

THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

1. **SURNAME:** Christensen **Date:** September 6, 2016 **Initials:** VC
FIRST NAME: Villy **MIDDLE NAME(S):**
2. **DEPARTMENT/SCHOOL:** Institute for the Oceans and Fisheries
3. **FACULTY:** Science
4. **PRESENT RANK:** Professor **SINCE:** July 2010
5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
University of Copenhagen	PhD	Ecosystem Modelling	June 1992
University of Copenhagen	Cand scient. (II)	Marine Biology	1978.7-1980.10
University of Aarhus	Cand. scient. (I, II)	Biology, mathematics	1973.9-1978.7

Title of Dissertation and Name of Supervisor

Network analysis of trophic interactions in aquatic ecosystems.
Professor Sven Erik Jørgensen

Special Professional Qualifications

I work with ecosystem-based management with emphasis on modeling the impact of fisheries and climate change. My background is in fisheries research with emphasis on methodology development. My research focus has since 1990 been centered on understanding how human exploitation impacts marine ecosystems, and utilizes ecosystem modeling as the main tool. As part of this I have been central to the development and dissemination of the Ecopath with Ecosim (EwE) approach and software, and have through cooperation with scientists worldwide gained considerable knowledge on trophic dynamics of aquatic resources. I have led more than 50 training courses and workshops throughout the world (in 22 countries), centered on developing ecosystem approaches to fisheries management. Ecopath modeling is the de-facto standard for ecosystem approaches to fisheries management, and is being applied throughout the world. There are more than 400 derived models and publications, more than 6000 registered users in 155 countries, and more than seventy degrees using this form for modeling as a central element have been awarded at universities globally.

- 2013-: Developed methodologies for evaluating environmental impacts of major infrastructure development projects.
- 2010-14: Initiated and led the "Nereus - Predicting the Future Ocean" program, which develops methodologies for global assessments of fish populations, evaluate alternative future scenarios, and point to how sustainable policies can be implemented.
- 2006 - Leading development of new EwE6, including coupling to 3D-gaming engine for visualization, design of decision-support system, single-player games, and videos
- 2004 - Developing methodology for database-driven ecosystem model generation; applied to all the world's large marine ecosystems (Christensen et al. 2008)
- 2002 - Developing the EcoOcean model used for global environmental assessment as part of the UNEP Global Biodiversity Outlook 4, the UNEP GEO 4 and 5: Environment for Development, The Economics of Ecosystems and Biodiversity, the International Assessment of Agricultural Science and Technology for Development (Ag IAASTD), the OECD Environmental Outlook, and the Millennium Ecosystem Assessment
- 2001-3: Developed methodology for quantification of how fish biomass and exploitation pressure has changed regionally; applied to the North Atlantic, West Africa, and the South China Sea (Christensen et al., 2003, 2004, 2003). Plots used by Dr Sylvia Earle for her 2009 TEDPrize acceptance speech.

- 1998: Co-author of “fishing down marine food webs” (Pauly et al. 1998)
- 1996: First published description of ‘fishing down the food web’ (Christensen 1996)
- 1995: First quantification of ecosystem maturity (Christensen 1995), since then applied and elaborated further by many researchers
- 1995: Co-author of “primary production required to sustain global fisheries” (Pauly & Christensen 1995)
- 1993: Published description of ‘primary production required for fisheries’ (Christensen & Pauly 1993)
- 1992: Published description of Ecopath II (Christensen & Pauly 1992). Ecological Modelling recognized this paper in Dec 2008 as the third-most cited paper in the journal (of >5000).
- 1991: Evaluation of fisheries potential for tropical and subtropical areas globally (Christensen et al. 1991)
- 1990: Project leader for Ecopath development since 1990

6. **EMPLOYMENT RECORD**

(a) *Prior to coming to UBC*

University, Company or Organization	Rank or Title	Dates
International Center for Living Aquatic Resources Management	Program leader	1998-1999
ICLARM	Senior scientist	1993-1998
ICLARM	Associate scientist	1990-1992
Danish Institute for Fisheries and Marine Research	Assistant head	1988-1989
DIFMAR	Fisheries biologist	1980-1987

I worked for 8 years at the Danish Institute for Fisheries Research, (a research and management institution of the Ministry of Fisheries) at what was the highest non-administrative rank in the organization, and finally as Assistant Department Head of Research. At ICLARM (an international research institution affiliated with the CGIAR/World Bank, and now named WorldFish Center), I was recruited as an associate scientist, and promoted to senior scientist after three years, (the highest non-administrative rank). My final years with ICLARM were as program leader, responsible for the Fisheries Program with a staff of 15-20 and a million dollar budget.

(b) *At UBC*

Rank or Title	Dates
Professor (tenured), Institute for the Oceans and Fisheries, Faculty of Science	2015–
Director, Institute for the Oceans and Fisheries	2016.1-2
Co-Director, Institute for the Oceans and Fisheries	2015
Professor (tenured), Fisheries Centre, Faculty of Science	2012–2015
Co-Director, Fisheries Centre	2014–2015
Member, Biodiversity Research Centre, UBC	2013–
Faculty Associate, Royal Roads University	2011–
Faculty Associate, Dep. of Zoology	2005–
Associate Director, Fisheries Centre	2009–2013
Faculty Affiliate, Centre for Digital Media, Great Northern Way Campus	2009–2011
Professor (grant tenured), Fisheries Centre, CFIS	2010–2012
Associate Professor (grant tenured), College for Interdisciplinary Studies, Fisheries Centre	2007–2010
Faculty Associate, Inst. For Resources, Environment and Sustainability	2005–2008
Associate Professor (grant tenured), Fac. of Graduate Studies, Fisheries Centre	2004–2006
Senior Research Fellow, UBC Fisheries Centre	2001–2004
Visiting Scientist, UBC Fisheries Centre	1999–2001
Adjunct Professor, UBC Fisheries Centre	1996–2001

(c) *Date of granting of tenure at U.B.C.: 1 July 2004*

7. **LEAVES OF ABSENCE**

University, Company or Organization at which Leave was taken	Type of Leave	Dates
Univ. of Reykjavik; ICM/CSIC Barcelona; Aarhus University; Lake Kinneret Biological Station, Israel;	Study leave	2016.4-2017.3

8. **TEACHING**

(a) *Areas of special interest and accomplishments*

Danida, the Danish Development Agency, initially funded my position at ICLARM and my main term of reference was to develop methodologies for multispecies assessment of fisheries resources in developing countries, to disseminate these methodologies and support their application through training activities. The focus of my work was capacity building, and I worked very closely with a large number of developing country researchers throughout my time with ICLARM. As part of my work, I have conducted more than 50 training courses, hosted many visiting scientists/students, and dedicated considerable effort to editing publications from collaborators. I have headed a major capacity building activity for the European Union involving scientists from 31 institutions in Europe, Central and South America, the Caribbean, and Africa, collaborating on ecosystem approaches to fisheries management through a series of training courses leading to a major international symposium as well as supported several other such initiatives. My teaching has over a decade thus been focused on capacity building, with emphasis on training young scientists in developing countries.

(b) *Courses Taught at UBC*

I have given 3-8 hours of lectures/tutorials per year in the UBC FC graduate program between 1999 and 2004 when joining the faculty. I have also given more than 50 training courses and training workshops outside UBC [listed below under "(f) other"]. I was grant funded up to September 2014.

Session	Course Number	Scheduled Hours	Class Size	Hours Taught			
				Lectures	Tutorials	Labs	Other
2015-F	ENVR 200	1	46	1			
2015-F	Fish 520	10	11	5	5		
2015-F	Biol 420	1	24	1			
2015-S	Fish 501	42	3 + 5 unofficial	42			
2015-W	ENVR 490	2	14	2			
2015-W	Envr 300	50	59	40			
2014-F	Geog 310	2	95	2			
2014-F	Fish 500	1	8	1			
2014-F	Biol 420	1	20	1			
2014-F	Fish 520	10	8	6	4		
2013-F	Fish 520	15	6	7	8		
2012-F	Fish 520	10	8	4	6		
2011-F	Fish 520	10	8	6	4		
2011-W	Zool 502	2	13	2			
2010-F	Fish 501	36	6 + 3 unofficial	28	10		
2010-W	Zool 502	2	6	2			
2009-F	Envr 200	2	48	2			
2009-W	Fish 501	48	10+3 unofficial	26	15	10	
2006-W	EOS 478	1	24	1			

2006-F	Fish 501	36	9 + 14 unofficial	34		25	
2005-W	EOS 478	1	36	1			
2004-F	Fish 501	36	4 + 8 unofficial	18	18		
2003-W	Fish 501	36	8	36			

Training Courses Taught at UBC

Session	Course/organizer Topic	Scheduled Hours	Class Size	Hours Taught	
				Lectures	Tutorials
2013-S	Ecopath Programming Course – Brite funding (HQP) and fee-based (others)	35	32	-	-
2009-S	Ecosystem modeling advanced training workshops, 2-3 Sep. (Coordinator and lecturer). Fee-based	16	46 from 18 countries	10	6
2009-S	Ecosystem modeling, introductory training course, 26-28 Aug. (Coordinator and lecturer). Fee-based	26	37 from 16 countries	13	13
2004-S	Ecopath with Ecosim training course, 10-14 May, UBC, Vancouver. Activity of the 4 th World Fisheries Congress. (Coordinator and lecturer). Fee-based	40	31 from 16 countries	24	16
2002-W	FIAS/TrawlBase Ecosim Training Workshop, 15-25 Jan. (Lecturer) European Union	60	7 from 5 countries	20	40
2000-F	EwE Training Course, 6-10 Nov. UBC. (Coordinator and lecturer) Fee-based	40	31 from 12 countries	32	8
1999-F	EwE Training Course, 22-25 Nov, UBC, Vancouver, (Coordinator and lecturer)	40	24 from 4 countries	32	8

(c) *Graduate Students Supervised and/or Co-Supervised*

Student Name	Pro-gram type	Year		Principal Supervisor	Co-Supervisor(s)
		Start	Finish		
Santiago de la Puente (RMES)	M.Sc.	2015.9		Villy Christensen	
Abdulrahman BenHasan (RMES)	M.Sc.	2015.9		Villy Christensen	
Patricia Woodruf (Zool.)	PhD	2012.6		Villy Christensen	
Morane Clavel (Agrocampus-Ouest, Rennes, France)	M.Sc.	2015.2	2015.10	Didier Gascuel	Villy Christensen
Audrey Valls (Zool.)	PhD	2010.3	2014.12	Villy Christensen	
Rachel Chudnow (Zool.)	M.Sc.	2010.9	2012.12	Villy Christensen	
Jeroen Steenbeek (Vrije Universiteit Amsterdam) 2nd place in the <u>UNIGIS excellence awards 2013</u> .	M.Sc.	2009.9	2012.9	Villy Christensen (academic)	Jasper Dekker, (administrative)
Stephen Smikle, Univ. of West Indies, Jamaica	PhD	2006	On leave	Karl Aiken, UWI	Villy Christensen
Shawn Booth (Environ. & Manag., Royal Roads)	M.Sc.	2010.1	2012.5	Villy Christensen	

Michael Melnychuk (Zool.)	PhD	2005	2009.12	Carl Walters	Villy Christensen
Robert Ahrens (Zool.)	PhD	2004	2010.3	Villy Christensen	Carl Walters
Sherman Lai	M.Sc.	2005.9	2008.4	Kellogg Booth	Villy Christensen
Chiara Piroddi (Zool.)	M.Sc.	2005.9	2008.2	Villy Christensen	
Dave Preikshot (RMES)	PhD	2002	2007	Villy Christensen	Daniel Pauly

Supervision of visiting students/fellows

Name	Program	Visit period		Affiliation
		Start	Months	
Adam J. Schlenger	PhD student	2015.5	1	Scripps Institute of Oceanography, U.C. San Diego
Beatriz Dias	PhD student	2015.5	1	University of Massachusetts Amherst
Ana Helena Bevilacqua	PhD student	2015.4	12	Univ. Federal do Rio Grande do Norte, Natal RN, Brazil
Manuel Zetino-Rejón, PhD	Visiting Professor	2014.01	12	Centro Interdisciplinario de Ciencias Marinas-I.P.N. La Paz, BCS, Mexico
Hiroshi Inoue	PhD student	2013.12	2	Kyoto University, Japan
Hector Pavés	Visiting sc.	2013.5	2	Universidad Austral de Chile
Alejandro Ramírez	PhD student	2012.2	2	Universidad de Antofagasta, Chile
Samuele Tecchio	PhD student	2011.9	3	CSIC Barcelona
Hector Pavés	Post Doc	2010.12	9	Universidad Austral de Chile
Camille Albuoy	PhD student	2010.11	1	University of Montpellier, France
Marcela Conceição Nascimento	PhD student	2010.9	4	University of Campinas, Brazil
Marian Torres	PhD student	2010.9	4	Instituto Español de Oceanografía, Cádiz, Spain
Marta Coll, PhD	Post Doc	2011.2 2010.9 2009.9 2008.4,9	3 4 3½, 2	CSIC, Barcelona Dalhousie University/Inst of Marine Science, Barcelona
Stephen Smikle	PhD student	2009.9	5	Univ. of West Indies, Mona Campus, Jamaica
Brian Langseth	PhD student	2009.8	1½	Michigan State University
Chris Brown	PhD student	2009.8	2	Univ. of Queensland, Australia
Mark Hepburn	PhD student	2009.6	3	CSIRO, Hobart, Australia
Gabriela Vera	PhD student	2008.12	5	Universidade de São Paulo. Int. Oceanográfico
Maria Villanueva, PhD	Post Doc	2008.3	1½	IFREMER, France
Kelly Kearney	PhD student	2007.1,8	¾	Princeton University
Maria Villanueva, PhD	Post Doc	2006.11	1	IFREMER, France
Maddy Sigrist	Visiting scient.	2006.10	½	NOAA Chesapeake Bay
Fabián A. Rodríguez	PhD student	2005.9	2	Cinvestav-Mérida, Yucatán, México
Pi-Jen Liu	PhD student	2004.11	12	Univ. of Chung Hsing, Taiwan
Maria Villanueva	PhD student	2003.12	2	Ecole National Supérieure Agronomique de Toulouse, France
Simone Libraletto	PhD student	2003.9	6	Univ. of Venice, Italy
Marta Coll	PhD student	2003.8	4	Inst of Marine Science, Barcelona, Spain
Catherine Bulman, PhD	Visiting scient.	2003.4	1	CSIRO, Hobart, Tasmania
Simone Libraletto	PhD student	2002.3	4	Univ. of Venice, Italy

Chiara Piroddi	B.Sc. student	2002.3	5	Thethys Research Institute, Italy
Sonia Rodríguez Ruiz	PhD student	2000.8	4	Universidad de Alicante, Spain

Supervision of Research Associates/Post-Docs/Research Assistants

Name	Category	Period		Activity
		Start	Finish	
William Walters	Post-Doc	2016.5	2016.6	Spatial bioaccumulation modelling
Joe Buszowski	Senior programmer	2005.10	2013.6	Ecopath Research and Development
Jeroen Steenbeek	M&P	2011.9	2013.6	Nereus Program
David Le	Admin. assistant (30h)	2011.7	2013.5	Nereus Program
Yoshitaka Ota	Senior Research Fellow	2011.1	2013.2	Nereus Program
Dalai Felinto	M&P	2010.3	2013.6	3D Gaming/visualization/Nereus Program
Susana Cárdenas	RA/student	2010.1	2012.4	Towards ecosystem-based management of the Peruvian anchovy fishery
Colette Wabnitz	Post-Doc	2010.9	2011.8	Ecosystem modeling, Hawaii
Sherman Lai	Consultant programmer (part-time)	2010.10	2011.4	Nereus Program
Robert Ahrens	Post Doc	2009.11	2010.12	Global Biodiversity Outlook
Mike C Pan	Student (B.Eng.), full time summers, part time in semesters	2010.9 2008.5	2011.11 2010.3	3D Gaming/visualization
Chiara Piroddi	M&P B	2008.3	2011	Ecosystem modeling; Peruvian anchovy
Jeroen Steenbeek	Consultant programmer	2006.1	2011.8	Programming of Lenfest Ocean Futures
Sherman Lai	Team leader, computer scientist (M&P D)	2003.8	2010.8	Development of ecosystem modeling software, project planning and conduction
Carie Hoover	PhD student (part-time)	2007.3	2010	Program testing, Lenfest Ocean Futures
Lewis Nicolle	Game designer (part-time)	2009.6	2009.8	3D Gaming/visualization
Chendursundaran Kamaragurubaran	Computer Engineer (part-time to May 09, full-time since)	2008.10 2007.10	2010.3 2007.12	AERL Scenario Lab Development; Ecopath Online concept; Lenfest Ocean Futures
Stephen Danic	Game designer (part-time)	2009.5	2009.8	3D Gaming/visualization
Dalai Felinto	Intern (full-time)	2008.11 2008.5	2009.2 2008.8	3D Gaming/visualization
Joe PW Hui, PhD	RA III, Programmer	2007.3	2008.12	Programming of Lenfest Ocean Futures
Ken Kwasnicki	Consultant programmer (pt-time)	2006.12	2008	Visualization of pine beetle attacks
Tony Einfeldt	B.Sc. student, work study (part time)	2007.10	2008.4	Population trend database
Robyn Forrest	Documentation (part-time, PhD student)	2007.3	2008.10	Documentation of Lenfest Ocean Futures
Jordan Beblow	RA II	2004	2008.2	Development of biomass trend database, global scenario modeling
Dr Sylvie Guénette	Research Associate	2006.6	2007.12	Global scenario modeling
Fang Gao	RA III, Programmer	2005.10	2007.9	Programming of Lenfest Ocean Futures
William Walters	Professional/Management A	2007.5	2007.9	Spatial modeling procedures
Lingbo Li	Student (DFO-funded)	2007.5	2007.7	Ecological risk assessment for transgenic salmon

Matt Richard	Intern (from Univ. of Dalhousie)	2006.5	2006.8	Global scenario modeling
Heather Keith	RA II	2006.1	2006.6	Modeling of global fishing effort
Walt Yao	B.Sc. student, work study (part time)	2005.9	2006.3	Programming for ecosystem modeling software
Laura Sunderland	BA student, work study (part time)	2004.9	2005.5	Description of ecosystem models for model database
Dr Sheila Heymans	Res. Associate	2003	2005.2	Modeling of Steller sea lion dynamics in the Aleutian Islands
Dr Sylvie Gu��nette	Res. Associate	2003	2005.2	Modeling of Steller sea lion dynamics in the eastern Gulf of Alaska

Supervisory Committee Member for the following students (UBC unless otherwise noted):

Student Name	Program type	Year		Principal Supervisor	Co-Supervisor(s)
		Start	Finish		
John Driscoll (RES)	PhD	2016.5		Kai Chan	
Ben Nelson (Zool)	PhD	2015		Murdoch McAllister	
Sarah Hawkshaw (Zool)	PhD	2015		Murdoch McAllister	
Shannon Obradovich (Zool)	PhD	2015		Murdoch McAllister	
Catarina Wor (Zool)	PhD	2015		Murdoch McAllister	
Roberto Licandeo (Zool)	PhD	2015		Murdoch McAllister	Carl Walters
Tom Porteus (Zool)	PhD	2015	2015.4	Murdoch McAllister	
Sarah Amundrud (Zool)	PhD	2014		Diane Srivastava	
Siamak Behzadi, Univ. of Hormozgan, Iran	PhD	2014		Ehsan Kamrani	
Rachel Chudnow (Zool)	PhD	2014		Murdoch McAllister	
Szymon Surma (RMES)	PhD	2014		Tony Pitcher	
Peter Jacobs, George Mason University	M.Sc.	2013	2015.5	Kim de Muetsert	
Mathieu Coll��ter (Zool)	PhD	2012	2014.12	Daniel Pauly	Didier Gascuel
Szymon Surma (RMES)	M.Sc.	2012	(2014)	Tony Pitcher	(transferred to PhD)
Kristy A. Lewis, Louisiana State University	PhD	2010	2014	Jim Cowan	
Lucas Brotz (EOAS)	M.Sc.	2010	2011	Daniel Pauly	Evgeny Pakhomov
Ed Gegr (RMES)	PhD	2009		Kai Chan	
Mike Hawkshaw (Zool)	PhD	2008		Carl Walters	
Maria Espinosa (RMES)	M.Sc.	2008	2010.8	Kai Chan	
Jenny Selgrath	PhD	2007		Amanda Vincent	
Mike Hawkshaw (Zool)	M.Sc.	2006	2008.8	Carl Walters	
Leigh Gurney (UBC EOAS)	PhD	2005	2013	Evgeny Pakhomov	
Brajgeet Bhathal	PhD	2005	2014	Daniel Pauly	
Brett van Porten (Zool)	PhD	2005	2012.6	Carl Walters	
Steve McAdams (Zool)	PhD	2006	2012	Carl Walters	
Anna Hall (Zool)	PhD	2004	2011.8	Andrew Trites	
Colette Wabnitz	PhD	2004	2010.4	Daniel Pauly	
Sergio Neira, U Cape Town	PhD	2004	2008	Coleen Moloney	
Pablo Trujillo	M.Sc.	2004	2007.8	Daniel Pauly	
Heather Keith	M.Sc.	2003	2006.3	Rashid Sumaila	Carl Walters
Lyne Morissette	PhD	2002	2007.9	Daniel Pauly	
Michael Melnychuk (Zool)	M.Sc.	2002	(2004)	Carl Walters	(Transferred to PhD)
Rik C Buckworth	PhD	2002	2004	Carl Walters	

Emma Bredezen	M.Sc.	2002	2003	Andrew Trites	
Andrea Coombs	M.Sc.	2001	2004	Andrew Trites	
Stephen Watkinson	M.Sc.	2001	2002	Daniel Pauly	
Richard Stanford	M.Sc.	2001	2002	Tony Pitcher	
Yvette Rizzo	PhD	2001	Withdr.	Daniel Pauly	
Kristin Kaschner	PhD	2000	2004	Daniel Pauly	Andrew Trites
Elizabeth Mohammed	PhD	2000	Withdr.	Daniel Pauly	
Katia de Freire	PhD	1999	2005	Daniel Pauly	
Steven Martell	PhD	1999	2002	Carl Walters	
Alasdair Beattie	M.Sc.	1999	2001	Daniel Pauly	
Laura Vidal-Hernandez	M.Sc.	1999	1999	Daniel Pauly	

(d) *Continuing Education Activities*

(e) *Visiting Lecturer (indicate university/organization and dates)*

- 2011: * Visiting Professor. Master of Fisheries Management Program. University of Las Palmas de Gran Canaria. 4-8 April; teaching ecosystem modeling course and developing model for strategic plan.
- 2001: Lecturer, Multispecies Fisheries Models, North Sea Centre, Hirtshals, Denmark, 1-10 August; international course for PhD students organized by University of Copenhagen
- 1993: Visiting Professor, teaching graduate course "Ecological Engineering and Modelling", 15-26 Feb. 1993, Asian Institute of Technology (AIT), Bangkok, Thailand.
- 1992: Visiting Professor, graduate course "Ecological Engineering and Modelling", 25 Feb.-9 Mar. 1992, AIT, Bangkok, Thailand.

