

John W. Virdin
Durham, North Carolina

Experience

Total Work Experience in Coastal and Ocean Policy: 19 years

- 2015 – Present **Duke University Nicholas Institute for Environmental Policy Solutions** Durham, N.C.
Director of the Oceans & Coastal Policy Program (beginning January 2015); Adjunct Assistant Professor to the Nicholas School for the Environment (beginning March 2016)
- *Overall:* Responsible for development and implementation of the Institute's program to connect the University's expertise to help decision-makers sustainably manage ocean resources, with a focus on (i) fisheries and food security, (ii) the blue economy and marine ecosystem services and (iii) blue carbon and climate change. Projects ongoing/completed to date include:
 - *Small-scale fisheries governance:* Co-led a scan of the theory and practice of small-scale governance worldwide, including hosting a workshop with experts and practitioners from academia, fisheries associations, non-profit organizations, philanthropies and international agencies; ongoing collaboration with the United Nations Food and Agriculture Organization (FAO) on a new global study of small-scale fisheries
 - *National and regional fisheries governance reform in the Western and Central Pacific Ocean tuna fisheries, and in West Africa:* Advised the World Bank to help sustainably manage tuna fisheries in the western and central Pacific, support fisheries governance reform in West Africa; ongoing collaboration with the University of the South Pacific, University of Wollongong and Environmental Defense Fund on Pacific Island fisheries policy research and training
 - *Blue economy research in Bangladesh, the Caribbean and United States:* Ongoing collaboration with the World Bank and Center for the Blue Economy to assess the implications of the blue economy concept for the Government of Bangladesh, collaborated with the Organization of Eastern Caribbean States Secretariat and the World Bank on defining the blue economy concept in the Caribbean, and collaborated with the North Carolina Sea Grant Office to measure the ocean economy in the state of North Carolina
 - *Global coral reef policy analysis:* Ongoing collaboration with the United Nations Environment Program (UNEP) to analyze the design of international and regional policy instruments to address drivers of change in coral reef ecosystems
 - *West Africa mangrove conservation:* Collaborated with GRID-Arendal and the Abidjan Convention Secretariat to assess the feasibility of blue carbon payments to support mangrove conservation in West Africa and reduce greenhouse gas emissions
- 2012 – 2014 **World Bank** Washington, D.C.
Acting Program Manager for the Global Partnership for Oceans (GPO); Senior Natural Resource Management Specialist – Advising on oceans and fisheries governance across the institution's portfolio
- *World Bank lending portfolio for oceans:* Provided technical guidance as part of a team supporting the World Bank's overall lending portfolio for sustainable oceans, including leading the development of the Pacific Islands Regional Oceanscape Program to provide an estimated \$75 million to 9 Pacific Island Countries, and supporting the expansion of the West Africa Regional Fisheries Program
 - *Global Partnership for Oceans (GPO):* Helped develop the conceptual framework for the Global Partnership for Oceans, a coalition of over 150 Governments, companies, civil society organizations, foundations and multilateral agencies formed from 2012 – 2014 to support countries to reform the institutions governing the use of the ocean under their jurisdiction
- 2004 – 2011 **World Bank** Washington, D.C.
Senior Natural Resource Management Specialist – Developing and supporting investments to strengthen fisheries institutions throughout Africa

- *West Africa Fisheries Governance Reform*: Led the preparation of the conceptual framework and supervision of the implementation of a US\$125 million investment program in 9 West African countries to help strengthen and reform the institutions governing the fisheries, including supporting surveillance and enforcement operations
- *Senegal Community Fisheries Management*: Led the preparation of the conceptual framework and supervision of the implementation a US\$9.5 million project to expand a network of support for community institutions managing defined coastal fisheries, as well as supervised investments in the management of coastal parks and protected areas
- *Strategic partnership to support fisheries governance reform across Africa*: Helped develop and then led the supervision of a 10-year US\$ 60 million investment fund to support fisheries institutional reforms in Africa, in partnership with the United Nations Food and Agriculture Organization (FAO) and World Wide Fund for Nature (WWF)

Supporting Institutional Development for Marine Conservation

- *Guinea-Bissau Network of Coastal Protected Areas*: Led the supervision of a US\$11.0 million project to create a national network of 5 coastal protected areas, as well as improved economic development for the rural communities living in these areas, and helped to establish a private foundation to fund the protected areas network and develop a business case for sale of 'blue carbon' credits to support the network

2001 – 2004

World Bank Washington, D.C.

Consultant – Supporting a World Bank strategy to promote fisheries institutional reform

- One of the principal authors of a World Bank Fisheries Approach Paper, which served as the basis for the institution's re-engagement in the fisheries sector.
- Conducted analytical work on the fisheries in Senegal and Guinea-Bissau, to help the Governments develop national strategies for fisheries institutional reform
- Helped prepare a \$75 million investment to support the introduction of community institutions for management of coral reef fisheries in 6 districts in Eastern Indonesia

2001 – 2002

World Resources Institute Washington, D.C.

