1982	20	27			47	47
Impact of Oil on the Marine Environment	1977	44				44	44
Review of Potentially Harmful Substances: Arsenic, Mercury and Selenium	1986 1988	36	7			43	43

Individuals Who Cite GESAMP Most Often

Name	Role	# Citations	# Papers	# Items
P. G. Wells	GESAMP chair 1999 - 2000, Working group chair	48	11	28
T. Hofer	Working group member	40	7	20
R. A. Duce	GESAMP chair 2001 - 2002, Working group chair			19
J. M. Bewers	GESAMP member, Working group member	23	9	14
J. S. Gray	GESAMP chair 1993 - 1994, Working group chair	23	12	14
S. Boehmer Christiansen	No GESAMP connection	21	5	18
T. D. Jickells	Working group member	21	18	4
R. Arimoto	Working group member	20	17	2

Rationale for the research

Initial motivation: GESAMP was being reviewed by the UN

× evidence was needed of the value of its work

Citation indexes are available & can be used to measure impact

× indexes primarily identify citations in journal articles

Question: are conclusions drawn about GESAMP's publications representative?

Relevance of grey literature

Grey literature is a large (& growing) but undervalued genre

Citation studies **can** show that grey literature is used

× Few have been published

Strategies for locating citations of a complex body of grey literature can be developed (although strategies themselves can be complex)

Search Strategies

Cited Author

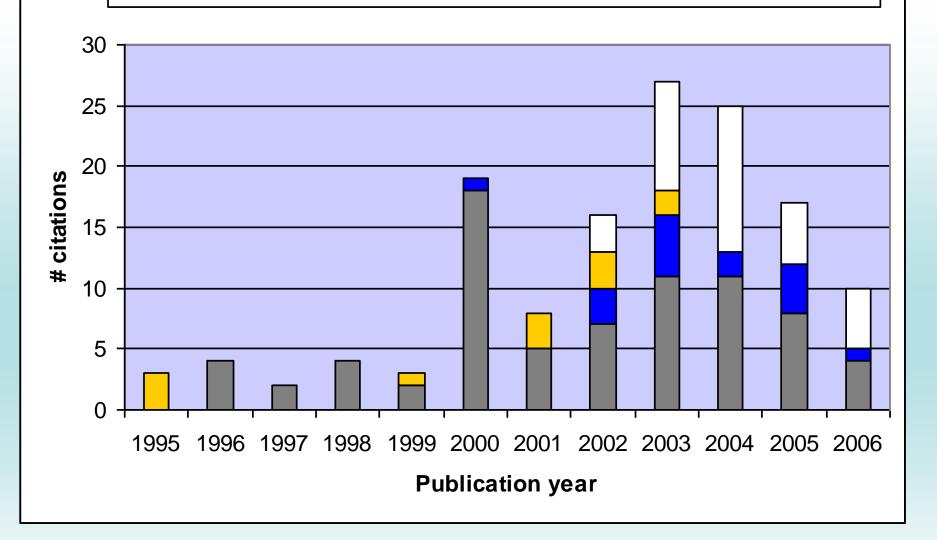
- GESAMP*
- GR* EX* SCI*
- IMCO*FAO*
- IMO*FAO*
- J* GR* EX*
- UN GR* EXP*

Cited Work - Report Titles

- atm* inp* t*
- sta* mar* env*
- sea* mic*
- land*sea* b* OR cont* riv*
- rev* h* oc* OR hlth oc*
- imp* oil mar*
- imp* oil rel*

Citations to GOMC Gulfwatch publications

■ grey cites grey ■ grey cites white ■ White cites grey □ white cites white



Publications Identified

290 publications in database

- Administrative
- Conferences, workshops, summits & forums
- Public education
- Gulfwatch project
- Reports completed by contractors
- Web-based resources

Holdings of GESAMP Publications in Selected Major Marine Science and National Libraries