(f) *Other (* indicates ecosystem modelling training courses where I have acted as course leader and lecturer; some of the courses are called 'workshops' below)*

- 2016: * Ecosystem modelling course, 7-11 March. Barcelona Ocean, ICM/CSIC, Barcelona. 21 participants from 16 countries]
- 2016: * Ecosystem modelling course, 7-11 March, CSIRO, Hobart, Tasmania. [26 participants]
- 2015: Modelling radionuclide transfer in marine food webs. Institut de radioprotection et du sûreté nucléaire & International Atomic Energy Agency, 1-2 Dec., 2015, La Seyne sur Mer, France
- 2015: * Tracing bio-accumulated substances through the food web, 20-21 Aug., SAMS, Oban, Scotland
- 2015: * Advanced Ecosim course, 18-19 Aug. SAMS, Oban, Scotland
- 2015: Building scenarios of future marine ecosystems under a global change context. IRD, Marbec, EII, Euromarine workshop, Sète, France, 8-10 June
- 2014: * Using EwE for fisheries management, Nov 13, EwE 30. ICM-CSIC, Barcelona, Spain [26 participants, 16 countries]
- 2014: * Advanced Ecospace training course, Nov 7, EwE 30. ICM-CSIC, Barcelona, Spain [34 participants, 18 countries]
- 2014: * Advanced Ecosim training course, Nov 6, EwE 30. ICM-CSIC, Barcelona, Spain [31 participants, 14 countries]
- 2014: * Introductory EwE training course, Nov 4-5, EwE 30. ICM-CSIC, Barcelona, Spain [35 participants, 14 countries]
- 2014: * Training Workshop on Ecosystem Modelling for the Bay of Bengal. Bay of Bengal Large Marine Ecosystem Project, Phuket, Thailand, Sep 8-12, 2014. Course leader and lecturer. [19 participants from 8 countries].
- 2013: * Using Ecosystem Modeling for Fisheries Management. International Council for Exploration of the Sea (ICES), Copenhagen, Denmark, August 26-30, course leader and lecturer, [22 participants from 12 countries].
- 2012: * Ecosystem Modeling Workshop, Ocean County College, Toms River, NJ, USA. March 12-15, 2012. Course leader and lecturer.
- 2011: * Ecopath modeling workshop. CINVESTAV, Unidad Mérida, Yucatan, Mexico. June 20-24. 13 participants from throughout Mexico. Course leader and lecturer (solo).
- 2011: * Using Ecosystem Modeling for Fisheries Management. International Council for Exploration of the Sea (ICES), Copenhagen, Denmark, March 7-11, course leader and lecturer [24 participants from 14 countries]

- 2011: Great Lakes Ecopath modeling workshop. Feb 28-Mar 1; Michigan State's Kellogg Biological Station. Resource person.
- 2010: * Training workshop on the use of EwE for ecological, economic, and analysis of fisheries. Interim Guinea Current Commission/Guinea Current Large Marine Ecosystem project. Dec. 13-17 Accra, Ghana, course leader and lecturer [17 participants from 15 countries]
- 2010: * Using Ecosystem Modeling for Fisheries Management. International Council for Exploration of the Sea (ICES), Copenhagen, Denmark, March 8-12, course leader and lecturer; [27 participants from 16 countries].
- 2009: * Modelación de Ecosistemas con la utilización del Program EwE impartio para Profesores-Investigadores y Estudiantes de Posgrado, llevado a cabo en la Unidad Mérida del CINVESTAV, 45 hours, April 20-24. 15 participants from throughout Mexico; course leader and lecturer (solo).
- 2008: * Coastal-Marine Ecosystem-Based Management Tools Training for South Pacific Practitioners, Magnetic Island, Queensland, Australia, August 29. [35 participants from the South Pacific]
- 2008: * Modern Methods for Ecosystem Modelling: *EUR-OCEANS Summer School*, The Scottish Association for Marine Science, Dunstaffnage Marine Laboratory, Dunbeg, Oban, Scotland, June 30 – July 3, 24 PhD students from 17 countries. Lecturer and resource person.
- 2008: * EwE6 training course, WorldFish & IRRI, Los Baños, Philippines, GEF/LME project – funded through IOC/UNESCO, Jan 31 – Feb 5, 31 participants from 3 countries. Coordinator and lecturer
- 2007: Biogeochemical processes and fish dynamics in food web models for end-to-end conceptualization of marine ecosystems. Theory and use of Ecopath with Ecosim. Workshop at the 6th European Conf. on Ecological Modelling, ECEM'07. Trieste, Italy, November 26-27, 60 participants. Lecturer (solo), resource person and organizer
- 2007: * Spatial modeling workshop, EU IncoFish, La Paz, Mexico, Mar 16-21. Lecturer (solo) and resource person [30 participants from 10 countries]
- 2007: * International ecosystem modeling workshop, EU ECOST, Sète, France, Feb 26 – Mar 2. Coordinator and (solo) lecturer [26 participants from 11 countries]
- 2006: * International ecosystem modeling workshop, EU IncoFish, Cape Town, Sep 11-15. Lecturer (solo) and resource person [22 participants from 12 countries]
- 2006: * EwE ecosystem modeling programming course, Smithsonian Environmental Research Center, Edgewater MD, August 28-31. Coordinator and lecturer [22 participants from 3 countries; evaluation available]
- 2006: * EwE fisheries economics training course, Guinea Current GEF/LME project, Accra, Ghana, 18-22 April. Coordinator and lecturer [30 participants from 16 West African countries; evaluation available]
- 2005: * EwE training course, Benguela Current GEF/LME project, Univ. of Cape Town, 5-14 Dec. Coordinator and lecturer [16 participants from 6 countries; evaluation available]
- 2004: * EwE training course, NMFS Galveston, Texas, 30 Nov – 3 Dec. Coordinator and lecturer
- 2004: * EwE training course, GEF Baltic Seas Regional Project, Jūrmala, Latvia, 18-22 Oct. Coordinator and (solo) lecturer [19 participants from 7 countries]
- 2003: EwE modeling workshop for Chesapeake Bay, NOAA Chesapeake Office, Patuxent MD, 28-29 April. Lecturer / PI
- 2002: * Ecosystem modeling workshop, Rønbjerg, Denmark, 25-29 Nov. Workshop leader and lecturer (solo)
- 2002: * Ecosystem management workshop 'Enfoque Metodológico para el análisis ecosistémico en la administración de pesquerías de la zona central de Chile', Concepción, Chile, 14-15 Nov. 2002. Workshop leader, lecturer (solo)
- 2002: Ecosystem modeling workshop, Virginia Institute of Marine Science, Gloucester Point, VA 13-14 May 2002. Workshop leader/PI,
- 2002: * Ecosim training course, Smithsonian Environmental Research Center, Edgewater, MD., 8-10 May Coordinator and lecturer
- 2002: * EwE training course, Univ. of Florida, Tallahassee, FL 29 April - 3 May. Coordinator and lecturer
- 2002: * Ecopath training course, Annapolis, MD, 19-20 Feb. Coordinator and lecturer (solo)
- 2000: * APEC Training Workshop on Marine Ecosystem Modeling and Analysis, 7-10 August, Academia Sinica, Taipei, Taiwan. Resource person and lecturer [52 participants]
- 2000: * FAO workshop on the Use of Ecosystem Models to Investigate Multispecies Management Strategies for Capture Fisheries. 17-20 July. UBC FC and FAO. Resource person, lecturer. [31 participants from 13 countries]
- 2000: Bioeconomic modelling workshop on the Thai demersal fisheries in the Gulf of Thailand. 31 May-9 June, Hua Hin, Thailand. DOF, Thailand and FAO. Resource person, invited speaker, [10 participants]
- 1999: * Regional ecosystem modeling training course, Manila, Philippines, 7-11 June. Coordinator and lecturer

- 1998: * International workshop "Placing fisheries in their ecosystem context", Univ. of Sao Paulo, Sao Paulo, Brazil, 30 Nov - 5 Dec. Coordinator and lecturer [27 participants from 6 countries]
- 1998: * ADB-funded Regional Training Workshop on Methods of Analysis of Fishery Resources, Songkhla, Thailand, 1-3 Nov. Lecturer (solo)
- 1998: * International training course "Placing fisheries in their ecosystem context", North Sea Centre, Denmark, 4-8 Aug. Coordinator and lecturer [31 participants from 22 European and West African countries]
- 1998: * Regional training course on application of Ecopath with Ecosim, Universidad Nacional, Puntarenas, Costa Rica, 21-28 April. Coordinator and lecturer [31 participants from 9 countries]
- 1998: FAO Expert Consultation "Use of Ecopath with Ecosim to Evaluate Strategies for Sustainable Exploitation of Multi-Species Resources." Fisheries Centre, UBC, Canada, 25-27 Mar. Co-organizer and lecturer, [27 participants from 9 countries]
- 1997: * Regional training course, "Placing fisheries in their ecosystem context", Univ. of Cape Town, Cape Town, South Africa, 9-17 Dec. Coordinator and lecturer [20 participants]
- 1997: * Ecopath course at Institute of Zoology, Academia Sinica, Taiwan, 13-16 Oct. Lecturer (solo)
- 1996: * International course: "Ecopath: Modeling and Management of Aquatic Ecosystems", CICIMAR, La Paz, Baja California Sur, Mexico, 21-26 Oct. Lecturer.
- 1993: * Ecopath course for scientists from 5 Malaysian fisheries research institutions at the Marine Fisheries Research Development and Management Division / South East Asian Fisheries Development Center (MFRDMD/SEAFDEC), Kuala Terengganu, Malaysia, September (two weeks). Lecturer (solo)
- 1993: * Ecopath course for scientists from developing countries, 8-19 Mar. Center for Marine Tropical Ecology (ZMT), Bremen, Germany. Lecturer

9. **SCHOLARLY AND PROFESSIONAL ACTIVITIES**

(a) *Areas of special interest and accomplishments*

I am considered a world leader in development of ecosystem models for fisheries policy use, and I lead the development of the widely applied Ecopath software for ecosystem simulation and policy analysis. The approach was in 2007 named by the US National Oceanographic and Atmospheric Administration as one of the ten biggest scientific breakthroughs in the organization's 200-year history. See also (5), Special Professional Qualifications.

(b) *Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))*

Granting Agency	Subject	COMP	Year	Principal Investigator(s)	Co-Investigator(s)
NSERC	Discovery Grant	C	2014-2019	Villy Christensen	
FWCP	Characterization of Arrow/Kootenay Ecosystems	NC	2013-2014	Villy Christensen & B. van Poorten	
Global Environment Facility/UNESCO	Transboundary Water Assessment Program	C	2013-2014	Villy Christensen	Daniel Pauly
Convention on Biological Diversity	GBO4 scenario study on the Strategic Plan and the Aichi Biodiversity Targets	C	2012-2014	Rashid Sumaila and Villy Christensen	
Nippon Foundation	Nereus – Predicting the Future Ocean Program	NC	2011-2014	Villy Christensen	
Nippon Foundation	Nereus – Predicting the Future Ocean Program	NC	2010-2011	Villy Christensen	

NOAA, Hawaii	Ecosystem models to explore management options	C	2010-2011	Villy Christensen	
NSERC	Canadian Fisheries Research Network	NC	2010-2015	Murdoch McAllister	VC, a.o.
NSERC	Discovery Grant	C	2007-2012	Villy Christensen	
Netherlands Environmental Assessment Agency (PBL)	Global Biodiversity Outlook	NC	2009-2011	Villy Christensen	
UNEP	State and Outlook of Marine Biodiversity – Regional Seas	NC	2010	Villy Christensen	
Lenfest Ocean Program	Lenfest Ocean Futures Project, Phase II	NC	2008.2 – 2010.1	Villy Christensen	
Canadian Bureau for International Education, FAITC	Canada/CARICOM Leadership Scholarships	C	2009	Villy Christensen	
UBC VP Research & International	Ecopath 25 Year conference	NC	2009	Villy Christensen	
Environmental Protection Agency, Sweden	Ecosystem modeling of the Baltic	C	2009	Villy Christensen	
Canadian Bureau for International Education, Foreign Affairs and International Trade Canada (FAITC)	Caribbean Student Exchange Program	C	2008	Villy Christensen	
Duke University & Packard Foundation	Ecoseed, an evaluation tool for placement and sizing of protected areas	C	2007-8	Villy Christensen	Zach Ferdaña
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (training course)	NC/C	2008	Villy Christensen	World-Fish Center
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (global activity)	NC/C	2007-2008	Villy Christensen	
Finnish Institute of Marine Research	Developing module for tracking persistent substances	N	2007	Villy Christensen	
Scottish Association for Marine Science	Programming of Ecological Network Analysis	NC	2007	Villy Christensen	
BC Ministry of the Environment	Visualization of pine beetle attacks	NC	2006-2007	Villy Christensen	
Lenfest Ocean Program	Lenfest Ocean Futures Project	NC	2005-2007	Villy Christensen	Daniel Pauly

Netherlands Ministry for the Environment	Global Biodiversity Outlook (GLOBIO2)	NC	2005-2007	Villy Christensen	Jackie Alder
UNEP	Global Environment Outlook (GEO4) scenarios modeling	NC	2005-2007	Villy Christensen	Jackie Alder
OECD	OECD Environment Outlook, scenario development	NC	2006	Villy Christensen	Jackie Alder
NSERC, Research Tools and Instruments	Large screen with multi-touch interface	C	2006	Kellogg Booth	Villy Christensen & others
Scientific Commission for Oceanographic Research/ UNESCO-IOC	Quantitative ecosystem indicators for fisheries management	C	2001-2006	Philippe Cury & Villy Christensen	
David Suzuki Foundation	Biomass reconstruction project (gift)	NC	2005	Villy Christensen	
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (global activity)	NC/C	2005	Villy Christensen	
(Activity of 4 th World Fisheries Congress; fee based)	Ecopath training course at UBC	NC	2004	Villy Christensen & Carl Walters	
NMFS/ NPUMMRC	Ecosystem analysis of Steller sea lion dynamics and their prey	C	2003-2004	Villy Christensen & Andrew Trites	
(Fee based)	Ecopath training course at UBC	NC	2000	Villy Christensen & Carl Walters	

(c) *Research or equivalent contracts (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC)).*

Granting Agency	Subject	COMP	Year	Principal Investigator	Co-investigator(s)
Lenfest Ocean Program	Towards ecosystem-based management of the Peruvian anchovy fishery	NC	2010-14	Villy Christensen	
Pew Environment Group	Animated videos for Pew Global Sharks Conservation Campaign	NC	2010-11	Villy Christensen	
Stony Brooks University	Management Strategy Evaluation functionality	NC	2010	Villy Christensen	
Netherlands Environmental Assessment Agency (PBL)	The Economics of Ecosystems and Biodiversity	NC	2010	Villy Christensen	
CEFAS, UK	Programming of model coupling	NC	2010	Villy Christensen	

Marine Stewardship Council/CSIRO	Management Strategy Evaluation module for EwE	NC	2010	Villy Christensen	
University of Hawaii	Programming of indicator module for EwE	NC	2010	Villy Christensen	
CEFAS, UK	Programming of variable time step in Ecosim	NC	2009 -10	Villy Christensen	
US Dept. of Commerce	Fisheries ecosystem model for the Chesapeake Bay	C	2008 -09	Villy Christensen	
US Dept. Commerce	Fisheries ecosystem model for the Chesapeake Bay	C	2006 -08	Villy Christensen	
Fisheries and Oceans Canada	Report on ecosystem activities and indicators	NC	2006	Villy Christensen	
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	2005	Villy Christensen	Carl Walters & Steven Martell
US Department of Commerce	Chesapeake Bay Stock Assessment (NA05NMF4571261)	C	2005	Steven Martell	Villy Christensen & Rob Latour
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	2004	Villy Christensen	Carl Walters & Steven Martell
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	2003	Villy Christensen	Carl Walters & Steven Martell
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	2002	Villy Christensen	Carl Walters
Chesapeake Bay Research Consortium	Ecosystem modeling training course	NC	2002	Villy Christensen	
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	2001	Villy Christensen	Carl Walters
European Union	Service contract, ecosystem modeling	NC	1998	Villy Christensen	
European Union	Placing fisheries in their ecosystem context	C	1997 - 2001	Villy Christensen	

(c) Invited Presentations

- 2016: Institute for Marine Science, ICM/CSIC, Barcelona, 10 June 2016. Modeling marine ecosystems.
- 2015: Pacific Salmon Commission, Salish Sea Survival Project, "Visualizing change", Richmond BC, 10 Dec.
- 2015: Universidad Peruana Cayetano Heredia, lecture on ecosystem-based management, Lima, Peru, June 18
- 2015: WWF international seminar on EBM and rights-based fisheries, Lima, Peru, June 15.
- 2015: IRTA, Sant Carles de la Ràpita, Catalonia, Spain. Lecture on global fisheries. Apr. 16
- 2015: ISI-MIP at IIASA, Laxenburg, Austria, cross-sectorial workshop. Plenary presentation, Mar 3-4.
- 2015: Scripps Institution of Oceanography, University of California, San Diego, (student-invited seminar), Jan 28.
- 2014: Ecopath 30 Years Conference, Barcelona. Opening lecture (and three other presentations, session chair). Nov. 10-12.