Fellow, Biological Resources Program; Climate, Energy & Pollution Program

- Worked with the Government of Trinidad & Tobago, University of the West Indies and the Council of Presidents of Environmental NGOs, to develop a project proposal for the Global Environment Facility to promote institutions for collaborative management of coastal ecosystems in Trinidad & Tobago, focused on adaptation responses to climate change

2001 – 2002

Coast Alliance Washington, D.C.

Consultant, through Yale Center for Coastal & Watershed Systems

- Conducted in-depth economic study funded by the Munson Foundation on the impacts of development on coastal barrier island ecosystems in the United States, including focused site analysis on leeward wetlands and mangroves in Lee County, Florida.

Winter 2000/01

World Conservation Network (IUCN) Washington, D.C.

Consultant, Marine Program – Focused on Coastal Adaptation Responses to Climate Change

- Created Coastal Adaptation Partnership, a network of coastal ecosystem scientists collaborating to promote responses to climate change in coastal communities

October, 2000

World Wide Fund for Nature (WWF) Washington, D. C.

Consultant, Sustainable Commerce Program – Focused on Fishing Subsidies

- Conducted a study on the nature of government subsidies to the global fishing industry

2000

World Bank Washington, D. C.

Consultant – Reviewing Community Institutions for Fisheries Management in the Pacific

- Assisted in drafting the Pacific Islands Regional Economic Report, co-authored the Coastal Management chapter assessing potential models to strengthen institutions for community management of coastal fisheries
- Summer 1999 **World Bank** Washington, D. C.
Summer Internship – Coastal Fisheries Management
- Thesis work and research on institutions for community management of coastal fisheries in the Pacific – New Caledonia, Fiji, and New Zealand
- Spring 1999 **Environmental Law Clinic** Yale University
Consultant, IUCN Marine Program – focused on International Fisheries Access Agreements
- Collaboration with small research team to examine international fishing access agreements between the European Union and West Africa, with respect to World Trade Organization subsidies violations
- Winter 1998/99 **World Bank** Washington, D. C.
Consultant, Rural Development Department – Supported a Global Fisheries Partnership
- Assistance in designing the proposal for a Forum For Sustainable Fisheries -- a global coalition of public/private donors, NGOs, and client countries to improve fisheries management
- Summer 1998 **World Bank** Washington, D. C.
Summer Internship, Rural Development Department – Global Fisheries Management
- Extensive work in the creation of the Forum For Sustainable Fisheries
- Fall 1997 **Natural Resources Defense Council** San Francisco, California
Unpaid Internship
- Analysis and research of the recreational take for fish stocks, including assessments of the economic impact of new regulation and catch reductions on the industry

Publications/Research/Presentations

Articles

- 2018 Drakou, E.G., **Virdin, J.** and L. Pendleton. 2018. Mapping the global distribution of locally-generated marine ecosystem services: the case of the West and Central Pacific Ocean tuna fisheries. *Ecosystem Services* 31 (2018): 278-288
- 2017 Bell, J.D., Cisneros-Montemayor, A., Hanich, Q., Johnson, J.E., Lehodey, P., Moore, B.R., Pratchett, M.S., Reygondeau, G., Senina, I., **Virdin, J.** and C.C.C. Wabnitz. 2017. Adaptations to maintain the contributions of small-scale fisheries to food security in the Pacific Islands. *Marine Policy* 88 (2018): 303-314
- 2017 Golden, J.S., **Virdin, J.**, Nowacek, D., Halpin, P., Benneer, L. and P.G. Patil. 2017. Making sure the blue economy is green. *Nature Ecology and Evolution* 1 (2) ISSN 2397-334X(online).
- 2013 Sander, K., Lee, J., Hickey, V., Mosoti, V., **Virdin, J.**, and W. Macgrath. 2013. Conceptualizing maritime environmental and natural resources law enforcement – the case of illegal fishing. *Environmental Development*. <http://dx.doi.org/10.1016/j.envdev.2013.08.00>
- 2000 **Virdin, J.** 2000. Co-Management of Coastal Resources in Fiji. *Coastal Management Journal* 28 (4) 325 – 337.
- 2000 **Virdin, J.** 2000. Coastal Management Institutions in Samoa. *Tropical Resources Institute Journal* 19: 18 – 20.