Library	Holdings of Reports and Studies	
National Marine Biological Library, Plymouth, England http://www.mba.ac.uk/hmbl/	Amost complete holdings (two missing reports will be acquired at R. Cordes's suggestion)	
Woods Hole Oceanographic Institute Library, Woods Hole, Massachusetts, USA http://www.mblwhoilibrary.org/	Missing five reports, published 1986- 1991 (missing reports will be acquired at R. Cordes's suggestion)	
Scripps Institution of Oceanography Library, San Diego, California, USA http://scilib.ucsd.edu/sio/	Missing several recent the matic reports, and many session reports	
Bedford Institute of Oceanography Library, Halifax, Canada http://www.mar.dfo-mpo.gc.ca/e/library/bio-e.htm	Complete holdings	
British Library, London, and Document Supply Centre, Boston Spa, West Yorkshire, England http://www.bl.uk	Complete holdings (Document Supply Centre)	
Library of Congress, Washington, DC, USA http://www.loc.gov	Many gaps in holdings	
Bibliothèque nationale de France, Paris, France http://www.bnf.fr	Many gaps in holdings	

Name Changes

1969 — Joint IMCO/FAO/UNESCO/ WMO Group of Experts on the Scientific Aspects of Marine Pollution

1993 — IMO/FAO/UNESCO-IOC/ WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

GESAMP Citations in Web of Science

Cited Author Field

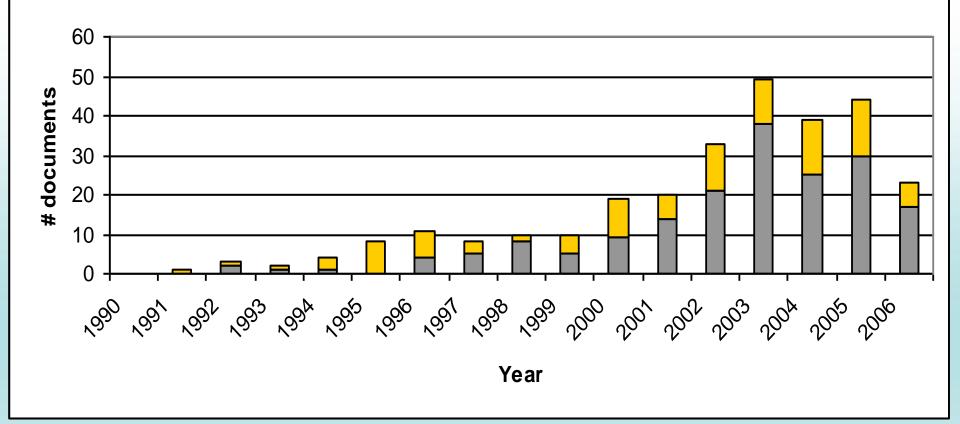
- GESAMP
- JOINT GROUP EXP S
- GROUP EXP SCI ASP
- IMO FAO UNESCO WM
- UNEP

Cited Work Field

- 115 REG SEAS REP STU
- STAT MAR ENV
- IMOFAOUNESCOWMOWHOIA
- REP STUD
- GESAMP REPORTS STUDI

284 Documents Cite GOMC Publications, 1990-2006

■ grey documents [n=180] ■ journals and books [n=104]



Impact of this case study

Citation indexes and other web-based tracking tools can be used to trace citations of a complex body of grey literature

Analysis of GESAMP publications shows influence / citations

- × over many years after publication
- mostly by people not directly connected to GESAMP
- in environmental science journals & a variety of other disciplines