- 2014: American Fisheries Society Annual Meeting, Quebec City, QB. Keynote speaker; Fishing down the food web session, Aug. 21
- 2014: Convention on Biological Diversity, 18th Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), marine aspects of CBDs Global Biodiversity Outlook 4, Montreal, June 21
- 2014: Carl Walters Symposium, Review of modeling marine ecosystems, UBC, June 19
- 2014: Louisiana State University, School of the Coast and Environment, Distinguished Fisheries Science Lecture, Baton Rouge, Louisiana, Mar. 13
- 2014: Convention on Biological Diversity, Secretariat, Montreal, global ocean lecture, Feb. 20
- 2014: College of Marine Science, University of South Florida, Feb. 7. Modeling marine ecosystems.
- 2013: The Science of the Cohen Commission. Fraser River Aboriginal Fisheries Secretariat, March 27
- 2013: Netherlands Environmental Assessment Agency, Bilthoven, Netherlands, Jan 23, 2013. The Global Ocean.
- 2012: Stockholm Seminar, Royal Academy of Sciences, Stockholm, Sweden, Sep. 14.
- 2012: American Fisheries Society 142nd Annual Meeting, Minneapolis-St. Paul, Aug 18-23. Opening plenary speaker.
- 2012: 10th Congress for the International Society for the Study of Fatty Acids and Lipids. Global Interest Plenary Lecture, Vancouver BC, May 29.
- 2012: ICES/PICES 2nd International Conference on Effects of Climate Change on the World Ocean's. Yeosu, Korea, May 13-20. Workshop on predicting climate change. Invited speaker.
- 2012: 6th World Fisheries Congress, Edinburgh, Scotland. May 7-10. Session on Climate Change; keynote.
- 2012: APEC-LME Workshop on Marine Ecosystem Assessment and Management, Seoul, Korea, Jan. 4-5.
- 2011: University of Sao Paulo, Brazil, Dec. 1. Lecture on relationship between oceanography and fisheries research.
- 2011: American Fisheries Society Meeting, Seattle WA. Session on global overfishing; keynote. September 7.
- 2011: Using ecosystem modeling to evaluate impact of oil spills. NOAA Deepwater Communities Expert Workshop, St. Petersburg FL, April 21-22.
- 2011: Ocean visualizations and games. New tools for promoting sustainable fisheries. Role playing and other videogames. CIESM International Workshop. Gothenburg, 24 March.
- 2011: NSERC Canadian Capture Fisheries Research Network, 1st AGM, Vancouver, 22-24 February. Hecate Strait Crab fisheries and their ecosystem
- 2011: FARO/Safari Remote Sensing Workshop. Toronto, 6 Jan., Remote sensing and ecosystem impacts.
- 2009: Anchoveta in the ecosystem: Ecosystem-based management. Universidad Peruana Cayetano Heredia. 12 Nov. Public lecture.
- 2009: Análisis de efectos ecosistémicos. Conference Las Cuotas de Captura: Análisis de Experiencia Peruana, Universidad de Lima, 10 Nov. Presentation to the fishing industry hosted by the Ministry of Production.
- 2009: Ecosystem-based management of the Peruvian anchovy fishery. IMARPE. Lima, 9 Nov. Presentation to researchers.
- 2009: The future of Ecopath. Keynote lecture, Ecopath 25 Years, International Conference, UBC, Aug. 31 - Sep 2.
- 2009: Using food web analysis to inform policy on food security. The Unexpected Link – Conference on Network Science. Central European University, Budapest, Hungary, June 17-18.
- 2009: Bevan Symposium on Sustainable Fisheries, School of Fisheries, Univ. of Washington, Seattle. Quantitative support tools to implement EBFM, April 30-May 1, 2009.
- 2009: Biodiversity modeling for global policy scenarios. Netherlands Environmental Assessment Agency, Bilthoven, Netherlands, March 2, 2009
- 2008: Overview of Ecopath with Ecosim and the Ecosed project. EBM Tool Network Public Webinar, March 26, 2008
- 2007: Ecopath with Ecosim 6: New generation ecosystem modeling package. PICES 16th Annual Meeting, Victoria BC, October 30, 2007
- 2007: Ecosystem-based Management. Baltic STERN workshop on linking food web modeling and fisheries economy, Resilience Centre, Stockholm, 22-23 November
- 2007: Tracking persistent pollutants through the food web. Workshop on Developing Integrated Monitoring and Modeling Programs for Hg in the Chesapeake Bay. STAC & NOAA Chesapeake Bay. Baltimore, US, Oct 2-4.
- 2007: Ecosystem Models. Department of Fisheries and Oceans, Ecosystem Modeling Workshop, Victoria, Oct 22-25
- 2007: Using ecosystem modeling for fisheries management. Centre de Recherche Halieutique Méditerranéenne et Tropicale, Sète, France, March 2007
- 2006: PICES/NPRB Integration of Ecological Indicators for the North Pacific WS, Seattle, WA. 1-3 June, Invited speaker

- 2005: National Academies' Ocean Studies Board, Committee on Ecosystem Effects of Fishing, 9 May, Seattle WA, invited speaker
- 2005: Ecosystem Science and Management Planning Workshop, Western Pacific Regional Fisheries Council. April 18-22, 2005. Honolulu, Hawaii, USA. Expert panel member/invited speaker.
- 2004: Fourth World Fisheries Congress, Vancouver Canada, 2-6 May. Session leader/speaker
- 2002: Mote Symposium, Trade-offs in fisheries management, Sarasota, Florida, 4-7 Nov. 2002, Invited speaker
- 2002: Ecosystem modeling workshop, Faroe Fisheries Institute, Torshavn, Faroe Islands, 24-27 Sep 2002. Invited speaker,
- 2000: US Atlantic States Marine Fisheries Commission, Multispecies Assessment Feasibility Workshop, 15-16 August 2000, Alexandria, Virginia, USA. Invited speaker
- 2000: Canadian Living Marine Resources - Global Ocean Observation System workshop, 29-30 March, BIO, Halifax, Canada. Invited speaker,
- 2000: History of Marine Animal Populations Workshop, Census of Marine Life, 19-22 Feb., Esbjerg, Denmark. Invited speaker,
- 1999: Census of Marine Life, Ocean Biogeographical Information System Workshop, 3-4 Nov., AGU, Washington, DC USA. Invited speaker,
- 1998: Workshop on Comparative Dynamics of Exploited Ecosystems of the Northwest Atlantic, Halifax, N.S., Canada, 12-15 November, Lecturer, invited speaker.
- 1998: Conference on Biodiversity and Development, The Danida Research Council, Copenhagen, 21 Oct 1998. "Biodiversity and Development: Exploitation of Marine Resources". Keynote speaker
- 1998: Tropical Fish Biology Symposium of the Fisheries Society of the British Isles, 13-17 July, Southampton, U.K. Keynote speaker
- 1998: Scientific coordinator and keynote speaker, EC Conference "Ocean food webs and economic productivity", Lisbon, 30 June-3 July. "Fisheries research and the challenge of ecosystem management"
- 1997: International conference: "Ocean Harvest 97", Southampton Oceanographic Centre, U.K., June. Invited speaker.
- 1996: 3rd Regional Dialogue, ACP-EU Fisheries Research Initiative, Belize, 5-10 Dec., Resource person, invited speaker
- 1996: GLOBEC, Small Pelagics and Climate Change Modelling Workshop. JRC, Ispra, Italy. October 14-16, invited speaker
- 1996: International symposium "Unifying Goal Functions" at the Salzaau Cultural Centre, Germany, 30 Aug.-4 Sep. Invited speaker.
- 1996: U.S. NAS' Ocean Studies Board International Conference on Ecosystem Management for Sustainable Fisheries, Monterey, California, 19-23 February. Invited speaker.

(e) Other Presentations

Numerous, some examples:

- 2013: Ministry of Production, Lima, Peru, April 18, presentation to the Vice-minister and Heads of Office
- 2012: Ministry of Production, Lima, Peru, Nov. 8, presentation to the Vice-minister and Heads of Office
- 2012: IMARPE, Lima, Peru, Nov. 7. Presentation to scientific staff and directors.
- 2012: Centro para la Sostenibilidad Ambiental de la Universidad Peruana Cayetano Heredia (CSA-UPCH), Lima, Peru, November 7, 2012. The Peruvian upwelling ecosystem and fisheries sector. Public presentation to 250 participants. Introduction by the Minister of Production.
- 2012: Ministerio del Ambiente, Lima, Peru, Nov. 6, Ecological, Social and Economic Impacts of the Peruvian Fisheries, presentation to Minister and Vice-minister of the Environment and their Heads of Office
- 2012: Sociedad Nacional de Pesquería, Lima, Peru, Nov. 5, Ecological, Social and Economic Impacts of the Peruvian Fisheries, presentation to CEO's of Peruvian industrial fisheries
- 2009: "Life in Chesapeake Bay", Chesapeake Bay Fisheries Symposium, April, Patuxent, MD, video screening
- 2005: Estuarine Research Foundation 2005, 20-21 October, Norfolk, VA, speaker.
- 2005: Chesapeake Bay Fisheries Research Symposium, 27-28 April, Patuxent, MD, speaker
- 2004: Chesapeake Bay Fisheries Research Symposium, 25-26 Feb, Patuxent, MD, speaker
- 2003: Chesapeake Bay Fisheries Research Symposium, Feb, Patuxent, MD, speaker

(f) Other (includes working groups and workshops where I have acted as leader/resource person)

- 2015: IPBES Authors' workshop, 9-13 Mar. Ushuaia, Argentina
- 2014: IPBES Authors' workshop, Methodological Assessment of Scenarios and Modelling of Biodiversity and Ecosystem Services, 27-31 Oct., Egmond aan Zee, the Netherlands
- 2013: GEF/IOC LME and Open Ocean Transboundary Water Assessment Program IOC/UNESCO, 20-22 March
- 2012: GEF 14th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July. Speaker
- 2010: GEF 12th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July. Speaker
- 2010: GEF/IOC LME and Open Ocean Transboundary Water Assessment Working Groups, GRID, Arendal, Norway, 21-25 June
- 2010: GEF/IOC LME Transboundary Water Assessment Working Group, Paris, 1-5 Feb.
- 2009: GEF 11th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 9-10 July. Speaker
- 2009: Scenarios and models for exploring future trends of biodiversity and ecosystem services changes. European Commission, Brussels. Invited panelist, 13 May
- 2008: Integrating climate and Australian Ecopath models to predict climate change impacts on Australian marine systems. CSIRO Climate Adaptation Flagship, University of Tasmania, Hobart, 2-4 September. Resource person, lecturer
- 2008: GEF 10th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 8-9 July. Speaker
- 2007: Ecosystem Tool Developers Network Workshop. UBC Fisheries Centre. Oct 18-19, co-chair.
- 2007: NOAA National Ecosystem Modeling Workshop, Santa Cruz, CA, August 28-31
- 2007: GEF 9th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July 10-11. Speaker
- 2007: FAO Expert Consultation: "Modelling ecosystem interactions for informing and ecosystem approach to fisheries: Best practices in ecosystem modeling", Tivoli, Italy, July 3-6.
- 2007: Ecosystem modeling workshop. Sun-Yat Sen University, Guangzhou, China, April 9; leader.
- 2007: Gulf of Mexico Fisheries Management Council's Ecosystem Modeling Workshop, FWRI, St. Petersburg, FL., May 8-10; resource person
- 2006: Integrating ecosystem and economic modeling, workshop, Univ. of Amsterdam, Amsterdam Nov 1-3.
- 2006: South Atlantic Fisheries Management Council's planning workshop for ecosystem approaches to fisheries, Oct 20, Vancouver, BC; organizer and host.
- 2006: Ecosystem Tool Developers Network Workshop. The Nature Conservancy, Santa Cruz, September
- 2006: GEF 8th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July. Speaker
- 2006: Ecosystem Tool Developers Network, Kick-off Workshop, Packard Foundation and NatureServe, Arlington VA, March 22-24.
- 2005: Research and Monitoring Workshop, Ecosystem Management in the South Atlantic Region, South Atlantic Fisheries Management Council, Charleston, SC, 16-18 Nov, resource person/speaker.
- 2005: NOAA Assistant Regional Administrator's Fisheries Habitat Conservation Meeting, Anchorage, AK, 19 Sep, resource person/speaker.
- 2005: GEF 7th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 6-7 July. Speaker
- 2005: Working group on management policies for marine management, NCEAS, Santa Barbara CA, 21-23 March.
- 2005: International workshop: NOAA Decision Tools for Ecosystem Based Management of Fisheries. 14-18 Feb, Key Largo, Florida, session chair/speaker.
- 2004: Working group on management policies for marine management, National Center for Ecosystem Analysis and Synthesis (NCEAS), Santa Barbara CA, 7-10 Dec.
- 2004: Tools for Coastal-Marine Ecosystem-Based Management, Packard Foundation and NatureServe, Arlington VA, August 20.
- 2004: GEF 6th Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 30 Mar. Speaker
- 2004: International workshop, Ecosystem model and database integration, La Paz, Baja California Sur, Mexico, 2-5 March, resource person/speaker.
- 2003: International Workshop, Role of fisheries and climate in the North Pacific. PBS, DFO, Nanaimo 16-18 September. Co-chair.
- 2003: International workshop, Modeling Antarctic ecosystems, UBC, 15-17 April. Resource person, speaker
- 2002: International workshop. An ecosystem approach to fisheries management in the southern Benguela, UCT, Cape Town, 9-11 Dec. Resource person, speaker
- 2002: SCOR/IOC WG 119 Meeting on Quantitative Ecosystem Indicators for Fisheries Management, Cape Town, 4-6 October, Co-chair.
- 2002: EwE Hecate Strait workshop, DFO, Nanaimo, 9-10 April 2002. Resource person, speaker

- 2001: SCOR/IOC WG 119 Meeting on Quantitative Ecosystem Indicators for Fisheries Management, Reykjavik, Iceland, 5-6 October, Co-chair.
- 2001: Workshop on Ecosystem approaches to fisheries management, CSIRO Marine Laboratories, Hobart, Tasmania, 28-30 August. Resource person, invited speaker
- 2001: Considerations for Ecosystem Management of the Northern Benguela Ecosystem, Workshop, Swakopmund, Namibia, 23-25 May. Resource person, invited speaker
- 2001: International Workshop on Management of Tropical Coastal Fisheries in Asia, 20-23 March, Penang, Malaysia. Resource person, invited speaker
- 2001: Ecopath with Ecosim modeling workshop for Chesapeake Bay, NOAA Chesapeake Office, Patuxent MD, 22-24 October. Workshop leader/PI,
- 1998: Ocean Studies Board, U.S. National Academy of Sciences, workshop "Assessing the Global Distribution and Abundance of Marine Organisms", Monterey, California, 13-15 Jan. Invited participant,
- 1995: International workshop "Mass-balance models of Northeastern Pacific ecosystems", 6-10 November. Fisheries Centre, University of British Columbia, Vancouver, Canada. Resource person, lecturer
- 1993: Two week workshop on modeling of resource interactions in the Northwest Atlantic, October, at the Dept. of Fisheries & Oceans (DFO), Newfoundland, Canada. Resource person, lecturer
- 1991: CEC Workshop. Techniques for biological assessment in fisheries management, 17-24 July, Jülich, Germany. Invited participant

(g) Conference Participation (Organizer, Keynote Speaker, etc.). Includes invited participation only

- 2014: Ecopath 30 Years, International Conference and Workshops, CSIC-ISM, Nov 4-14. Scientific Committee member. 127 participants from 21 countries
- 2014: Global Biodiversity Outlook 4 workshop at the University of British Columbia, May 10-14, 2014 (co-convenor).
- 2013: AAAS Symposium, Weaving the future ocean web through collaboration: the Nereus Program. Vancouver, BC. Organizer, Feb 17.
- 2012: Yale Climate and Energy Institute's Annual Conference: Managing species for regulating carbon cycling. (Steering Committee member, invited speaker). Yale University, April 12-14.
- 2012: AAAS Symposium, Predicting The Future Ocean – The Nereus Program. Vancouver, BC. Organizer and speaker. Press briefing presenter.
- 2011: AAAS Symposium, 2050 – Will There be Fish? Washington DC, US, Feb. 18. Organizer and speaker. Press briefing presenter; gave ~35 media interviews.
- 2010: AAAS symposium, Bridging Science and Society for Sustainability: The Role of Visualization, San Diego, US, Feb. 20. Co-organizer and speaker.
- 2009: Ecopath 25 Years, International Conference and Workshops, UBC, Aug 30-Sep 5. Convener. 127 participants from 21 countries
- 2007: European Conf. on Ecological Modelling, ECEM'07, Trieste, Italy. Nov. 27-30. Session chair/speaker
- 2006: Thinking Big, A Global Look at Fisheries Science. Celebratory Symposium for Daniel Pauly, May 1-3, UBC. Organizer/session chair
- 2005: ICES Annual Science Conference, Aberdeen, Scotland, 21-24 September. Theme session chair/speaker
- 2004: International symposium "Quantitative Indicators for Fisheries Management" IOC/Unesco HQ, Paris, 31 March - 3 April. Co-convenor, (250+ participants, 43 countries)
- 2000: International Conference "Placing Fisheries in Their Ecosystem Context", 4-8 December, Charles Darwin Research Station, Galapagos Islands, Ecuador. Coordinator and co-convenor
- 1999: WWF/Charles Darwin Foundation for the Galápagos Islands Biodiversity Workshop, Galápagos, 25-28 May. Invited participant
- 1999: FAO/Australia Technical Consultation on the Use of Indicators of Sustainable Fisheries Development, Sydney, Australia, 18-22 January. Invited expert,
- 1998: 10th Global Biodiversity Forum, Bratislava, Slovakia, 30 April-2 May, speaker.

10. SERVICE TO THE UNIVERSITY

(a) Memberships on committees, including offices held and dates

- 2015-2016: IOF Graduate Program Development Committee, chair

2015: IOF Advisory Council, ex-officio member
 2014-2015: Dean's committee for establishing new Institute for the Oceans and Fisheries
 2013-2014: Dr. Amanda Vincent, Promotion Committee, Member
 2013-2014: Dr. William Cheung, Promotion and Tenure Committee, Member
 2013: RMES Graduate Awards Committee, member
 2013-: Zoology Graduate Awards Committee, member
 2013 Strategic plan committee for the UBC Fisheries Centre, chair
 2011-: CIRS BC Hydro Decision Theatre Local Advisory Panel, member
 2011-2016: NSERC Canadian Capture Fisheries Network, Scientific Committee, member
 2006-2015: COSMOS International Graduate Travel Award, Committee Member
 2011-2013: Fisheries Centre Restructuring Committee, member
 2011-2013: Fisheries Centre Financial Committee, member
 2009-2011: UBC International Advisory Council, member
 2006-2009 AERL IT Committee, chair
 2005-2008: North Pacific Universities Marine Mammal Research Consortium, Scientific Advisory Committee Member
 2005: AERL Building Implementation Committee
 2004-2005: AERL Building IT Budget Committee
 2004-2005: AERL Scenario Lab Planning Committee
 1999-2003: Sea Around Us Project Steering Committee

(b) Other service, including dates

2016 Chair, Doctoral exam of Meixuezi Tong, Botany, 30 Mar.
 2016 Examiner, Comp. exam of Sarah Amundrud, Zoology, 24 Mar.
 2015 Examiner, Comp. exam of Rachel Chudnow, Zoology, 22 Oct.
 2015 Chair, Doctoral exam of Jonathan Salter, RMES, 16 Oct.
 2015 Examiner, M.Sc. exam of Peter Jacobs, George Mason University, Fairfax VA, 28 Apr.
 2015 Examiner, Comp. exam of Szymon Surma, RMES, 24 Apr.
 2015 Examiner, Comp. exam of Roberto Licandeo, Zoology, 1 Apr.
 2014 Examiner, PhD exam of Audrey Valls, Zoology, 9 Dec.
 2014 Chair, Doctoral exam of David Semeniuk, EOAS, 25 Sep.
 2014 Examiner, PhD exam of Kristy Lewis, Louisiana State Univ., Baton Rouge LA, 14 Mar.
 2013 Examiner, PhD exam of Leigh Gurney, EOAS, 25 Nov.
 2013 Examiner, Comp. exam of Andres Cisneros, 28 Mar
 2012 University Examiner, Doctoral exam of Lingbo Li, 7 Dec.
 2012 Examiner, Comp. exam of Kristy Lewis, Louisiana State Univ., 4 Sep.
 2012 Examiner, Comp. exam of Mathieu Colleter, 29 Aug.
 2011 Examiner, Comp. exam of Jennifer Selgrath, 2 Nov.
 2011 Examiner, M.Sc. exam of Lucas Brotz, EOAS, 7 Oct.
 2011 Examiner, Comp. exam of Audrey Valls, Zoology, 2 Sep.
 2011 Examiner, Doctoral exam of Anna Hall, Zoology, 30 Aug.
 2011 Examiner, Comp. exam of Mike Hawkshaw, 24 May
 2011 Examiner, Comp. exam of Dalal Al-Abdulrazzak, 15 Mar.
 2010 Examiner, Comp. exam of Ed Gregr, 22 Dec.
 2010 Examiner, M.Sc. exam of Maria Espinosa Romero, RMES, 23 Aug.
 2010 Examiner, Doctoral exam of Robert Ahrens, Zoology, 4 April
 2009 Examiner, Doctoral exam of Michael Melnychuk, Zoology, 7 Dec.
 2009 Chair, Doctoral exam of Julie Deslippe, Forestry, 3 Dec.
 2009 Chair, Doctoral exam of Stephen TB Lau, Chemistry, 27 May
 2008 University Examiner, Doctoral exam of Robyn Forrest, RMES, 18 Dec.
 2007 Examiner, Comp. exam of Leigh Gurney, EOAS, 7 Nov.
 2007 Examiner, Doctoral exam of Lyne Morissette, Zoology, 17 Sep.
 2007 Examiner, M.Sc. exam of Pablo Trujillo, RMES, 28 Aug.
 2007 University Examiner, Doctoral exam of Wai Lung Cheung, Zoology, 17 May
 2007 Examiner, Doctoral exam of David Preikshot, RMES, 13 Mar.
 2007 University Examiner, Doctoral exam of Telmo Morato, Zoology, 26 Jan.

