

## OCEAN ACIDIFICATION EFFECTS WORKSHOP

### BREAKOUT GROUP ASSIGNMENTS

**Session 1** – Three breakout groups divided by data type: oceanography data, recruitment data, exposure studies

Questions for all three breakout groups

1. What data sets are readily available?
2. What is the quality of the datasets?
3. Can data be made available on a website?
4. What projects are coming online that will provide important data in the future?
5. Are proper tools available to work with the datasets?

#### **Group 1 – Oceanography data**

Moderator: Russ Moll

Rapporteur: Steve Hankin

Simone Alin	NOAA Pacific Marine Environmental Laboratory
Jim Barry	Monterey Bay Aquarium Research Institute
Peter Betzer	St. Petersburg Downtown Partners
Andrew Dickson	Scripps Institution of Oceanography
Richard Feely	NOAA Pacific Marine Environmental Laboratory
John Finger	Hog Island Oyster Company
Carl Gouldman	NOAA Integrated Ocean Observing System
Steve Hankin	NOAA Pacific Marine Environmental Laboratory
Larry Langebrake	SRI International
Russ Moll	California Sea Grant Director
Jan Newton	University of Washington
Mark Ohman	Scripps Institution of Oceanography
Diane Pleschner-Steele	California Wetfish Producers Association
Steve Ramp	Monterey Bay Aquarium Research Institute
Phil Taylor	National Science Foundation
Russ Vetter	Southwest Fisheries Science Center

**Session 1 cont'd****Group 2 – Recruitment data**

Moderator: Skyli McAfee

Rapporteur: Terrie Klinger

Debbie Aseltine-Neilsen	California Department of Fish and Game
Tony D'Andrea	Oregon Department of Fish and Wildlife
Robin Downey	Pacific Coast Shellfish Growers
Tom Ebert	Oregon State University
Benoit Eudeline	Taylor Shellfish Company
Maria Haws	University of Hawaii
Annaliese Hettinger	University of California Davis
Ian Jefferds	Penn Cove Shellfish
Libby Jewett	NOAA
Terrie Klinger	University of Washington
Kevin Lunny	Drakes Bay Oyster Company
Skyli McAfee	California Ocean Science Trust Director
Paul McElhany	NOAA Northwest Fisheries Science Center
Bruce Menge	Oregon State University
Dave Nisbet	Nisbet Oyster Company
Dennis Peterson	Carlsbad Aquafarm
Ray RaLonde	Alaska Sea Grant
Bill Robertson	Aquatics NW
Steve Schroeter	University of California Santa Barbara
Bruce Steele	California Sea Urchin Commission
Brad Warren	Sustainable Fisheries Partnership
Brent Vadopalas	University of Washington

**Group 3 – Exposure studies**

Moderator: Juliette Hart

Rapporteur: Victoria Fabry

Steve Brandt	Oregon Sea Grant Director
Sue Cudd	Whiskey Creek Hatchery
Teri King	Washington Sea Grant
Ralph Elston	Aquatechnics
Vicky Fabry	California State University San Marcos
Phyllis Grifman	University of Southern California Sea Grant
Dennis Hedgecock	University of Southern California
Gretchen Hofmann	University of California Santa Barbara
Chris Langdon	Oregon State University
George Waldbusser	Oregon State University
Lou Zeidberg	Stanford University

**Session 2:** Two breakout groups for each habitat type: open-ocean and near-shore

Questions for all breakout groups:

1. What analyses integrating these diverse datasets can we conduct now?
2. What additional methods / tools are required from future studies?

**Group 1 – Open-ocean hydrographic and biological data**

Moderator: Simone Alin

Rapporteur: Andrew Dickson

Simone Alin	NOAA Pacific Marine Environmental Laboratory
Andrew Dickson	Scripps Institution of Oceanography
Carl Gouldman	NOAA Integrated Ocean Observing System
Larry Langebrake	SRI International
Russ Moll	California Sea Grant
Diane Pleschner-Steele	California Wetfish Producers Association
Ray RaLonde	Alaska Sea Grant
Phil Taylor	National Science Foundation
Russ Vetter	Southwest Fisheries Science Center