Our analysis contributed to the GESAMP review process

Citing Journals

311 different journals in 84 subject areas

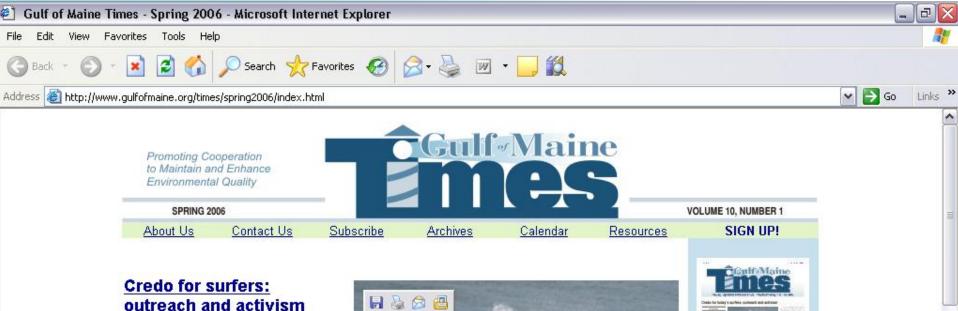
Top five

- Environmental Sciences
- Marine & Freshwater Biology
- Oceanography
- Geosciences, Interdisciplinary
- Meteorology & Atmospheric Sciences

Core Citing Journals*

	# citations	# papers
Marine Pollution Bulletin	185	135
Science of the Total Environment	56	37
Marine Chemistry	46	39
Marine Policy	42	22
Journal of Geophysical Research – Atmospheres	40	40
Atmospheric Environment	39	38
Ocean & Coastal Management	38	19
Marine Ecology – Progress Series	31	30

*477 citations in 360 papers



By Lisa Capone

It's not surprising that someone who grew up amid the waves of Massachusetts's North Shore got hooked on surfing early. What comes as a revelation, though, at least to someone outside surfing circles, is the way Jamie Hosker talks about his passion. No "knarly waves" or "dude" references from this attorney-turnedshopkeeper. Instead, Hosker talks earnestly about issues he says are near and dear to his and every surfer's heart: water quality, beach access and political activism on behalf of the ocean. "I think more than any other sport, surfing creates environmental activists," Hosker said. "You are embedded in the



Jamie Hosker rides the wintry waves. Hosker heads a chapter of Surfrider Foundation, a national group dedicated to environmental protection. PHOTO: JP HALEY



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environment you are playing in. You swallow it, it's in your ears, you're above it, you're below it."

Google Search for Links

GESAMP

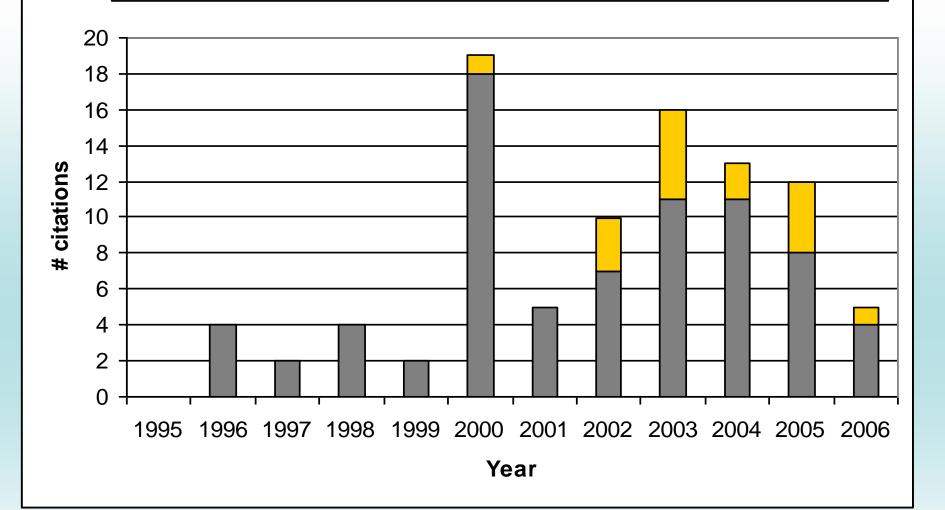
gesamp.imo.org /link — 27 (144) links gesamp.imo.org /related — 52 (198) links

GOMC

gulfofmaine.org /link gulfofmaine.org /related —

GOMC Gulfwatch: 92 Citations in Grey Literature

■ citations to grey literature [n=76] ■ citations to journal articles [n=16]



GOMC Gulfwatch: 46 Citations in journals