2006 Chair, Comp. exam of Sarah Foster, RMES, 16 June
 2006 Examiner, Comp. exam of Brett van Porten, 24 Apr.
 2006 University Examiner, Doctoral exam of Cameron Ainsworth, Zoology, 28 April
 2006 Examiner, M.Sc. exam of Heather Keith, 31 Mar.
 2005 Examiner, Comp. exam of Robert Ahrens, 14 Oct.
 2005 Chair, Doctoral exam of Sudhagar Mani, Chemistry, 9 Sep.
 2005 Examiner, Comp. exam of Anna Hall, 15 April
 2005 Examiner, Comp. exam of Michael Melnychuk, 30 Mar
 2004 Examiner, Comp. exam of David Preikshot, 16 Nov.
 2004 Examiner, Doctoral exam of Katia Freire, 6 Nov.
 2003 Examiner, M.Sc. exam of Emma Bredesen, 11 Dec.
 2001 Examiner, M.Sc. exam of Stephen Watkinson, 17 Sep.
 2001 Examiner, M.Sc. exam of Alasdair Beattie, 13 July
 1999 University examiner, M.Sc. exam of Edward Nsiku

11. SERVICE TO THE COMMUNITY

- (a) *Memberships on scholarly societies, including offices held and dates*
 International Society for Ecological Modeling, member
 American Fisheries Society, member
 American Association for the Advancement of Sciences, member
- (b) *Memberships on other societies, including offices held and dates*
- (c) *Memberships on scholarly committees, including offices held and dates*
 Intergovernmental Panel for Biodiversity and Ecosystem Services (IPBES), Delivery 3c, Coordinating Lead Author, Lead Author, 2014-2016.
 Ecopath 30' Anniversary Conference, Barcelona, Spain. Nov 4-14, 2014. Scientific Advisory Committee, Member
 European Conf. on Ecological Modelling, ECEM'14, Marrakesh, Morocco. Oct 27-30, 2014. Scientific Advisory Committee, Member
 European Union MareFrame FP7 KBBE project, External Advisory Group, Member, 2014-2017
 Ecopath Research and Development Consortium, Founding Board Chair, 2012-
 CBD Global Biodiversity Outlook 4 (GBO4). Coordinating Lead Author, 2012-2014
 "Life in a Changing Ocean", panel member, 2011- 2015.
 GLOBIO - Mapping human impacts on the biosphere. Partnership between PBL, UNEP-WCMC, UNEP-Grid & UBC. Director (= board member). 2011 - .
 Dolphin Biology and Conservation, Advisory Board, Member, 2011 -
 UNEP Global Environment Outlook 5, Contributing Author, 2011 - 2012
 GEF Transboundary Water Assessment, GEF/IOC Open Ocean Working Group (TWAP). Member, 2010 -
 GEF Transboundary Water Assessment, GEF/IOC LME Working Group (TWAP). Member, 2009 -
 GEF/IOC/NOAA/IUCN Large Marine Ecosystems Consultative Committee, member, 2005 - present
 Oceana, Science Advisory Board, member, 2003.
 IUCN Commission on Ecosystem Management, member, 1998 - present
 ECEM'07, the 6th European Conference on Ecological Modelling. Trieste, Italy, November 27-30, 2007.
 Scientific Advisory Committee, member.
 2nd Global Conference on Large Marine Ecosystems, Steering Committee, member. September 2007
 Scientific Committee on Oceanographic Research (SCOR) / UNESCO's Intergovernmental Oceanographic Commission's joint WG 119 on "Quantitative Ecosystem Indicators for Fisheries Management", Co-chair. 2001-6
 Pacific Ocean Shelf Tracking project, Pelagic WG, member, 2004-5
 Millennium Ecosystem Assessment, Contributing author, marine systems, 2002-5
 SCOR Working Group 105 on the Impact of World Fisheries Harvests on the Stability and Diversity of Marine Ecosystems, Member. 1996-9

- (d) *Memberships on other committees, including offices held and dates*
 ICES Multispecies Assessment WG, Member, 1992-1997
 Nordic Council Herring Research Planning Group, Member, 1987-1989
 ICES Herring Assessment Working Group (WG), Member, 1985-1989
 ICES Larval Fish Ecology WG, Member, 1983-1989
 ICES International Herring Larvae Survey WG, Member, Chair 1985-1989. Member 1981-1984
- (e) *Editorships (list journal and dates)*
 Guest editor: ICES Journal of Marine Science, special issue, 2005
 Guest editor: Ecological Modeling, special issue, 2004
 Editorial Board Member, Ecological Modelling, Elsevier Science Publishers, 1992 – present
 Editorial Board Member, Open Fish Science Journal, Bentham Science Publishers, 2008 - present
 Co-Editor, FishByte, Network of Tropical Fisheries Scientists (in Naga, the ICLARM Quarterly), 1997-1999
 Editorial Board Member, Dana, international fisheries journal, Olsen & Olsen Publishers, 1992-1997
- (f) *Reviewer (journal, agency, etc. including dates)*
 Reviewer for a large number of journals, including for African J Marine Science; Bull of Marine Science; Conservation Ecology; CJFAS; Dana; Estuarine, Coastal and Shelf Science; Fish and Fisheries; Fisheries; Global Change Biology; JEMBE; J Marine Systems; MEPS; Nature (2008:1; 2007:1; 2006:2); Science (2008:1; 2007:1)
 Reviews regularly for Ecological Modelling (Editorial Board Member)
 Book review for Cambridge Univ. Press (2009)
 Grant proposals to NS ERC (2008:1), Research Council of Norway (2008:2), NERC UK (2007), NSF (2005:2), International Foundation for Science, Stockholm (2005, 2001), DEFRA, UK, (2001); Great Lakes Fishery Commission (2001); South African National Research Foundation (2001)
- (g) *External examiner (indicate universities and dates)*
 2016: Univ. of Iceland, PhD thesis of Ms. Sigridur Sigurdardottir
 2002: Univ. of Tasmania, PhD thesis of Ms. Catherine Bulman,
 2002: James Cook University, Australia. M.Sc. thesis of Dr Neil Gribble
 2000: Memorial Univ. of Newfoundland, M.Sc. thesis of Ms. Jill Casey
 1997: Univ. of Port Elizabeth, RSA. PhD thesis of Ms. J.J. Heymans
- (h) *Consultant (indicate organization and dates)*
 2015-: Ecological impacts of proposed LNG Terminal, Prince Rupert, Golder Associates.
 2013-7: Ecological impacts of proposed terminal expansion at Roberts Bank, Port of Metro Vancouver.
 2014 UN's FAO/Bay of Bengal Large Marine Ecosystem Project: Training course on ecosystem modeling.
 2011: Review of Modeling Approaches in Support of Ecosystem-Based Fishery Management, NMFS NEFSC; Center for Independent Experts. March – April 2011.
 2010: UNIDO/Gulf of Guinea Current Large Marine Ecosystem Project. Training course on construction ecosystem models of the Gulf of Guinea Current area.
 2010-1: Predation on Fraser River Sockeye Salmon. Cohen Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River. September 2010 – May 2011. Report preparation and testimony.
 2006: UNIDO/Gulf of Guinea Current Large Marine Ecosystem Project. Training course in ecosystem modeling.
 1997: Evaluation of FAO/Danida project on Training in Fish Stock Assessment and Fishery Research Planning. Team leader; 1-month mission to Italy, Namibia, Indonesia and Thailand
 1994-5: UN FAO writers contract on management of fisheries involving top predator and prey species components.
 1993: UN Food and Agriculture Organization (FAO) writers contract on the structure of the pelagic ecosystem in the Black Sea.
- (i) *Other service to the community*
 Founding member of [EBM Tool Network](#)
 Founding member of EBM Tool Developers Collaborative

12. AWARDS AND DISTINCTIONS

- (a) Awards for Teaching (indicate name of award, awarding organizations, date)*
- (b) Awards for Scholarship (indicate name of award, awarding organizations, date)*
- (c) Awards for Service (indicate name of award, awarding organizations, date)*
- (d) Other Awards*

International Science & Engineering Visualization Challenge, Finalist, US National Science Foundation and the journal Science, 2010.

Recognized by Ecological Modelling in 2008 for the third-most cited paper in the journal (of >5000).

EwE, for which I have been the project leader since 1990, was named one of ten major scientific breakthroughs in the 200-year history of the US National Oceanographic and Atmospheric Administration in 2007.

The University of Victoria 2007 Craigdarroch Award for Societal Contribution; co-recipient for contribution to the 'Coast under Stress' project

Zayed International Prize for the Environment, 2006. 2nd prize, co-recipient for contribution to the 'Millennium Ecosystem Assessment'

13. OTHER RELEVANT INFORMATION (Maximum one page)

THE UNIVERSITY OF BRITISH COLUMBIA***Publications Record*****SURNAME:** Christensen**FIRST NAME:** Villy
MIDDLE NAME(S)**Initials:** VC
Date: 06-Sep-16**1. REFEREED PUBLICATIONS*****(a) Journals***

- Vasslides, J.M., de Mutsert, K. Christensen, V., Townsend, H. 2017. Using ecosystem models to understand the effects of watershed-based management actions in coastal ecosystems. *Coastal Management*, in press (January 2017 issue).
- Coll, M., Steenbeek, J., Sole, J., Palomera, I., Christensen, V. 2016. Modelling the cumulative spatial-temporal effects of environmental factors and fishing in a NW Mediterranean marine ecosystem. *Ecological Modelling*, in press.
- Heymans, J.J., Coll, M., Link, J.S., Mackinson, S., Steenbeek, J., Walters, C.J., Christensen, V., 2016. Best practice in developing, balancing, fitting and using Ecopath with Ecosim food-web models for ecosystem-based management, obtaining ecosystem baselines and testing theoretical ecological hypotheses. *Ecological Modelling*, in press.
- Eddy, T.D., Lotze, H.K., Fulton, E.A., Coll, M., Ainsworth, C.H., de Araújo, J.N., Bulman, C.M., Bundy, A. Christensen, V., Field, J.C., Gribble, N.A., Hasan, M., Mackinson, S., Townsend, H. 2016. Ecosystem effects of invertebrate fisheries. *Fish and Fisheries*, in press..
- Christensen, V, M Coll, J Buszowski, WWL Cheung, T Frölicher, J Steenbeek, CA Stock, RA Watson and CJ Walters. 2015. The global ocean is an ecosystem: Simulating marine life and fisheries. *Global Ecology and Biogeography* 24:507-517.
- Coll, M., Akoglu, E., Arreguín-Sánchez, F., Fulton, E.A., Gascuel, D., Heymans, J.J., Libralato, S., Mackinson, S., Palomera, I., Piroddi, C., Shannon, L., Steenbeek, J. Villasante, S., and Christensen, V. 2015. Modelling dynamic ecosystems: venturing beyond boundaries with the Ecopath approach. *Reviews in Fish and Fisheries* (in press)
- Colléter M, Valls A, Guitton J, Gascuel D, Pauly D, and Christensen V. 2015. Global overview of the applications of the Ecopath with Ecosim modeling approach using the EcoBase model repository. *Ecological Modelling*, 302:42-53.
- De Mutsert, K., J. Steenbeek, K. Lewis, J. Buszowski, J.H. Cowan, Jr., and V. Christensen. Exploring effects of hypoxia on fish and fisheries in the northern Gulf of Mexico using a dynamic spatially-explicit ecosystem model. *Ecological Modelling*, in press (Nov. 2015).
- Link, J.S., F. Pranovi, S. Libralato, M. Coll, V. Christensen, C. Solidoro, E. Fulton. 2015. Emergent properties delineate marine ecosystem perturbation and recovery. *TREE* 30(11): 649-661.
- Montero, L.C., V. Christensen, and J.J. Castro. 2015. Effects of small-scale and recreational fisheries on the Canary Islands ecosystem. *Ecological Modelling*, in press.
- Piroddi, C., M. Coll, J. Steenbeek, D.M. Moya, and V. Christensen. 2015. Modelling the Mediterranean marine ecosystem as a whole: addressing the challenge of complexity. *MEPS*.
- Ramírez, A., Ortiz, M., Steenbeek, J., Christensen, V., 2015. Evaluation of the effects on rockfish and kelp artisanal fisheries of the proposed Mejillones Peninsula marine protected area (northern Chile, SE Pacific coast). *Ecological Modelling* 297, 141–153.
- Steenbeek J., Buszowski J, Christensen V, Akoglu E, Aydin K, Ellis N, Felinto D, Guitton J, Lucey S, Kearney K, Mackinson S, Pan M, Platts M, Walters C. 2015. Ecopath with Ecosim as a model-building toolbox: source code capabilities, extensions, and variations. *Ecological Modelling*.
- Valls, A., Coll, M., & Christensen, V. 2015. Keystone species: toward an operational concept for marine biodiversity conservation. *Ecological Monographs*, 85(1), 29–47.
- Zetina-Rejón, M., Cabrera-Neri, E., López-Ibarra, G.A., Arcos-Huitrón, E., Christensen, V. 2015. Trophic modeling of the continental shelf ecosystem outside of Tabasco, Mexico: A network and modularity analysis. *Ecological Modelling*, (July 2015).
- Christensen, V, M Coll, J Steenbeek, J Buszowski, D Chagaris, and CJ Walters. 2014. Representing variable habitat quality in a spatial food web model. [Ecosystems](#)
- Christensen, V, M Coll, C Piroddi, J Steenbeek, J Buszowski, and D Pauly. 2014. Biomass of predatory fish in the world ocean: a century of decline. *Marine Ecology Progress Series* 512:155-166.

- Christensen, V., S De la Puente, JC Sueiro, J Steenbeek, P Majluf. 2014. Valuing seafood: The Peruvian fisheries sector. *Marine Policy*, 44:302-311.
- Gurney, L., Pakhomov, E.A., Christensen, V. 2014. An ecosystem model of the Prince Edward Island Archipelago. *Ecol. Model.* 294:117-136
- Marques, A., Pereira, H.M., Krug, C., Leadley, P.W., Visconti, P., Januchowski-Hartley, S.R., Krug, R.M., Alkemade, R., Bellard, C., Cheung, W.L., Christensen, V., Cooper, H.D., Hirsch, T., Hoft, R., van Kolck, J., Newbold, T., Noonan-Mooney, K., Regan, E.C., Rondinini, C., Sumaila, U.R., Teh, L.S., Walpole, M., 2014. Identifying enabling and urgent actions for the 2020 Aichi Targets. *Basic And Applied Ecology* 15(8):633-638.
- Tittensor, D.P., Walpole, M., Hill, S.L.L., Boyce, D.G., Britten, G.L., Burgess, N.D., Butchart, S.H.M., Leadley, P.W., Regan, E.C., Alkemade, R., Baumung, R., Bellard, C., Bouwman, L., Bowles-Newark, N.J., Chenery, A.M., Cheung, W.W.L., Christensen, V., Cooper, H.D., Crowther, A.R., Dixon, M.J.R., Galli, A., Gaveau, V., Gregory, R.D., Gutierrez, N.L., Hirsch, T.L., Höft, R., Januchowski-Hartley, S.R., Karmann, M., Krug, C.B., Leverington, F.J., Loh, J., Lojenga, R.K., Malsch, K., Marques, A., Morgan, D.H.W., Mumby, P.J., Newbold, T., Noonan-Mooney, K., Pagad, S.N., Parks, B.C., Pereira, H.M., Robertson, T., Rondinini, C., Santini, L., Scharlemann, J.P.W., Schindler, S., Sumaila, U.R., Teh, L.S.L., van Kolck, J., Visconti, P., and Ye, Y., 2014. A mid-term analysis of progress towards international biodiversity targets. *Science* 346, 241–244.
- Heymans JJ, M Coll, S Libralato, L Morissette and V Christensen. 2014. Global patterns in ecological traits of marine food webs. *PLoS ONE* 9(4): e95845.
- Merrie, A., DC Dunn, M Metian, AM Boustany, Y Takei, AO Elferink, Y Ota, V Christensen, PN Halpin, H Österblom. 2014. An ocean of surprises - Human use trends, unexpected dynamics and governance challenges in the global marine commons. *Global Environmental Change*, 27:19-31.
- Neira, S., C. Moloney, L.J. Shannon, V. Christensen, H. Arancibia, A. Jarre. 2014. Assessing changes in the southern Humboldt in the 20th century using food web models. [Ecological Modelling](#) 278: 52-66.
- Neira S., C. Moloney, V. Christensen, P. Cury, L. Shannon, H. Arancibia. 2014. Analysing changes in the southern Humboldt ecosystem for the period 1970-2004 by means of dynamic food web modelling. *Ecological Modelling*, 274:41-49.
- Coll, M., J. Navarro, R.J. Olson & V. Christensen. 2013. Assessing the trophic position and ecological role of squids in marine ecosystems by means of food web models. [Deep Sea Research](#) II 95: 21-36.
- Hoover, C., T Pitcher, V Christensen. 2013. Impacts of hunting, fishing, and climate change on the Hudson Bay marine ecosystem: I. 1970-2009. *Ecological Modelling*, 264:130-142.
- Hoover, C., T Pitcher, V Christensen. 2013. Effects of hunting, fishing and climate change on the Hudson Bay marine ecosystem: II. Ecosystem model future projections. *Ecological Modelling*, 264:143-156.
- Österblom, H, A Merrie, M Metian, WJ Boonstra, T Blenckner, JR Watson, RR Rykaczewski, Y Ota, JL Sarmiento, V Christensen, M Schlüter, S Birnbaum, BG Gustavsson , C Humborg, C-M Mörtz, B Müller-Karulis, MT Tomczak, M Troell, and C Folke. 2013. Modeling social-ecological scenarios in marine systems. *BioScience*, 63(9):735-744.
- Pavés, HJ, HE González, V. Christensen. 2013. Status, structure, and functioning of the pelagic communities in the North Chilean Patagonian coastal system. *Hydrobiologia*, 717(1):85-108.
- Steenbeek, J., M Coll, L Gurney, F Mélin, N Hoepffner, J Buszowski, V Christensen. 2013. Bridging the gap between ecosystem modelling tools using geographic information systems: driving a food-web model with spatial-temporal primary production data. *Ecological Modelling*, 263:139-151.
- Tecchio, S., M. Coll, V. Christensen, JB Company, E Ramírez-lloдра, F. Sardà. 2013. Food web structure and vulnerability of a deep continental slope ecosystem of the NW Mediterranean Sea. *Deep-Sea Research Part I*, 75:1-15.
- Torres, MÁ, M Coll, JJ Heymans, V Christensen, I Sobrino. 2013. Food-web structure of and fishing impacts on the Gulf of Cadiz marine ecosystem (South-western Spain). *Ecological Modelling* 265:26-44.
- Ahrens, R. N. M., Walters, C. J., and Christensen, V. 2012. Foraging arena theory. *Fish and Fisheries* 13: 41–59.
- Cisneros-Montemayor, A.M., Christensen, V., Arreguin-Sanchez, F., Sumaila, U.R., 2012. Ecosystem models for management advice: An analysis of recreational and commercial fisheries policies in Baja California Sur, Mexico. *Ecol. Model.* 228, 8–16.
- Coll, M., C. Piroddi, C. Albouy, F. Ben Rais Lasram, W.W.L. Cheung, V. Christensen, V.S. Karpouzi, F. Guilhaumon, D. Mouillot, M. Paleczny, M.L. Palomares, J. Steenbeek, P. Trujillo, R. Watson, & D. Pauly. 2012. The Mediterranean Sea under siege: spatial overlap between marine biodiversity, cumulative threats and marine reserves. *Global Ecology and Biogeography*, 21(4): 465-480.
- Fouzai, N., M. Coll, I. Palomera, A. Santojanni, E. Arneri, & V. Christensen. 2012. Fishing management scenarios to rebuild exploited resources and ecosystems of the Northern-Central Adriatic (Mediterranean Sea). [J. Mar. Syst.](#) 102-104, 39–51.