**Group 2 – Open-ocean hydrographic and biological data**

Moderator: Mark Ohman

Rapporteur: Steve Ramp

Peter Betzer	St. Petersburg Downtown Partners
Steve Hankin	NOAA Pacific Marine Environmental Laboratory
Richard Feely	NOAA Pacific Marine Environmental Laboratory
John Finger	Hog Island Oyster Company
Skyli McAfee	California Ocean Science Trust
Jan Newton	University of Washington
Mark Ohman	Scripps Institution of Oceanography
Steve Ramp	Monterey Bay Aquarium Research Institute
Brent Vadopalas	University of Washington

**Session 2 cont'd****Group 3 – Nearshore hydrographic and biological data**

Moderator: Jim Barry

Rapporteur: Gretchen Hofmann

Debbie Aseltine-Neilsen	California Department of Fish and Game
Jim Barry	Monterey Bay Aquarium Research Institute
Steve Brandt	Oregon Sea Grant
Sue Cudd	Whiskey Creek Hatchery
Tom Ebert	Oregon State University
Ralph Elston	Aquatechnics
Juliette Hart	University of Southern California Sea Grant
Maria Haws	University of Hawaii
Dennis Hedgecock	University of Southern California
Gretchen Hofmann	University of California Santa Barbara
Ian Jefferds	Penn Cove Shellfish
Libby Jewett	NOAA
Chris Langdon	Oregon State University
Dave Nisbet	Nisbet Oyster Company
Bill Robertson	Aquatics NW
Steve Schroeter	University of California Santa Barbara

**Group 4 – Nearshore hydrographic and biological data**

Moderator: Phyllis Grifman

Rapporteur: Robin Downey

Tony D'Andrea	Oregon Department of Fish and Wildlife
Teri King	Washington Sea Grant
Robin Downey	Pacific Coast Shellfish Growers
Benoit Eudeline	Taylor Shellfish Company
Vicky Fabry	California State University San Marcos
Phyllis Grifman	University of Southern California Sea Grant
Annaliese Hettinger	University of California Davis
Terrie Klinger	University of Washinton
Kevin Lunny	Drakes Bay Oyster Company
Paul McElhany	Northwest Fisheries Science Center
Bruce Menge	Oregon State University
Dennis Peterson	Carlsbad Aquafarm
Bruce Steele	California Sea Urchin Commission
George Waldbusser	Oregon State University
Brad Warren	Sustainable Fisheries Partnership
Lou Zeidberg	Stanford University

**Session 3:** Three breakout groups exploring future cross-discipline interaction

**Group 1 – How should we modify monitoring/research program designs to enhance cross-discipline analysis?**

Moderator: Jan Newton

Rapporteur: Paul McElhany

Debbie Aseltine-Neilsen	California Department of Fish and Game
Jim Barry	Monterey Bay Aquarium Research Institute
Steve Brandt	Oregon Sea Grant
Sue Cudd	Whiskey Creek Hatchery
Tom Ebert	Oregon State University
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Chris Langdon	Oregon State University
Paul McElhany	Northwest Fisheries Science Center
Jan Newton	University of Washinton
Dave Nisbet	Nisbet Oyster
Phil Taylor	National Science Foundation
Bruce Steele	California Sea Urchin Commission
Russ Vetter	Southwest Fisheries Science Center
George Waldbusser	Oregon State University

**Group 2 – How should we synchronize cross-discipline data systems?**

Moderator: Steve Hankin

Rapporteur: Juliette Hart

Simone Alin	NOAA Pacific Marine Environmental Laboratory
Teri King	Washington Sea Grant
Tony D'Andrea	Oregon Department of Fish and Wildlife
Andrew Dickson	Scripps Institution of Oceanography
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Gretchen Hofmann	University of California Santa Barbara
Ian Jefferds	Penn Cove Shellfish
Bruce Menge	Oregon State University Zoology
Russ Moll	California Sea Grant
Dennis Peterson	Carlsbad Aquafarms
Diane Pleschner-Steele	California Wetfish Producers Association
Steve Schroeter	University of California Santa Barbara
Steve Ramp	Monterey Bay Aquarium Research Institute
Brad Warren	Sustainable Fisheries Partnership
Brent Vadopalas	University of Washington

**Session 3 cont'd****Group 3 – What approaches should we use to enhance future cross-discipline interaction?**

Moderator: Skyli McAfee

Rapporteur: Libby Jewett

Peter Betzer  
Ralph Elston  
Richard Feely  
Carl Gouldman  
Dennis Hedgecock  
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