- Forrestal, F., M. Coll, D. Die, and V. Christensen. 2012. Ecosystem effects of bluefin tuna (*Thunnus thynnus thynnus*) aquaculture in the North-Western Mediterranean Sea. MEPS, 456: 215–231
- Melnychuk, M.C., Walters, C.J., Christensen, V., Bothwell, M.L., and Welch, D.W. 2012. Effects of solar ultraviolet radiation exposure on early ocean survival and fry-to-smolt growth of juvenile salmon. MEPS 457: 251–264.
- Melnychuk, M.C., V. Christensen, and C.J. Walters. 2012. Meso-scale movement and mortality patterns of juvenile coho salmon and steelhead trout migrating through a coastal fjord. [Environmental Biology of Fishes](#) 96(2-3): 325–339.
- Morissette, L., Christensen, V. and Pauly, D., 2012. Marine mammal impacts in exploited ecosystems: would large-scale culling benefit fisheries? PLoS 7(9): e43966, doi:10.1371/journal.pone.0043966.
- Nascimento, Marcela C., Gonzalo Velasco, Thomas A. Okey, Villy Christensen, and A. Cecília Z. Amaral. 2012. Trophic model of the outer continental shelf and upper slope demersal community of the Southeastern Brazilian Bight. *Scientia Marina*, 76(4): 763–779.
- Arias-González, J.E., González-Gándara, C.J., Cabrera, L., and Christensen, V. 2011. Predicted impact of the invasive lionfish *Pterois volitans* on the food web of a Caribbean coral reef. *Environmental Research* 111:917–925.
- Christensen, V., J. Steenbeek, P. Failler. 2011. A combined ecosystem modeling and value chain approach. *Ecological Modelling* 222:857–864.
- Piroddi, C., Bearzi, G., Christensen, V., 2011. Marine open cage aquaculture in the eastern Mediterranean Sea: a new trophic resource for bottlenose dolphins. *Mar.Ecol.Prog.Ser.* 440, 255–266.
- Espinosa-Romero, M.J., E.J. Grev, V. Christensen, C. Walters, and K.M.A. Chan. 2011. Representing mediating effects and species reintroductions in Ecopath with Ecosim. *Ecological Modelling* 222: 1569–1579.
- Tremblay-Boyer, L., Gascuel, D., Watson, R., Christensen, V., & Pauly, D. 2011. Modelling the effects of fishing on the biomass of the world's oceans from 1950 to 2006. *Marine Ecology Progress Series*, 442: 169–185.
- Piroddi, C., Bearzi, G., Gonzalvo, J., Christensen, V. 2011. From common to rare: the case of the Mediterranean common dolphin. *Biological Conservation*, 144(10): 2490–2498.
- Brown, C. J., Fulton, E.A., Hobday, A.J., Matear, R., Possingham, H., Bulman, C., Christensen, V., Forrest, R., Gehrke, P., Gribble, N., Griffiths, S., Lozano-Montes, H., Martin, J., Metcalf, S., Okey, T., Watson, R., and Richardson, A.J. 2010. Effects of climate-driven primary production change on marine food webs: implications for fisheries and conservation. *Global Change Biology*, 16(4):1194–1212.
- Christensen, V. 2010. Behavior of sandeels feeding on herring larvae. *Open Fish Journal* 3: 164–168
- Christensen, V. 2010. MEY = MSY. *Fish and Fisheries* 11(1):105–110.
- Ma, H., Townsend, H., Zhang, X., Sigrist, M., and Christensen, V. 2010. Using a fisheries ecosystem model with a water quality model to explore trophic and habitat impacts on fisheries stock: A case study of the blue crab population in Chesapeake Bay. *Ecological Modelling*, 221(7): 997–1004; (dx.doi.org/10.1016/j.ecolmodel.2009.01.026).
- Colette C C Wabnitz, Balazs, G., Beavers, S., Bjorndal, K.A., Bolten, A.B., Christensen, V., Hargrove, S., Pauly, D., 2010. Ecosystem structure and processes at Kaloko Honokhau, focusing on the role of herbivores, including the green sea turtle *Chelonia mydas*, in reef resilience. *Mar.Ecol.Prog.Ser.* 420, 27–44.
- Smikle, S. G., Christensen, V., & Aiken, K. A. (2010). A review of caribbean ecosystems and fishery resources using ECOPATH models. *Études Caribéennes*, (15). <http://doi.org/10.4000/etudescaribeennes.4529>
- Walters, C., V. Christensen, W. Walters, K. Rose. 2010. Representation of multi-stanza life histories in Ecospace models for spatial organization of ecosystem trophic interaction patterns. *Bull. Mar. Sci.* 86(2):439–459.
- Piroddi, C., Giovanni, B., Christensen, V., 2010. Effects of local fisheries and ocean productivity on the northeastern Ionian Sea ecosystem. *Ecol. Model.* 221, 1526–1544.
- Christensen, V., Z. Ferdaña, J. Steenbeek. 2009. Spatial optimization of protected area placement incorporating ecological, social and economical criteria. *Ecological Modelling* 220:2583–2593
- Christensen, V., Walters, C.J., Ahrens, R., Alder, J., Buszowski, J., Christensen, L.B., Cheung, W.W.L., Dunne, J., Froese, R., Karpouzi, V., Kastner, K., Kearney, K., Lai, S., Lam, V., Palomares, M.L.D., Peters-Mason, A., Piroddi, C., Sarmiento, J.L., Steenbeek, J., Sumaila, R., Watson, R., Zeller, D. and Pauly, D., 2009. Database-driven models of the world's large marine ecosystems. *Ecological Modelling*, 220:1984–1996. ([doi/10.1016/j.ecolmodel.2009.04.041](http://doi.org/10.1016/j.ecolmodel.2009.04.041))
- Duan, L.J., Li, S.Y., Liu, Y., Moreau, J. and Christensen, V. 2009. Modeling changes in the coastal ecosystem of the Pearl River Estuary from 1981 to 1998. *Ecological Modelling* 220:2802–2818.
- Heymans, J.J., U.R. Sumaila, V. Christensen. 2009. Policy options for the northern Benguela ecosystem using a multi-species, multi-fleet model. *Progress in Oceanography* 83:417–425. ([doi/10.1016/j.pocean.2009.07.013](http://doi.org/10.1016/j.pocean.2009.07.013))
- Melnychuk, M.C. and V. Christensen. 2009. Methods for estimating detection efficiency and tracking acoustic tags with mobile transect surveys. *J Fish Biol.* 75:1773–1794.

- Neira, S., C. Moloney, P. Cury, C. Mullon, and V. Christensen. 2009. Mechanisms affecting recovery in an upwelling food web: the case of the southern Humboldt. *Progress in Oceanography* 53:404-416. ([doi/10.1016/j.pocean.2009.07.007](https://doi.org/10.1016/j.pocean.2009.07.007)).
- Wilson, R.W., F.J. Millero, J.R. Taylor, P.J. Walsh, V. Christensen, S. Jennings & M. Grosell. 2009. Contribution of fish to the marine inorganic carbon cycle. *Science* 323: 359-362.
- Freire, K.M.F, Christensen, V., Pauly, D. 2008. Description of the East Brazil Large Marine Ecosystem using a trophic model. *Scientia Marina* 72(3): 477-491
- Gascuel, D., Morissette, L., Palomares, M.L.D. and Christensen, V., 2008. Trophic flow kinetics in marine ecosystems: Toward a theoretical approach to ecosystem functioning. *Ecological Modelling*, 217: 33-47.
- Gu  nette, S, Christensen, V, Pauly, D. 2008. Trophic modeling of the Peruvian upwelling ecosystem: towards reconciliation of multiple datasets. *Progress in Oceanography*, 79(2-4): 326-335 ([doi/10.1016/j.pocean.2008.10.005](https://doi.org/10.1016/j.pocean.2008.10.005)).
- Walters, C.J, R. Hilborn, V. Christensen. 2008. Surplus production dynamics in declining and recovering fish populations. *Canadian Journal of Fisheries and Aquatic Research*, 65:2536-2551 (doi:10.1139/F08-170).
- Walters, C, Martell, S.J.D, Christensen, V, and Mahmoudi, B. 2008. An Ecosim model for exploring ecosystem management options for the Gulf of Mexico: implications of including multistanza life history models for policy predictions. *Bull. Mar. Sci.* 83(1): 251-271.
- Christensen, V., Aiken, K.A., Villanueva, M.C. 2007. Threats to the ocean: on the role of ecosystem approaches to fisheries. *Social Science Information*: 46(1): 67-86.
- Freire, K.M.F., Christensen, V., Pauly, D. 2007. Assessing fishing policies for northeastern Brazil. *Pan-American Journal of Aquatic Sciences* 2(2): 113-130.
- Heymans, J.J., Gu  nette, S., and Christensen, V. 2007. Evaluating network analysis indicators of ecosystem status in the Gulf of Alaska. *Ecosystems*: 10(3):488-502
- Melnchuk, M.C., Welch, D.W., Walters, C.J., and Christensen, V. 2007. Riverine and early ocean migration and mortality patterns of juvenile steelhead trout (*Oncorhynchus mykiss*) from the Cheakamus River, British Columbia. *Hydrobiologia* 582:55-65.
- Walters, C and V. Christensen. 2007. Adding realism to foraging arena predictions of trophic flow rates in Ecosim ecosystem models: shared foraging arenas and bout feeding. *Ecological Modelling* 209:342-350.
- Gu  nette, S., Heymans, J. J., Christensen, V., and Trites, A. W. 2006. Ecosystem models show combined effects of fishing, predation, competition, and ocean productivity on Steller sea lions (*Eumetopias jubatus*) in Alaska. *Can. J. Fish. Aquat. Sci.*, 63:2495-2517
- Libralato, S., V. Christensen and D. Pauly. 2006. A method for identifying keystone species in food web models. *Ecological Modelling*, 195:153-171.
- Daan, N., V. Christensen and P. Cury (Eds.) 2005. Quantitative Ecosystem Indicators for Fisheries Management. *ICES Journal of Marine Science* 62(3):308-615. (Special issue)
- Sherman, K., Sissenwine, M., Christensen, V., Duda, A., Hempel, G., Ibe, C., Levin, S., et al. 2005. A global movement toward an ecosystem approach to management of marine resources. *Marine Ecology Progress Series* 300, 275-279.
- Walters, C. J., Christensen, V., Martell, S. J., and Kitchell, J. F. 2005. Possible ecosystem impacts of applying MSY policies from single-species assessment. *ICES Journal of Marine Science*, 62(3):558-568.
- Christensen, V., and J. Maclean, (Eds.) 2004. Placing fisheries in their ecosystem context. *Ecological Modelling* 172(2-4):102-438, (Special issue)
- Christensen, V. and C. J. Walters. 2004. Ecopath with Ecosim: methods, capabilities and limitations. *Ecol. Model.* 172:109-139
- Christensen, V. and C. J. Walters. 2004. Trade-offs in ecosystem-scale optimization of fisheries management policies. *Bull. Mar. Sci.*, 74(3):549-562
- Kavanagh, P., N. Newlands, V. Christensen and D. Pauly. 2004. Automated parameter optimization for Ecopath ecosystem models. *Ecol. Model.* 172:141-149
- Shannon, L. J., Christensen, V., and Walters, C. 2004. Modelling stock dynamics in the southern Benguela ecosystem over the last twenty five years. *African Journal of Marine Science*, 26: 179-196
- Christensen, V., Gu  nette, S., Heymans, J. J., Walters, C. J., Watson, R., Zeller, D. and Pauly, D. 2003. Hundred-year decline of North Atlantic predatory fishes. *Fish and Fisheries* 4: 1-24.
- Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2003. The future for fisheries. *Science*, 302:1359-1361.

- Pauly, D., V. Christensen, S. Gu  nette, T.J. Pitcher, U.R. Sumaila, C.J. Walters, R. Watson and D. Zeller. 2002. Towards sustainability in world fisheries. [Nature](#) 418, 689 - 695.
- Beattie, A., Sumaila, U. R., Christensen, V., and Pauly, D. 2002. A model for the bioeconomic evaluation of marine protected area size and placement in the North Sea. [Natural Resource Modeling](#), 15(4):413-437.
- Christensen, V. 2000. Indicators for marine ecosystems impacted by fisheries. [Mar. Freshwater Res.](#) 51:447-450
- Pauly, D., V. Christensen, and C.J. Walters. 2000. Ecopath, Ecosim and Ecospace as tools for evaluating ecosystem impact of fisheries. [ICES J. of Marine Science](#) 57: 697-706
- Walters, C.J., J.F. Kitchell, V. Christensen and D. Pauly. 2000. Representing density dependent consequences of life history strategies in aquatic ecosystems: Ecosim II. [Ecosystems](#) 3: 70-83.
- Walters, C., D. Pauly and V. Christensen. 1999. Ecospace: prediction of mesoscale spatial patterns in trophic relationships of exploited ecosystems, with emphasis on the impacts of marine protected areas. [Ecosystems](#) 2: 539-554.
- Christensen, V. 1998. Fishery induced changes in a marine ecosystem: insights from models of the Gulf of Thailand. [Journal of Fish Biology](#) 53 (Supplement A): 128-142.
- Christensen, V. and D. Pauly. 1998. Changes in models of aquatic ecosystems approaching carrying capacity. [Ecological Applications](#), 8(1): S104-S109.
- Pauly, D., A. Trites, E. Capuli, and V. Christensen. 1998. Diet compositions and trophic levels of marine mammals. [ICES Journal of Marine Science](#), 53: 467-481.
- Pauly, D., R. Froese and V. Christensen. 1998. How pervasive is "fishing down marine food webs": response. [Science](#) 282 (5393): 1383a, 1998 November 20.
- Pauly, D., V. Christensen, A. Dalsgaard, R. Froese, and J. Torres. 1998. Fishing down marine food webs. [Science](#) 279 (5352): 860-863.
- Trites, A. D. Pauly and V. Christensen. 1997. Competition between fisheries and marine mammals for prey and primary production in the Pacific Ocean. [J. North West Atl. Fish. Sci.](#) 22: 173-187.
- Walters, C., V. Christensen and D. Pauly. 1997. Structuring dynamic models of exploited ecosystems from trophic mass-balance assessments. [Reviews in Fish Biology and Fisheries](#) 7:139-172.
- Christensen, V. 1996. Managing fisheries involving top predator and prey species components. [Reviews in Fish Biology and Fisheries](#), 6:417-442.
- Christensen, V. 1996. Virtual Population Reality. [Reviews in Fish Biology and Fisheries](#), 6: 243-247.
- Christensen, V. 1995. A model of trophic interactions in the North Sea in 1981, the Year of the Stomach. [Dana](#) 11(1):1-19.
- Christensen, V. 1995. Ecosystem maturity - towards quantification. [Ecol. Modelling](#), 77:3-32.
- Dalsgaard, J.P.T., C. Lightfoot, and V. Christensen. 1995. Towards quantification of ecological sustainability in farming systems analysis. [Ecol. Engineering](#), 4: 181-189.
- Pauly, D., and V. Christensen. 1995. Primary production required to sustain global fisheries. [Nature](#): 374:255-257.
- Christensen, V. 1994. Emergy based ascendancy. [Ecol. Modelling](#), 72: 129-144.
- Christensen, V. 1994. On the behavior of some proposed goal functions for ecosystem development. [Ecol. Modelling](#), 75/76: 37-49
- Christensen, V. and D. Pauly. 1992. ECOPATH II - A software for balancing steady-state ecosystem models and calculating network characteristics. [Ecol. Modelling](#) 61:169-185.
- Munk, P. and V. Christensen. 1990. Larval growth and drift pattern and the separation of herring spawning groups in the North Sea. [J. Fish Biol.](#) 37:135-148.
- Munk, P., K  rboe, T., and Christensen, V. 1989. Vertical migrations of herring, *Clupea harengus*, larvae in relation to light and prey distribution. [Environmental Biology of Fishes](#), 26(2):87-96.
- K  rboe, T., Munk, P., Richardson, K., Christensen, V., and Paulsen, H. 1988. Plankton dynamics and larval herring growth, drift and survival in a frontal area. [Marine Ecology Progress Series](#), 44(3):205-219.
- Munk, P., Christensen, V., and Paulsen, H. 1986. Studies of a larval herring (*Clupea harengus* L.) patch in the Buchan area. 2. Growth, mortality and drift of larvae. [Dana](#), 6:11-24

(b) *Conference Proceedings*

- Christensen, V., Amorim, P. A., Diallo, I., Diouf, T., Gu  nette, S., Heymans, J. J., Mendy, A. N., Ould Taleb Ould Sidi, M. M., Palomares, M. L. D., Samb, B., Stobberup, K. A., Vakily, J. M., Vasconcellos, M., Watson, R., and Pauly, D., 2004. Trends in fish biomass off Northwest Africa, 1960-2000. In: Chavance, P., M. Ba, D. Gascuel, M. Vakily, & D. Pauly (Eds.) *Marine Fisheries, Ecosystems, and Societies in West Africa: Half a Century of Change*. pp. 377-386, IRD, Paris

- Pitcher, T. J., Heymans, S. J. J., Ainsworth, C., Buchary, E. A., Sumaila, U. R., and Christensen, V., 2004. Opening the lost valley: implementing a 'Back to the Future' restoration policy for marine ecosystems and their fisheries. In: Sustainable Management of North American Fisheries. pp. 165-193, Ed. by E. E. Knudsen, D. D. MacDonald, and J. K. Muirhead, American Fisheries Society Symposium, Vol. 43.
- Jarre-Teichmann, A. and V. Christensen. 1998. Comparative modelling of trophic flows in four large upwelling ecosystems: global vs. local effects. P 423-443 in. Durand, M.-H., P. Cury, R. Mendelssohn, C. Roy, A. Bakun, and D. Pauly (eds.) Global vs. Local Changes in Upwelling Ecosystems. Proc. of the first CEOS symposium, 5-9 September 1994, Monterey, CA. Orstom, Paris.
- Pauly, D., F.C. Gayanilo, Jr., R. Froese and V. Christensen. 1995. Software tools for management of tropical aquatic resources. p. 90-102 in G.T. Sakagawa (ed.) Assessment methodologies and management. Proceedings of the World Fisheries Congress, Theme 5. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- Christensen, V. and D. Pauly, eds. 1993. [Trophic models of aquatic ecosystems](#). ICLARM Conf. Proc. 26, 390 p. International Center for Living Aquatic Resources Management (ICLARM), Manila; International Council for the Exploration of the Seas (ICES), Copenhagen; and Danish International Development Assistance (DANIDA), Copenhagen.
- Christensen, V., and D. Pauly. 1993. [Flow characteristics of aquatic ecosystems](#), p. 338-352. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Christensen, V. and D. Pauly. 1993. [On steady-state modelling of ecosystems](#), p. 14-19. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Moreau, J., V. Christensen and D. Pauly. 1993. [Analysis of African lakes](#) using a multispecies trophic model: the example of Lake George, Uganda, p. 124-129. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Ruddle, K. and V. Christensen. 1993. An energy flow model of the [mulberry dike-carp pond farming system](#) of the Zhujiang Delta, Guangdong Province, China, p. 48-55. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Pauly, D. and V. Christensen. 1993. [Graphical representation](#) of steady-state trophic ecosystem models, p. 20-28. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.

(c) *Other*

- Kok, M., Alkemade, R., Bakkenes, M., Boelee, E., Christensen, V., van Eerdt, M., van der Esch, S., Janse, J., Karlsson-Vinkhuyzen, S., Kram, T., Tanya Lazarova, Linderhof, V., Lucas, P., Mandryk, M., Meijer, J., van Oorschot, M., Teh, L., van Hoof, L., Westhoek, H., Zagt, R., 2014. How sectors can contribute to sustainable use and conservation of biodiversity. [CBD Technical Series No 79](#).
- Christensen, V., and A.W. Trites. 2011. Predation on Fraser River sockeye salmon. Cohen Commission Tech. Rept. 8: 120 p. www.cohencommission.ca
- PBL. 2010. Rethinking Global Biodiversity Strategies. Exploring structural changes in production and consumption to reduce biodiversity loss. A contribution to the project on The Economics of Ecosystems and Biodiversity (TEEB). Netherlands Environmental Assessment Agency (PBL). 168 p. (Main author)
- Watson, R., J. Alder, V. Christensen and D. Pauly. 2005. Mapping global fisheries patterns and their consequences. Part I,2 In: D.J. Wright and A. Scholz (eds). Place Matters – Geospatial Tools for Marine Science, Conservation and Management in the Pacific Northwest. Oregon State University Press, Corvallis. 272 pp.
- Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2003. The future for fisheries p. 29-36 In: D. Kennedy et al. (eds.) Science Magazine's State of the Planet, 2006-2007. AAAS, Washington, DC.
- Pauly, D., and V. Christensen. 2002. [Chapter 10: Ecosystem Models](#). p. 211-227 in P. Hart and J. Reynolds, editors. Handbook of Fish and Fisheries, vol. 2. Blackwell Science.
- Christensen, V. and D. Pauly. 2001. Coral reef and other tropical fisheries. p. 534-538 in J.H. Steele, S.A. Thorpe and K.K. Turekian (Editors). Encyclopedia of Ocean Sciences, Academic Press.

2. **NON-REFEREED PUBLICATIONS**

(a) *Journals*

- Villasante, S., Arreguín-Sánchez, F., Heymans, J.J., Libralato, S., Piroddi, C., Christensen, V., Coll, M. 2016. Modelling marine ecosystems using the Ecopath with Ecosim food web approach: new insights to address complex dynamics after 30 years of developments. Ecological Modelling, in press.

- Christensen, V. 2014. Are we there yet? Advancing an Ecosystem Approach in the Gulf of Maine. 2014. Transactions of the American Fisheries Society, 143(3):832-832.
- Cury, P, and V. Christensen. 2005. Quantitative ecosystem indicators for fisheries management: an introduction. ICES Journal of Marine Science, 62:307-310.
- Christensen, V. 2004. When South Africans swim together. Foreword to special issue "An ecosystem approach to fisheries management in the southern Benguela". African Journal of Marine Science, 26:i-ii
- Christensen, V. and D. Pauly. 2004. Placing fisheries in their ecosystem context, an introduction. Ecol. Model. 172:103-107

(b) Conference Proceedings

- Palomera I., Navarro J., Coll M., Bernal M., Olivar M.P., Albo-Puigserver M., Barría C., Sáez-Liante R., Steenbeek J., Christensen V., Barroeta Z., Cardona H., Corrales, X., López N., Martínez F., Muñoz A., Sánchez S., Valls E., Rosas-Luis R. 2015. The ECOTRANS Project: unraveling the trophic pathways and energy transfer from small pelagic fish to top predators in the Mediterranean Sea. The 3rd CLIoTOP Symposium, 14-18 September 2015, San Sebastian Spain, (poster).
- Christensen, V. 2014. The baby has turned 30. Foreword. p. 1. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Gasalla, MA, Rodrigues, AR, Pincinato, RBM. Christensen, V. 2014. Ecosystem model of the Santos Basin Marine Ecosystem, p. 42-43. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Valls A., Coll M., Christensen V. 2014. Keystone species: a restored and operational concept to inform marine biodiversity conservation, p. 54-55. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Zetina-Rejón M.J., I.M. Abascal-Monroy, J.C. Hernández-Padilla, P. del Monte-Luna, G. López-Ibarra, F. Arreguín-Sánchez, and V. Christensen. 2014. The relevance of cohesive structures in the self-organization of marine ecosystems, p. 92-93. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Piroddi C, Coll M, Steenbeek J, Lique C, Macias Moy D, Christensen V. 2014 Modelling the Mediterranean marine ecosystem as a whole: addressing the challenge of complexity, p. 118-120. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Christensen V, Coll M, Steenbeek J, Buszowski J, Chagaris D, Walters C. 2014. Representing variable habitat quality in a spatial food web model. p. 141-142. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Christensen, V. 2014. Modeling marine ecosystems: lessons learned and the road ahead. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Piroddi C, Steenbeek J, Lique C, Coll M, Macias Moy D, Giannoulaki M, Christensen V. 2014. Advances on modelling spatial-temporal ecosystem dynamics in the Mediterranean Sea. p. 143-144. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Inoue H, Christensen V, Yamashita Y. 2014. Temporal and spatial variability in overfished coastal ecosystems: a case study from Tango Bay, Japan. p. 150-151. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Coll M, Steenbeek J, Palomera I, Christensen V. 2014. Cumulative impacts of human activities in the southern Catalan sea (NW Mediterranean) ecosystem associated with the Ebro Delta River. p. 170-171. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3).
- Christensen V, Coll M, Buszowski J, Cheung WWL, Frölicher T, Steenbeek J, Stock CA, Watson RA, Walters C. 2014. The global ocean is an ecosystem: Simulating marine life and fisheries. p. 175-177. In: Steenbeek, J., Piroddi, C., Coll,

- M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- Pavés, H.J. , González H.E., Christensen V. 2014. Carbon fluxes of two pelagic communities in the North Chilean Patagonian coastal system. p. 178-179. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- Steenbeek, J., Coll M, Gurney L, Mélin M, Hoepffner N, Buszowski J, Christensen V. 2014. Bridging the gap between ecosystem modelling tools and geographic information systems: driving food web model with external spatial-temporal data, p. 182-183. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- Pavés, H.J. , González H.E., Christensen V. 2014. Trophic impact and keystone species in two pelagic communities in the North Chilean Patagonian coastal system. p. 198-200. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- Colléter, M., Valls A, Guitton J, Morissette L, Arreguín-Sánchez F, Christensen V, Gascuel D, Pauly D. 2014. EcoBase: a repository solution to gather and communicate information from EwE models, p. 206-207. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- Colléter, M., Valls A, Guitton J, Christensen V, Gascuel D, Pauly D. 2014. Overview of worldwide applications of the Ecopath with Ecosim approach using the EcoBase models repository, p. 208-210. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*. Fisheries Centre Research Reports 22(3).
- The Technical Committee of the Ecopath Research and Development Consortium. 2014. Programming with EwE: customizing EwE for your science p. 211-212. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*, pp. 211. Fisheries Centre Research Reports 22(3).
- The Executive Board of the Ecopath Research and Development Consortium. 2014. The Ecopath Research and Development Consortium: the future of EwE. p. 213-214. In: Steenbeek, J., Piroddi, C., Coll, M., Heymans, J. J., Villasante, S., Christensen, V. (eds.), *Ecopath 30 Years Conference Proceedings: Extended Abstracts*, pp. 213. Fisheries Centre Research Reports 22(3).
- Arias-González, J.E., Abarca, L.G., Alcocer-Durán, J., Cabrera, J.L., Caderón-Aguilera, L.E., Chiappa-Carrara, X., Christensen, V., Cupul-Magaña, A., Franco-López, J., Pérez-España, H., Morales-Zárate, V., Rodríguez-Zaragoza, F.A., Sansores, C. and Schmitter-Soto, J.J., 2009. Relationship between biodiversity and ecosystem functioning in Mexican aquatic systems. p. 76-78. In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference Proceedings: Extended Abstracts* Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p,
- Brown, C.J., Fulton, E.A., Hobday, A.J., Matear, R., Possingham, H., Bulman, C., Christensen, V., Forrest, R., Gehrke, N., Gribble, N., Griffiths, S., Lozano-Montes, H., Martin, J., Metcalf, S., Okey, T., Watson, R. and Richardson, A.J., 2009. Ecological interactions within marine ecosystems determine winners and losers under climate change. p. 90-93. In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference Proceedings: Extended Abstracts* Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Christensen, V., 2009. The future of Ecopath. p. 159-160. In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference Proceedings: Extended Abstracts* Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Christensen, V., Lai, S. and Townsend, H., 2009. Chesapeake Bay fisheries ecosystem model: computer-generated graphics for creating a gaming experience with ecosystem data and management. P. 136 In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference Proceedings: Extended Abstracts* Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Cisneros-Montemayor, A.M., Christensen, V., Sumaila, U.R. and Arreguín-Sánchez, F., 2009. Fisheries in Baja California Sur: A trophic-based analysis of management scenarios. p. 29-30. In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference Proceedings: Extended Abstracts* Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Coll, M., Piroddi, C., Palomera, I., Arneri, E. and Christensen, V., 2009. Main drivers of marine resources and food-web changes in the Mediterranean Sea. P. 148-150. In: M. Palomares et al. (Editor), *Ecopath 25 Years Conference*

- Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Espinosa, M., Gregr, E., Chan, K., 2009. Supporting ecosystem based management on the west coast of Vancouver Island. In: Palomares, M.L.D., Morissette, L., Cisneros-Montemayor, A., Varkey, D., Coll, M., Piroddi, C. (eds.), Ecopath 25 Years Conference Proceedings: Extended Abstracts, pp. 113-114. Fisheries Centre Research Reports 17(3). Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p
- Link, J.S., Pranovi, F., Coll, M., Libralato, S., Christensen, V. and Legault, C., 2009. Exploring novel metrics of ecosystem overfishing using energy budget model outputs. P. 153. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p
- Neira, S., Moloney, C., Cury, P.M., Mullon, C. and Christensen, V., 2009. Mechanisms affecting recovery in an upwelling food web: the case of the southern Humboldt. p 103-104. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Piroddi, C., Bearzi, G. and Christensen, V., 2009. Effects of local fisheries and ocean productivity on the Northeastern Ionian Sea ecosystem. P 39-40 In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Piroddi, C., Varkey, D., Morissette, L. and Christensen, V., 2009. Production and consumption in Ecopath models: A global overview. P. 145-147. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Poonsawat, R., Supongpan, M. and Christensen, V., 2009. Introducing ecosystem-based management in the Gulf of Thailand. P. 46. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Steenbeek, J. and Christensen, V., 2009. Using true GIS data with Ecospace. P. 143-144. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Villasante, S., García-Negro, M.C., Rodríguez Rodríguez, G., Christensen, V. and Sumaila, U.R., 2009. A preliminary trophic model of coastal fisheries resources of the Patagonian marine ecosystem. P. 151-152. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Wabnitz, C., Bjørndal, K.A., Bolten, A.B., Christensen, V. and Pauly, D., 2009. Restoration of *Chelonia mydas* population in the Caribbean: Ecosystem impacts resulting from reduction of seagrass habitat complexity. P. 122-123 In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Walters, C.J., Christensen, V. and Ahrens, R., 2009. Foraging arena theory. P. 20. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Villanueva, M.C., V. Christensen, and P. Failler. 2008. Linking ecology, sociology and economics to determine the cost of aquatic environments. Proceedings of the 5th World Fisheries Congress, Yokohama, Japan.
- Christensen, V., M.C. Villanueva, and K.A. Aiken. 2006. Ecosystems at risk: the contribution of ecosystem approaches to fisheries to identify problems and evaluate potential solutions. IIFET 2006: 475, 12 p.
- Guénette, Sylvie, Sheila J.J. Heymans, Villy Christensen, Andrew W. Trites. 2007. Ecosystem models of the Aleutian Islands and Southeast Alaska shows that Steller sea lions are impacted by killer whale predation when sea lion numbers are low. In: J.F. Piatt and S.M. Gende (eds.) Proceedings of the Fourth Glacier Bay Science Symposium, Oct 26-28, 2004 U.S. Geological Survey Scientific Report 2007-5047, p. 150-154.
- Nauen, C.E., V. Christensen, P. Failler, S. Opitz, S. Thatje 2006. Recovering fisheries from crisis or collapse: how to shorten impact time of international research cooperation. 13 pages. In: Proceedings of the Thirteenth Biennial Conference of the International Institute of Fisheries Economics & Trade, July 11-14, 2006, Portsmouth, UK: Rebuilding Fisheries in an Uncertain Environment.
- Christensen V. 2003. Using Ecopath with Ecosim for ecosystem based management of fisheries. In: H. Jákupsstovu (ed.) Workshop on Ecosystem Modelling of Faroese Waters, Tórshavn, September 2002, FRS / Faroese Fisheries Laboratory 2003: 73-75

- Christensen, Villy and Carl Walters. Ecopath with Ecosim: an overview. In: Proceedings of the INCO-DC Conference 'Placing Fisheries in their Ecosystem Context'. Galápagos Islands, Ecuador, 4-8 December 2000. Ed. V. Christensen, G. Reck and J.L. Maclean. Brussels: ACP-EU Fisheries Research Reports, (12): vii+79 p., 2002. 36 - 38.
- Christensen, Villy, Jan E. Beyer, Henrik Gislason and Morten Vinter. "A comparative analysis of the North Sea based on Ecopath with Ecosim and Multispecies Virtual Population Analysis". Proceedings of the INCO-DC Conference Placing Fisheries in their Ecosystem Context. Galápagos Islands, Ecuador, 4-8 December 2000. Ed. V. Christensen, G. Reck and J.L. Maclean. Brussels: ACP-EU Fisheries Research Reports, (12): vii+79 p., 2002. 39 - 39.
- Christensen, V., Garces, L., Silvestre, G. T., and Pauly, D. 2003. Fisheries impacts on the South China Sea large marine ecosystem. In: Silvestre, G., L. Garces, C. Luna, M. Ahmed, R. A. V. Santos, L. Lachica-Aliño, V. Christensen and D. Pauly, eds. 2003. Assessment and Management of Tropical Coastal Fisheries in Developing Asian Countries. ICLARM Conf. Proc. 67. 1120p.
- Christensen, V. 1999. Ecosystem modelling and the challenge of ecosystem-based management. p. 25-29 in Proceedings of the Expo '98 Conference on Ocean Food Webs and Economic Productivity, Lisbon, Portugal, 1-3 July 1998, Brussels, ACP-EU Fisheries Research Reports 5
- Christensen, V. 1998. Marine life at risk: biodiversity issues related to fisheries. In: Proceedings of the Conference on Biodiversity and Development, 21 October 1998, Eigtveds Pakhus, Copenhagen, Denmark. Macintosh, D. J. and Nielsen, T. (Eds.). Centre for Tropical Ecosystems Research, Aarhus University, Aarhus Denmark.
- Christensen, V. 1998. The new Ecopath with Ecosim. p. 9-10 in D. Pauly (Ed.) Use of Ecopath with Ecosim to Evaluate Strategies for Sustainable Exploitation of Multi-Species Resources. Fisheries Centre Research Reports, 6(2), 49p.
- Christensen, V. 1997. Productivity regulation and ecosystem variability, ecosystem exploitation: modelling results. Report from the international workshop "Ocean Harvest 97", Southampton Oceanographic Centre, U.K., June 1997.
- Christensen, V. and R. Mahon. 1997. Researchable issues relevant for management of large marine ecosystems, with special reference to the Caribbean. p. 79-100 in Anon, 1997. ACP-EU Fisheries Research Initiative. Proceedings of the Third Dialogue Meeting, Caribbean and Pacific and the European Union. Belize City, Belize, 5-10 December 1996. Brussels, ACP-EU Fish.Res. Rep., (3).

(c) *Other*

- Brummet, R., 2013. Growing aquaculture in sustainable ecosystems. World Bank, Agriculture and Environmental Services Department, Issue 5, 4 p. (Contributor).
- Christensen, V. 2013. Ecological networks in fisheries: predicting the future? Fisheries, 38(2): 76-82.
- Christensen, V, A Boustany, J Buszowski, WWL Cheung, DC Dunn, D Felinto, C Folke, PN Halpin, K Kearney, C McOwen, A Merrie, M Metian, H Österblom, Y Ota, RR Rykaczewski, JL Sarmiento, J Steenbeek, CA Stock, UR Sumaila, W Swartz, CJ Walters, R Watson, J Watson, A Valls, L Wood, and D Pauly. Life in the future ocean: the Nereus model. Manuscript presented at AAAS 2012, session "Predicting the Future Ocean: Nereus Program" in Vancouver BC, 18 February 2012.
- Christensen, V. 2012. The Oracle Meets Nereus: Predicting the Future Ocean. UBC Reports, 58(1). Jan. 3, 2012. [Online Edition](#).
- Kleisner, K., Coll, M., Christensen, V., Boonzaier, L., Strub, A.M., Zeller, D., Pauly, D., 2012. Towards increasing fisheries' contribution to food security. Part 1: The potentials of 25 fishing countries. The Sea Around Us Project, Fisheries Centre, Univ. of British Columbia, 150 p.
- Link, J.S., F. Pranovi, S. Libralato, M. Coll, V. Christensen, C. Legault. 2012. Delineating marine ecosystem perturbation and recovery: Theory and application of a trophic approach. ICES CM 2012/A.
- Christensen, V., Piroddi, C., Coll, M., Steenbeek, J., Buszowski, J., & Pauly, D. 2011. Fish biomass in the world ocean: A century of decline (pp. 1–20). Fisheries Centre Working Paper Series, Working paper #2011-06.
- Christensen, V. 2011. Modeling approaches in support of ecosystem-based fishery management at the Northeast Fisheries Science Center, Woods Hole MA; External independent peer review. Center for Independent Experts, Miami, FL. April 2011. 46 pp.
- ICES. 2011. Report of the Training Course: Ecosystem Modelling for Fisheries Management (TCMF2011), 7-11 March 2011, ICES Headquarters, Copenhagen. 18 pp
- Lai, S., Felinto, D., Steenbeek, J., Buszowski, J., Watson, R., Zeller, D., Pauly, D., Christensen, V. 2011. Deriving indicators for Regional Seas. In: Christensen, V., Lai, S., Palomares, M.L.D., Zeller, D., Pauly, D. (eds.), The State of Biodiversity and Fisheries in Regional Seas, pp. 3-9. Fisheries Centre Research Reports 19(3). Fisheries Centre, University of British Columbia [ISSN 1198-6727].

- ICES. 2010. Report of the Training Course: Ecosystem Modelling for Fisheries Management (TCMF2010), 8-12 March 2010, ICES Headquarters, Copenhagen. 20 pp
- Wieckowski, K.M., D.R. Marmorek, V. Christensen, D. Preikshot. 2010. Beaufort ERI: Integrated ecosystem modeling workshop proceedings (December 15 to 17, 2009). Prepared for Fisheries and Oceans Canada. Workshop proceedings prepared by ESSA Technologies Ltd., Vancouver, BC for the Arctic Aquatic Research Division, Fisheries and Oceans Canada, Winnipeg, Manitoba.
- Christensen, V., Lai, S., Pan, M., Felinto, D. and Townsend, H., 2009. Life in Chesapeake Bay: an animated documentary The Sea Around Us Newsletter, UBC Fisheries Centre, 53:1-2.
- Walters, C., and Christensen, V. 2009. Foraging arena theory. UBC Fisheries Centre Working Paper #2009-03. 18 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Walters, Carl, Villy Christensen, William Walters, Kenneth Rose. 2009. Representation of multi-stanza life histories in Ecospace models for spatial organization of ecosystem trophic interaction patterns. UBC Fisheries Centre Working Paper #2009-05. 23 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Christensen, V. 2008. Adding behavior to ecosystem modeling. UBC Fisheries Centre Working Paper #2008-02. 3 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Christensen, V. 2008. Workshop observations. In Report of the National Ecosystem Modeling Workshop (NEMoW). Edited by H.M. Townsend, J.S. Link, K.E. Osgood, T. Gedamke, G.M. Watters, J.J. Polovina, P.S. Levin, N. Cyr and K.Y. Aydin. NOAA Technical Memorandum NMFS-F/SPO-87. p. 85.
- Christensen, V., Lai, S. 2008. Ecosystem models: Ecopath with Ecosim 6. P 52-58 in DFO National Workshop on Modelling Tools for Ecosystem Approaches to Management; 22-25 October 2007. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2008/007.
- FAO, 2008. Fisheries management. 2. The ecosystem approach to fisheries. 2.1 Best practices in ecosystem modelling for informing an ecosystem approach to fisheries., FAO Fisheries Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2, Add. 1. Rome, FAO. 2008. 78p.
- Hongguang Ma, Howard Townsend, Villy Christensen. 2008. Fisheries Ecosystem Model of the Chesapeake Bay and its coupling with a hydrographic model. Poster presented at AFS Annual Meeting, Ottawa, Aug 17-21.
- Sherman, K., I. Belkin, V. Christensen, D. Pauly, S. Seitzinger, P. Hoagland, D. Jin, M.-C. Aquarone, and S. Adams. 2008. GEF International Waters Indicators for Developing a Global Benefits Index of Changing States of Large Marine Ecosystems. Working paper for GEF International Waters Indicators Review Workshop, 3-4 Dec. 2008, UNESCO, Paris, 74 p.
- Booth, S., Townsend, H., Christensen, V. 2008. Mercury in the Chesapeake. The Sea Around Us Project Newsletter 45: 5-6.
- Christensen, Villy, Joe Buszowski, Robyn Forrest, Fang Gao, Carie Hoover, Joe Hui, Sherman Lai, Jeroen Steenbeek, William Walters and Carl Walters. 2007. All new Ecopath with Ecosim 6. PICES 16th Annual Meeting, Victoria BC, October 26-November 5, 2007, S3-4136 (poster, also presented at ICEM'06).
- Christensen, V., Lai, S. 2007. Ecopath with Ecosim 6: the sequel. The Sea Around Us Project Newsletter 43: 1-4 (September-October)
- Gascuel D., Christensen V., Pauly D. 2007. EcoTroph : modelling marine ecosystem functioning and impact of fishing. Abstract, 6th European Conference on Ecological Modelling - ECEM'07. Trieste, Italy, November 27-30, 2007
- Heymans, Sheila JJ, Sylvie Gu  nette, Villy Christensen. 2007. Network analysis indicators of ecosystem status in the Gulf of Alaska. ECEM'06, Trieste, Italy, November 27-30 (poster).
- Heymans, S (J. J.), Gu  nette, S., Christensen, V., and Trites, A. W. 2007. Steller sea lions in the Gulf of Alaska: Modelling effects of environmental variation and fishing. The Scottish Association for Marine Science Newsletter 33: 14.
- Li, L. R.H. Devlin, V. Christensen, and M. McAllister. 2007. Exploratory ecological risk assessment of transgenic coho using EwE. Report to Fisheries and Oceans Canada (DFO)
- Pauly, D., R. Watson and V. Christensen. 2007. Les r  serves marines: un rem  de efficace? Les Dossiers de la Recherche. No. 28 (August): 34-37.
- Piroddi, C., Christensen, V. 2007. An ecosystem-based approach to study two dolphin populations around the island of Kalamos, Ionian Sea, Greece. ECEM'06, Trieste, Italy, November 27-30 (poster).
- Christensen, V., Vincent, A., 2006. Thinking big calls for thanking big. FishBytes, UBC, 12(3):3
- Christensen, V. 2006. Turning the tide is easy enough. Sea Around Us Newsletter 33: 1-5 (January/February). UBC, Vancouver.
- Christensen, V., Booth, S. 2006. Ecosystem modelling of dioxin distribution patterns in the marine environment, p. 83-102. In: Alder, J. Pauly, D. (eds.) On the multiple uses of forage fish: from ecosystems to markets. Fisheries Centre Research Reports V(n). Fisheries Centre, University of British Columbia [ISSN 1198-6727].

- Christensen, V. and C.J. Walters. 2005. Using ecosystem modeling for fisheries management: where are we? [ICES CM/M:19](#).
- Guénette, S, Christensen, V. 2005. Fisheries, the environment, or what? An introduction. UBC Fisheries Centre Research Reports, Vol 13 (1): 7.
- Heymans, J.J., Guénette, S., Christensen, V. and Trites, A. 2005. Changes in the Gulf of Alaska ecosystems due to ocean climate change and fishing. ICES CM 2005/M:22.
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2005. Modelling and mapping resource overlap between marine mammals and fisheries on a global scale. In Institutskolloquium, February 2005, Forschungs- und Technologiezentrum Büsum, Büsum, Germany.
- Pauly, D., S. Booth, V. Christensen, W.L., Cheung, C. Close, A. Kitchingman, M.L.D. Palomares, R. Watson, and D. Zeller. 2005. On the exploitation of elasmobranchs, with emphasis on Cowtail stingray *Pastinachus sephen* (family Dasyatidae) Fisheries Centre Working Paper 2005-07, The University of British Columbia, Vancouver, B.C., Canada
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2004. Modelling and mapping resource overlap between marine mammals and fisheries on a global scale (SC/56/E31). Environmental Concerns Working Group, IWC Scientific Committee Meeting, Sorrento, Italy, 33 p.
- Christensen, V. and P. Cury. 2004. Paris by day: Symposium on "Quantitative ecosystem indicators for fisheries management". PICES Press 12(2):4-6.
- Guénette, S., J.J. Heymans, V. Christensen and A.W. Trites. 2004. Reconciling the decline of Steller sea lions with fisheries and ecosystem change in Alaska. Poster presented at the World Fisheries Congress, Vancouver, Canada, 2-6 May 2004.
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2004. Modelling and mapping trophic overlap between marine mammals and fisheries on a global scale: implications for fisheries management. In 4th World Fisheries Congress, May 2-6, 2004, Vancouver, British Columbia, Canada.
- Libralato, S., V. Christensen and D. Pauly. 2004. Identification of keystone species from ecosystem models. Poster presented at the IOC/SCOR International Symposium on ecosystem indicators, Paris, 30 March – 3 April. (www.ecosystemindicators.org/Posters/Libralato.pdf).
- Preikshot, D., V. Christensen, R. Beamish and D. Pauly. 2004. An examination of ecosystem dynamics across different spatial scales reflected by climate and fisheries effects in North Pacific Oceanic ecosystems. Poster presented at the IOC/SCOR International Symposium on ecosystem indicators, Paris, 30 March – 3 April. (<http://www.ecosystemindicators.org/Posters/Preikshot.pdf>).
- Watson, R., J. Alder, S. Booth, V. Christensen, K. Kaschner, A. Kitchingman, S. Lai, M.L.D. Palomares, F. Valdez, D. Zeller and D. Pauly. 2004. Welcome to www.searoundus.org: launching our 'products' on the web. Sea Around Us Project Newsletter March/April (22): 1-8.
- Watson, R., J. Alder, V. Christensen and D. Pauly, D. 2004. Probing the depth: reverse engineering of fisheries statistics. Presented at the Symposium on 'Place matters: geospatial tools for marine science, conservation and management'. Description p. S20; abstract on attached CD-ROM. In: AAAS Annual Meeting, 12-16 February 2004, Seattle.
- Christensen, V. 2003. Last week it was summer – confessions of an ecosystem traveler. FishBytes/Sea Around Us Newsletter, UBC, January-February 2003: 3-7.
- Christensen, V., R. Watson and D. Pauly. 2002. Falling fish catches since the 1970s. Map insert In: 'A World Transformed.' National Geographic, Washington, D.C.
- Christensen, V., S. Guénette, J. J. Heymans, C. J. Walters, R. Watson, D. Zeller, and D. Pauly. 2002. Estimating fish abundance of the North Atlantic, 1950 to 1999. in S. Guénette, V. Christensen, and D. Pauly, editors. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9(4): 1-25.
- Dommasnes, A., V. Christensen, B. Ellertsen, C. Kvamme, W. Melle, L. Nottestad, T. Pedersen, S. Tjelmeland, and D. Zeller. 2002. Ecosystem model for the Norwegian Sea and Barents Sea. in S. Guénette, V. Christensen, and D. Pauly, editors. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9(4):213-240.
- Pauly, D., Watson, R. and Christensen, V. 2002. Quand le poisson vient à manquer. La Recherche. July-August 355:80-83
- Walters, C. J., Christensen, V. and Pauly, D. 2002. Searching for optimum fishing strategies for fisheries development, recovery and sustainability In: The use of ecosystems models to investigate multispecies management strategies for capture fisheries (eds Pitcher, T. J. and Cochrane, K.) Fisheries Centre Research Reports 10(2), 156 pp, pp. 11-15.

- Kaschner, K., R. Watson, V. Christensen, A. W. Trites, and D. Pauly. 2002. Modeling and mapping trophic overlap between marine mammals and commercial fisheries in the North Atlantic. p. 35-45 in D. Zeller, R. Watson, T. Pitcher, and D. Pauly, editors. Fisheries impact on North Atlantic ecosystems: catch, effort and national/regional ecosystems. Fisheries Centre Research Report 9(3).
- Walters, C. J., V. Christensen, and D. Pauly. 2002. Searching for optimum fishing strategies for fisheries development, recovery and sustainability. Pages 11-15 in T. J. Pitcher and K. Cochrane, editors. The use of ecosystems models to investigate multispecies management strategies for capture fisheries. Fisheries Centre Research Reports 10(2), 156 pp.
- Beattie, A., V. Christensen, U. R. Sumaila, and D. Pauly. 2001. Marine protected areas in the North Sea: a preliminary bioeconomic evaluation using Ecosim, a new game theory tool for use with the ecosystem simulation Ecopath with Ecosim. in U. R. Sumaila and J. Alder, editors. Economics of marine protected areas. Fisheries Centre Research Reports 9(8), UBC, Vancouver.
- Cury, P. and V. Christensen. 2001. SCOR/IOC Working Group 119: 'Quantitative Ecosystem Indicators for Fisheries Management'. ICES C.M. 2001/T:02.
- Christensen, V. and C.J. Walters. 2000. Ecopath with Ecosim: methods, capabilities and limitations. pp. 79-105, In: Pauly, D. and T.J. Pitcher (eds.) Methods for assessing the impact of fisheries on marine ecosystems of the North Atlantic. Fish. Centre Res. Rep. 8(2): 195 p.
- Pauly, D., R. Watson, D. Zeller, and V. Christensen. 2000. Ecosystems of the North Atlantic: some definitions. The Sea Around Us Project Newsletter 2:1-4.
- Pauly, D., Christensen, V., Froese, R., Longhurst, A., Platt, T., Sathyendranath, S., Sherman, K., and Watson, R. 2000. Mapping fisheries onto marine ecosystems: a consensus approach for regional, oceanic and global integration. ICES CM 2000/T:14. 16 p.
- Pauly, Daniel, Villy Christensen, R. Froese, A. Longhurst, T. Platt, S. Sathyendranath, K. Sherman and R. Watson. 2000. Mapping fisheries onto marine ecosystems: a proposal for a consensus approach for regional, oceanic and global integration. Methods for evaluating the impacts of fisheries on North Atlantic ecosystems. Ed. Daniel Pauly and T.J. Pitcher. Fisheries Centre Research Reports 8(2).
- Pauly, D., V. Christensen, R. Froese and M. L. Palomares. 2000. Fishing down aquatic food webs. American Scientist. 88.1 (2000): 46 - 51.
- Supongpan, M., Christensen, V., Walters, C. and Pitcher, T., 2000. The use of ecosystem models to investigate multi-species management strategies for capture fisheries in the Gulf of Thailand. A paper presented for the Workshop on the Use of Ecosystem Models to Investigate Multi-species Management Strategies for Capture Fisheries held by FAO/UBC, Canada.
- Walters, C. D. Pauly and V. Christensen 1999. Ecospace: prediction of mesoscale spatial patterns in trophic relationships of exploited ecosystems, with emphasis on the impacts of marine protected areas. International Council for the Exploration of the Sea, ICES C.M. 1998/S:4, 20 p.
- Christensen, V., and D. Pauly. 1998. The Ecopath approach and software. Pp. 8-11 in Okey, T.A., and D. Pauly. Trophic Mass-Balance Model of Alaska's Prince William Sound Ecosystem, for the Post-Spill Period 1994-1996. Fisheries Centre Reports 6 (4), 144 p. University of British Columbia, Vancouver, B.C., Canada
- Christensen, V. and D. Pauly. 1997. Placing fisheries resources in their ecosystem context. EC Fisheries Cooperation Bulletin, 10(2): 9-14 (English and French).
- Pauly, D. and V. Christensen. 1997. The Ecopath modeling approach and FishBase. Box 14, p. 124 In R. Froese and D. Pauly (eds.) FishBase 97: concepts, design and data sources. ICLARM, Manila.
- Pauly, D. and V. Christensen. 1997. Trophic levels of fishes. Box 16, p. 127 In R. Froese and D. Pauly (eds.) FishBase 97: concepts, design and data sources. ICLARM, Manila.
- Christensen, V. 1996. Sky-skraenter (Thermal convergence, in Danish). Flyv 6: 8-11.
- Christensen, V. 1996. Balancing the Alaska gyre model. p. 32-36 In: D. Pauly and V. Christensen (eds.) Mass-Balance Models of North-Eastern Pacific Ecosystems. Fisheries Centre Research Reports 4(1).
- Christensen, V. and D. Pauly. 1996. Ecological modeling for all. Naga, the ICLARM Quarterly 19 (2):25-26.
- Christensen, V. and D. Pauly. 1996. Marine ecosystem management: [an ode to Odum](#). Presented at the International Workshop on Ecosystem Management for Sustainable Marine Fisheries, Monterey, California, 19-24 Feb 1996.
- Pauly, D. and V. Christensen. 1996. ECOPATH models of coral reef ecosystems. P. 137-144 in J.W. McManus and M.C. Ablan (eds.). ReefBase, a global database on coral reefs and their resources. ICLARM.
- Pauly, D. and V. Christensen. 1996. Rationale for mass-balance (trophic) models, p. 12-15. In: Mass-balance models of North-eastern Pacific ecosystems. Fisheries Centre Res. Rep. 4(1)

- Pauly, D. and V. Christensen. 1996. Rehabilitating fished ecosystems: insights from the past. *Naga, the ICLARM Quarterly* 19(3):13-14
- Polovina, J.J., J. Purcell, M. Arai, A. Jarre-Teichmann, L. Huato, P. Livingston, A. Trites, K. Heise, J. Kelson, Y. Wada, S. Speckman and V. Christensen. 1996. Alaska Gyre model. p. 16-36. In: *Mass-balance models of North-eastern Pacific ecosystems*. Fisheries Centre Res. Rep. 4(1)
- Christensen, V. 1995. A multispecies virtual population analysis incorporating information of size and age. *ICES C.M.* 1995/D:8.
- Christensen, V. and D. Pauly. 1995. Fish production, catches and the carrying capacity of the world oceans. *Naga, the ICLARM Quarterly* 18(3):34-40.
- Pauly, D. and V. Christensen. 1995. Coral reef systems and their exploitation: toward a global account. *Reef Encounters* 18:6-7.
- Pauly, D., A. Trites, E. Capuli and V. Christensen. 1995. Diet composition and trophic levels of marine mammals. *ICES C.M.* 1995/N: 13. 22 p.
- Christensen, V. 1994. Assessing trophic impacts of fish stock enhancement. Appendix to report of the ICES Workshop to evaluate the potential of stock enhancement, as an approach to fisheries management. Copenhagen, 19-24 May, 1994. *ICES C.M.* 1994/F:9.
- Christensen, V. 1994. In our experience: a review of "Quantitative Fisheries Stock Assessment". *Naga, the ICLARM Quarterly*, 17(1): 55-56.
- Pauly, D. and V. Christensen. 1994. Modeling coral reef ecosystems. p. 58-60. in J.L. Munro and P.E. Munro, (eds.) *The management of coral reef resource systems*. ICLARM Conf. Proc. 44, 124 p.
- Christensen, V. and J.F. Caddy. 1993. Reflections on the pelagic food web structure in the Black Sea. Paper presented at the General Fisheries Council for the Mediterranean Technical Consultation on Stock Assessment in the Black Sea, 15-19 February 1993, Ankara, Turkey.
- Bakun, A., V. Christensen, C. Curtis, P. Cury, M.H. Durand, D. Husby, R. Mendelssohn, J. Mendo, R. Parrish, D. Pauly and C. Roy. 1992. The Climate and Eastern Ocean Systems Project. *Naga, the ICLARM Quarterly* 15(4):26-30.
- Christensen, V. 1992. Network analysis of trophic interactions in aquatic ecosystems. Royal Danish School of Pharmacy, Copenhagen, Denmark. PhD thesis. 55 p + Appendices.
- Christensen, V. 1992. On Gulland and Rosenberg (1992), a review. *Naga, the ICLARM Quarterly* 15(4):54-55.
- Christensen, V. 1992. Two new books on fish ecology from Chapman and Hall. Book review. *Naga, the ICLARM Quarterly* 15(1):50-51.
- Christensen, V. and D. Pauly. 1992. A guide to the ECOPATH II program (version 2.1). *ICLARM Software* 6, 72 p. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1992. ECOPATH II - An approach and a software for construction of ecosystem models and food web analysis. *ICES C.M.* 1992/L:30. (Poster).
- Christensen, V. and D. Pauly. 1992. Guide du logiciel ECOPATH II (version 2.1). *ICLARM Software* 6, 120 p. Adaptation française Jacques Moreau, avec l'assistance de C. Lhomme-Binudin. Centre international de gestion des ressources vivantes aquatiques (ICLARM), Manille, Philippines.
- Christensen, V. and D. Pauly. 1992. Una guía al ECOPATH II sistema de software (version 2.1). Traducido por Matthias Wolff. *ZMT Contributions* 1. Centro de Ecología Marina Tropical (ZMT), Bremen, Alemania, y Centro internacional de Manejo de recursos vivos acuáticos (ICLARM), Manila, Filipinas.
- Christensen, V. 1991. On ECOPATH, Fishbyte and fisheries management. *Fishbyte* 9(2):62-66.
- Christensen, V. and D. Pauly. 1991. A guide to the ECOPATH II program (version 2.0). International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1991. The South China Sea: analyzing fisheries catch data in an ecosystem context. *Naga, the ICLARM Quarterly* 14(4):7-9.
- Christensen, V., A. Trinidad-Cruz, J. Paw, J. Torres and D. Pauly. 1991. Appendix 6. Catch and potential of major fisheries resource systems in tropical and subtropical areas. p. 13-43. In: *A strategic plan for international fisheries research*. Appendixes. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. 1990. The ECOPATH II software or how can we gain from working together. *Naga, the ICLARM Quarterly*, 13(2):9-10.
- Christensen, V. and D. Pauly. 1990. A draft guide to the ECOPATH II program (version 1.0). *ICLARM Software* 6, 22 p. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1990. Global comparisons of aquatic ecosystems. *ICES C.M.* 1990/L:69. 7 p.
- Christensen, V. and D. Pauly. 1990. The ECOPATH II model. *ICES C.M.* 1990/L:68. 6 p.

- Degnbol, P., V. Christensen, J.G. Støttrup, H. Paulsen and K.J. Staehr. 1990. Experimental estimation of food preference in cod - results of a pilot experiment. ICES C.M. 1990/G:63. 7 p.
- Pauly, D. and V. Christensen. 1990. Three new approaches for the graphical representation of steady-state trophic ecosystem models. ICES C.M. 1990/L:67. 6 p.
- Pauly, D., V. Christensen and V. Sambilay, Jr. 1990. Some features of fish food consumption estimates used by ecosystem modelers. ICES C.M. 1990/G:17. 8 p.
- Christensen, V., 1989. HECAST a working group catch statistics spreadsheet package. ICES, ICES CM1989/D:19.
- Christensen, V., and Munk, P., 1989. Estimation of larval growth rates from herring larvae surveys. ICES, ICES CM1989/H:45.
- Christensen, V., Nielsen, T., and Paulsen, H., 1988. Sampling of herring larvae close to a drifting buoy. ICES, ICES CM1988/H:47.
- Richardson, K., Paulsen, H., Munk, P., Kioerboe, T., Christensen, V., and Nyhammer, S., 1986. Herring larvae distribution, plankton production and hydrography in the Buchan area (Scotland) in September-October, 1985. ICES, ICES CM1986/L:32.
- Christensen, V., and Lassen, H., 1986. Estimating average length composition from the International Herring Larvae Survey data. ICES, ICES CM 1986/H:67.
- Christensen, V., Heath, M., Kiorboe, T., Munk, P., Paulsen, H., and Richardson, K., 1985. Investigations on the relationship of herring larvae, plankton production and hydrography at Aberdeen Bank, Buchan Area, September 1984. ICES C.M. 1985/L:23
- Christensen, V., 1985. Estimation of herring larval production,. ICES, ICES CM 1985/H:60.
- Beyer, J. E., E.B. Christensen, V. Christensen, T. Kioerboe, P. Munk, H. Paulsen and K. Richardson., 1985. Summary of Danish enclosure experiments. ICES CM. 1985/Mini Symp. 7. 7 p.
- Christensen, V., Dahl, E. D., D.S. Hundahl, H., Kiorboe, T., and Kullenberg, G. 1983. A combined fish larval, phytoplankton and oceanographic survey in the Skagerrak and the Kattegat in April 1983. ICES CM 1983/L:26. 8 p.
- Christensen, V. 1983. Predation by sand eel on herring larvae. ICES CM. 1983/L:27. 10 p.

3. **BOOKS AND REPORTS**

(a) Authored

- Colléter, M., Valls, A., Guitton, J., Morissette, L., Arreguín-Sánchez, F., Christensen, V., Gascuel, D., Pauly, D., 2013. EcoBase: a repository solution to gather and communicate information from EwE models (No. 21). Fisheries Centre Research Reports.
- Kram, T., Neumann, K., van den Berg, M., Bakkes, J., Christensen, V., others, 2012. Global integrated assessment to support EU future environment policies (GLIMP). Final report. DG ENV Service Contract No. 07.0307/2009/550636/SER/F1. European Commission, 227 p.
- Ozkayank, B., Pinter, L., van Vuuren, D.P., Bizikova, L., Christensen, V., et al. 2012. Chapter 16: Scenarios and Sustainability Transformation, in Global Environment Outlook 5: Environment for the future we want (GEO5). UNEP, Nairobi, p 420-456.
- IOC-UNESCO. 2010. Transboundary Waters Assessment Programme (TWAP) Volume 5: Methodology for Assessment of Large Marine Ecosystems. viii + 115 pp. UNEP. (Contributing author).
- IOC-UNESCO. 2010. Transboundary Waters Assessment Programme (TWAP) Volume 6: Open Ocean Assessment Methodology. UNEP. (Contributing author).
- K. Sherman, D. Pauly, V. Christensen, R. Sumaila, J. O'Reilly, K. Hyde, I. Belkin, S. Seitzinger, J. Sutinen, S. Olsen, T. Hennessey, L. Juda, P. Hoagland, D. Jin, M. Aquarone, S. Adams. 2010. Methodology for assessing changing conditions of the world's large marine ecosystems. Report to the GEF Transboundary Water Assessment Program.
- Christensen, Villy, Alasdair Beattie, Claire Buchanan, Hongguang Ma, Steven J. D. Martell, Robert J. Latour, Dave Preikshot, Madeline B. Sigrist, James H. Uphoff, Carl J. Walters, Robert J. Wood, and Howard Townsend. 2009. Fisheries Ecosystem Model of the Chesapeake Bay: Methodology, Parameterization, and Model Explanation. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO- 106, 146 p.
- Ma, H., H. Townsend, M. Sigrist, V. Christensen, C. Walters, J. Buszowski, J. Korman, and D. Preikshot. 2009. Constructing Historical Long-Term Primary Production in the Chesapeake Bay for Use in Ecosystem-Based Fisheries Management Models. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO-105, 51 p.

- Christensen, V., Walters, C.J., Ahrens, R., Alder, J., Buszowski, J., Christensen, L.B., Cheung, W.W.L., Dunne, J., Froese, R., Karpouzi, V., Kastner, K., Kearney, K., Lai, S., Lam, V., Palomares, M.L.D., Peters-Mason, A., Piroddi, C., Sarmiento, J.L., Steenbeek, J., Sumaila, R., Watson, R., Zeller, D. and Pauly, D., 2008. Models of the world's large marine ecosystems. GEF/LME global project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. Intergovernmental Oceanographic Commissions Technical Series No. 80, iv+43p. UNESCO.
- Dalsgaard, A.J., Christensen, V., Nicolajsen, H., Koed, A., Støttrup, J., Groos, J., Bregnballe, T., Sørensen, H.L., Christensen, J.T., and Nielsen, R. 2008. Økosystemmodel for Ringkøbing Fjord. Skarvbestandens påvirkning af fiskebestandene, DTU Aqua-rapport nr. 178-08, DTU Aqua, Copenhagen.
- Alder, J., Guénette, S., Beblow, J., Cheung, W., and Christensen, V. 2007. Ecosystem-based global fishing policy scenarios, Fisheries Centre Research Report 15(7), University of British Columbia, Vancouver. 91 p.
- Guénette, S., Christensen, V., Hoover, C., Lam, M. E., Preikshot, D., and Pauly, D., 2007. A synthesis of research activities at the Fisheries Centre on ecosystem-based fisheries modelling and assessment with emphasis on the Northern and Central Coast of BC. [FCRR 2007, Vol. 15\(1\)](#) 32 pp
- Pauly, D., Froese, R., Sa-a, P., Palomares, M., Christensen, V. and Rius, J., 2000. TrophLab manual. ICLARM, Manila, Philippines.

(b) Edited

- Steenbeek, J., C. Piroddi, M. Coll, J.J. Heymans, S. Villasante and V. Christensen (Eds.) 2014. Ecopath 30 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 22(3), Fisheries Centre, University of British Columbia, 235 p.
- Christensen, V., Lai, S., Palomares, M.L.D., Zeller, D., Pauly, D. (eds.). 2011. The State of Biodiversity and Fisheries in Regional Seas, Fisheries Centre Research Reports 19(3). Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 82 pp.
- Christensen, V. and J.L. Maclean (Eds.) 2011. Ecosystem Approaches to Fisheries: A Global Perspective. Cambridge University Press, 342 p.
- Christensen, V., C.J. Walters and D. Pauly. 2005. Ecopath with Ecosim: a User's Guide, November 2005 Edition. Fisheries Centre, University of British Columbia, Vancouver, Canada. 154 p.
- Guénette, S., and V. Christensen (editors). 2005. Food web models and data for studying fisheries and environmental impacts on Eastern Pacific ecosystems. [Fisheries Centre Research Reports 13\(1\)](#): 237 pp.
- Christensen, V., C.J. Walters and D. Pauly. 2004. Ecopath with Ecosim: a User's Guide, May 2004 Edition. Fisheries Centre, University of British Columbia, Vancouver, Canada. 154 p.
- Silvestre, G., L. Garces, C. Luna, M. Ahmed, R. A. V. Santos, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly, eds. 2003. Assessment and Management of Tropical Coastal Fisheries in Developing Asian Countries. ICLARM Conf. Proc. 67. 1120 p.
- Christensen, V., Reck, G. and Maclean, J. L., eds. 2002. Proceedings of the INCO-DC Conference Placing Fisheries in their Ecosystem Context. Galápagos Islands, Ecuador, 4-8 December 2000, ACP-EU Fisheries Research Reports, (12), 79 p., Brussels.
- Guénette, S., Christensen, V., and Pauly, D., eds., 2002. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. [Fisheries Centre Research Reports 9\(4\)](#), 344 pp.
- Pauly, D. V. Christensen and L. Coelho, eds. 1999. Ocean food webs and economic productivity. Proceedings of the EXPO 98 Conference, Lisbon, Portugal, 1-3 July 1998. ACP-EU Fish. Res. Rep., (5): 87 p., Brussels
- Pauly, D. and V. Christensen, eds. 1996. Mass-Balance Models of Northeastern Pacific Ecosystems. [Fisheries Centre Research Reports, 4\(1\)](#). University of British Columbia. 131 p.

(c) Chapters

- Booth, S., W. Cheung, V. Lam, D. Zeller, V. Christensen and D. Pauly. 2014. Dioxin the seas around us, p. 99-108 In: D. Pauly and D. Zeller (eds). *So long, and thanks for the fish: the Sea Around Us, 1999-2014 – a fifteen-year retrospective*. A Sea Around Us Report to the Pew Charitable Trusts.
- Colléter, M., A. Valls, V. Christensen, M. Coll, D. Gascuel, J. Guitton, C. Piroddi, J. Steenbeck, J. Buskowski and D. Pauly. 2014. Modeling the ecosystem of the global oceans. P. 71-75 In: D. Pauly and D. Zeller (eds). *So long, and thanks for the fish: the Sea Around Us, 1999-2014 – a fifteen-year retrospective*. A Sea Around Us Report to the Pew Charitable Trusts
- Heymans, J.J., Coll, M., Libralatto, S., and Christensen, V. 2012. Ecopath theory, modeling and application to coastal ecosystems. Chapter 9.5 in Wolanski, E. and McLusky. D.S. (Editors). "Estuarine and Coastal Ecosystems

- Modeling" of the Elsevier Science Series "Estuarine and Coastal Science", Elsevier Science Publishers, Amsterdam.
- Christensen, V. 2011. Toward ecosystem-based management of fisheries. Page 1-8 in Christensen, V. and J.L. Maclean (Eds.) *Ecosystem Approaches to Fisheries: A Global Perspective*. Cambridge University Press.
- Christensen, V. and Lai, S. 2011. Scenario development for decision making. Page 304-314 in Christensen, V. and J.L. Maclean (Eds.) *Ecosystem Approaches to Fisheries: A Global Perspective*. Cambridge University Press.
- Christensen, V., and Maclean, J.L. 2011. Preface. Page xiii-xv in Christensen, V. and J.L. Maclean (Eds.) *Ecosystem Approaches to Fisheries: A Global Perspective*. Cambridge University Press.
- Christensen, V. and Walters, C.J. 2011. Progress in the use of ecosystem modeling for fisheries management. Page 189-205 in Christensen, V. and J.L. Maclean (Eds.) *Ecosystem Approaches to Fisheries: A Global Perspective*. Cambridge University Press.
- Stergiou, K.I., Christensen, V. 2011. Fishing down food webs. Page 72-88 in Christensen, V. and J.L. Maclean (Eds.) *Ecosystem Approaches to Fisheries: A Global Perspective*. Cambridge University Press.
- Gribble, N., Ault, J.S., Walters, C., Christensen, V., Lehodey, P., and J. Polovina. 2011. Ecosystem models and modeling lessons from other regions.. Chapter 3, Pages 43-66 in Glazier, E., 'Ecosystem Based Fisheries in the Western Pacific'. Wiley-Blackwell, New York.
- Christensen, V., and Cury, P. 2010. Using ecological indicators to assess the health of marine ecosystems: the North Atlantic. Chapter 14 in: S. E. Jørgensen, R. Costanza, and F.-L. Xu (Editors). *CRC Handbook on Indicators of Ecosystem Health*, 2nd Edition. CRC, Lewis Publishers
- Christensen, V., Walters, C.J., Ahrens, R., Alder, J., Buszowski, J., Christensen, L.B., Cheung, W.W.L., Dunne, J., Froese, R., Karpouzi, V., Kastner, K., Kearney, K., Lai, S., Lam, V., Palomares, M.L.D., Peters-Mason, A., Piroddi, C., Sarmiento, J.L., Steenbeek, J., Sumaila, R., Watson, R., Zeller, D. and Pauly, D., 2010. Database-driven models of the world's large marine ecosystems. P 74-103, Chapter 6 in: Sherman, K. and S. Adams (Editor). *Sustainable Development of the World's Large Marine Ecosystems during Climate Change: A commemorative volume to advance sustainable development on the occasion of the presentation of the 2010 Göteborg Award*. IUCN, Gland, Switzerland. (x+232 pages).
- Christensen, V. 2009. Ecopath with Ecosim: Linking fisheries and ecology. Page 55-70. Chapter 5 in: S. E. Jørgensen, T-S Chon, F.A. Recknagel (Editors) *Handbook of Ecological Modelling and Informatics*. WIT Press.
- Pauly, D., J. Alder, S. Booth, W.W.L. Cheung, V. Christensen, C. Close, U.R. Sumaila, W. Swartz, A. Tavakolie, R. Watson, L. Wood and D. Zeller. 2008. Fisheries in Large Marine Ecosystems: Descriptions and Diagnoses. p. 23-40. In: K. Sherman and G. Hempel (eds.) *The UNEP Large Marine Ecosystem Report: a Perspective on Changing Conditions in LMEs of the World's Regional Seas*. UNEP Regional Seas Reports and Studies No. 182.
- Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2006. El futuro de las pesquerías. p. 339-345 and 402-403 In: P. Trillo (ed.) *Libro del Centenario de Chimbote*, Yan Producciones, Lima, Peru. [Authorized translation of 'The future for fisheries' (Science 302: 1359-1361)].
- Trites, A.W., V. Christensen and D. Pauly. 2006. Effects of fisheries on ecosystems: just another top predator? In: *Top Predators in Marine Ecosystems*. I.L. Boyd, S. Wanless, and C.J. Camphuysen (Eds.). pp. 11-27. Cambridge University Press, Cambridge
- Alcamo, J. et al. 2005. Changes in ecosystem services and their drivers across the scenarios. Chapter 9 in *Ecosystems and Human Well-being: Volume 2. Scenarios*. Millenium Ecosystem Assessment. (lead author)
- Pauly, D. et al. 2005. Marine fisheries systems. Chapter 18 in *Ecosystems and Human Well-Being: Volume 1. Current State and Trends*. Millenium Ecosystem Assessment. (contributing author)
- Christensen, V., and Cury, P., 2005. Chapter 8. Application of ecological indicators for assessing health of marine ecosystems. In: *CRC Handbook on Indicators of Ecosystem Health*. pp. 193-212, Ed. by S. E. Jorgensen, R. Costanza, and F.-L. Xu, CRC, Lewis Publishers
- Pauly, D., Watson, R., and Christensen, V., 2003. Ecological geography as a framework for a transition toward responsible fishing. p. 87-101 in: *Responsible Fisheries in the Marine Ecosystem*. Ed. by M. Sinclair and G. Valdimarsson, CAB International
- Christensen, V., Garces, L. R., Silvestre, G. T., and Pauly, D., 2003. Fisheries impact on the South China Sea Large Marine Ecosystem: a preliminary analysis using spatially-explicit methodology. In: *Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries*. pp. 51-62, Ed. by G. T. Silvestre, L. R. Garces, I. Stobutzki, M. Ahmed, R. A. Valmonte-Santos, C. Z. Luna, L. Lachica-Aliño, P. Munro, V. Christensen, and D. Pauly, WorldFish Center Conference Proceedings 67
- Watson, R., D. Pauly., V. Christensen, R. Froese, A. Longhurst, T. Platt, S. Sathyendranath, K. Sherman, J. O'Reilly, and P. Celone. 2003. Mapping fisheries onto marine ecosystems for regional, oceanic and global integrations. In: G.

Hempel and K. Sherman (Eds.), Trends in Exploitation, Protection, and Research. Elsevier Science, Amsterdam. 12:375-395.

Pauly, D., F. Arreguín-Sánchez, J. Browder, V. Christensen, S. Manickchand-Heileman, E. Martínez and L. Vidal. 1999. Towards a stratified mass-balance model of trophic fluxes in the Gulf of Mexico Large marine ecosystem. p. 278-293. In: H. Kumpf and K. Sherman, eds. The Gulf of Mexico Large Marine ecosystem. Blackwell Science. USA.

Dalsgaard, J.P.T. and V. Christensen. 1997. Flow modelling with ECOPATH: providing insights on the ecological state of agroecosystems. P. 203-212 in P.S. Teng, M.J. Kropff, H.F.M. ten Berge, J.B. Dent, F.B. Lansigan and H.H van Laar, eds. Applications of Systems Approaches at the Farm and Regional Level. Kluwer Academic Publishers, 466 p.

Pauly, D. and V. Christensen. 1993. Stratified models of large marine ecosystems: a general approach and an application to the South China Sea, p. 148-174. In K. Sherman, L.M. Alexander and B.D. Gold, eds. Large marine ecosystems: stress, mitigation and sustainability. AAAS Press (American Association for the Advancement of Science Publishing Division), Washington, DC. 376 p.

4. PATENTS

5. SPECIAL COPYRIGHTS

6. ARTISTIC WORKS, PERFORMANCES, DESIGNS

7. OTHER WORKS

2012: Sharks & tuna. 90 Seconds animated documentary. Made with Pew Global Shark Campaign

2012: Sharks & reefs. 90 Seconds animated documentary. Made with Pew Global Shark Campaign

2012: The Oracle. Animated interactive 3D-module about the future ocean. Made by Nereus Program for AAAS 2012 (featured by CBC News)

2009: "Life in Chesapeake Bay", a 7-minute video, describing ecosystem changes developed with the Blender 3D gaming engine; director, producer, and scriptwriter. [Released July 2009; <http://ecopath.org/LifeInTheChesapeakeBay/>]

2007: Ecopath with Ecosim, Version 6 (with updates released monthly since then)

2004: Ecopath with Ecosim, Version 5.1

2003: Ecopath with Ecosim, Version 5.

2000: Ecopath with Ecosim, Version 4.

1996: ECOPATH, Version 3.0 for Windows, ICLARM Software 6.

1990-1994: ECOPATH scientific ecosystem modeling software, Versions 1.0, 2.0, 2.1 and 2.2. ICLARM Software 6

1988: HECAT, Herring Catch Statistics software, Developed for the ICES Herring Assessment Working Group.

8. WORK SUBMITTED (including publisher and date of submission)

Majluf, P., S. de la Puente, V. Christensen. The little fish that can feed the world. Submitted to Fish and Fisheries, Oct. 2015

Felinto, D, J Steenbeek, M Pan^a, J Buszowski, S Lai, V Christensen. OceanViz: Analyzing and visualizing management impact on marine ecosystems. Environmental Modelling and Software, submitted March 2015.

Teh, Louise S.L., William W.L. Cheung, Villy Christensen, U.R. Sumaila. Can we meet the Target? Status and future trends for fisheries sustainability. Submitted to Current Opinion in Environmental Sustainability, Oct. 2015.

Wilting HC, Ahrens R, Neumann K, van den Bergd M, Christensen V, ten Brink B. Scenarios for future global fish supply: From wild catch to aquaculture. Environmental Management, submitted Jan. 2015.

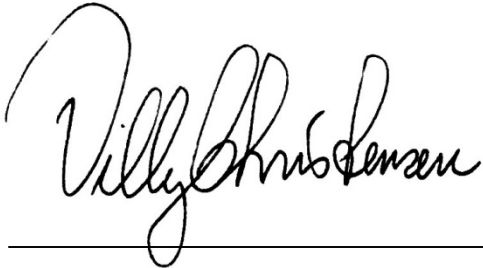
De Mutsert, K., J.H. Cowan, J. Steenbeek, and V. Christensen. Chapter 14: The use of Ecospace in determining hypoxia effect on fish and fisheries. Pp 238-255 in J. Dubravko, K.A. Rose, R. D. Hetland, and K. Fennel (eds.). Modeling Coastal Hypoxia: Numerical Simulations of Patterns, Controls and Effects of Dissolved Oxygen Dynamics. Springer, New York. Resubmitted after review, July 2016.

9. WORK IN PROGRESS (including degree of completion)

Christensen, V., S. De la Puente, J.C. Sueiro, C.J. Walters, J. Tam, P. Majluf. Toward ecosystem based management of the Peruvian upwelling ecosystem: six decades of change. Ecol. Model., MS completed

Coll, Marta, Lynne J. Shannon, Cameron Ainsworth, Villy Christensen, Sheila J. Heymans, Steve Mackinson, Sergio Neira, Kate Watermeyer. Consequences of depletion and recovery for marine ecosystem functioning,

Pavés, HJ, HE González, V. Christensen. Exploring the role of top predators and artisanal fishery in two basins of the Chilean Patagonian coastal system: Considerations for ecosystem modeling and future actions. To be submitted to Progress in Oceanography, special issue.

A handwritten signature in black ink, reading "Villy Christensen". The signature is written in a cursive, flowing style. Below the signature is a horizontal line.

September 6, 2016