White Papers, Policy Briefs and Discussion Papers

- 2018 Bennett, A., Patil, P., Kleisner, K., Rader, D., Virdin, J., and X. Basurto. 2018. *Contribution of Fisheries to Food and Nutrition Security: Current Knowledge, Policy, and Research*. NI Report 18-02. Durham, NC: Duke University, https://nicholasinstitute.duke.edu/sites/default/files/publications/contribution_of_fisheries_to_food_and_nutrition_security_0.pdf
- 2018 Environmental Defense Fund and Nicholas Institute for Environmental Policy Solutions at Duke University. 2018. *Financing fisheries reform: Blended capital approaches in support of sustainable wild-capture fisheries*. Environmental Defense Fund. Co-Authors: Klaas de Vos, Timothy Fitzgerald, Phoebe Higgins, Jake Hiller, Namrita Kapur and John Virdin. <http://www.edf.org/blendedcapital>
- 2017 FAO. 2017. *Workshop on improving our knowledge on small-scale fisheries: data needs and methodologies*. Workshop proceedings, 27–29 June 2017, Rome, Italy. FAO Fisheries and Aquaculture Proceedings No. 55. Rome, Italy. Co-authors: Xavier Basurto, Nicole Franz, David Mills, John Virdin and Lena Westlund. <http://www.fao.org/3/a-i8134e.pdf>. Last accessed 1/30/2018
- 2017 Basurto, X., Virdin, J., Smith, H. and R. Juskus. 2017. *Strengthening Governance of Small-Scale Fisheries: An Initial Assessment of the Theory and Practice*. Oak Foundation: www.oakfnd.org/environment. Last accessed: 1/29/2018
- 2017 Kraemer, R.A. et al. 2017. *Sustainable Ocean Economy, Innovation and Growth: A G20 Initiative for the 7th Largest Economy in the World*. G20 Insights Platform of the T20 Engagement Group. http://www.g20-insights.org/policy_briefs/sustainable-ocean-economy-innovation-growth-g20-initiative-7th-largest-economy-world/, last accessed: 5/2/2017
- 2017 Harrison, J., Pickle, A., Vegh, T. and J. Virdin. 2017. *North Carolina's Ocean Economy: A First Assessment and Transitioning to a Blue Economy*. North Carolina Sea Grant and Duke University Nicholas Institute of Environmental Policy Solutions. Raleigh, North Carolina.
- 2016 UNEP. 2016. *Blue Carbon Financing of Mangrove Conservation in the Abidjan Convention Region: A Feasibility Study*. United Nations Environment Program (UNEP), Abidjan Convention Secretariat and GRID-Arendal. Nairobi, Abidjan and Arendal.
- 2016 World Bank and Nicholas Institute. 2016. *Tuna Fisheries: Pacific Possible Background Report No. 4*. World Bank. Sydney, Australia.
- 2016 Cicin-Sain, B. et al. 2016. *Towards a Strategic Action Roadmap on Oceans and Climate: 2016 to 2021*. Global Ocean Forum. Washington, D.C.
- 2016 Patil, P., Virdin, J., Diez, S.M., Roberts, J. and A. Singh. 2016. *Toward a Blue Economy: A Promise for Sustainable Growth in the Caribbean*. Report No. AUS16344. World Bank. Washington, D.C. <http://documents.worldbank.org/curated/en/965641473449861013/main-report>
- 2015 World Bank. 2015. *Terra Ranka! A Fresh Start*. Guinea-Bissau Country Economic Memorandum. Report No. 58296-GW. Contributing Author for Fisheries. Washington, DC: World Bank.
- 2011 Global Ocean Forum. 2011. *Oceans at Rio+20: How well are we doing in meeting the commitments from the 1992 Earth Summit and the 2002 World Summit for Sustainable Development?* Summary for Decision Makers. Contributing Author for Sustainable Fisheries and Aquaculture. Global Ocean Forum. Newark, Delaware.
- 2009 World Bank. 2009. *Environment Matters at the World Bank*. Co-Author of chapter: "The Importance of Sub-Saharan Africa's Coastal and Marine Ecosystems," Annual Review July 2007 to June 2008. World Bank. Washington, D.C.

- 2005 World Bank. 2005. *Ghana: Managing Large Natural Assets*. Author of chapter on fisheries, Report to the Government of Ghana. World Bank. Washington, D.C.
- 2004 World Bank. 2004. *Senegal: Fisheries Sector Strategy*. Co-Author, Report to the Government of Senegal. World Bank. Washington, D.C.
- 2004 World Bank. 2004. *Saving Fish and Fishers: Toward Sustainable and Equitable Governance of the Global Fishing Sector*. Co-Author. World Bank. Washington, D.C.
- 2003 World Bank. 2003. *Guinea-Bissau: Diagnosis and emergency restructuring plan to enhance the domestic benefits of the fishing sector and its integration in the world economy*. Co-Author, Report to the Government of Guinea-Bissau. World Bank. Washington, D.C.
- 2003 World Bank. 2003. *Eritrea: a fisheries sector strategy for increasing the profitability and the management of the sector*. Co-Author, Report to the Government of Eritrea. World Bank. Washington, D.C.
- 2002 Virdin, J. *Economic Impacts of Development on Coastal Barrier Ecosystems in the United States*. Coast Alliance. Washington, D.C.
- 2001 Virdin, J. 2001. *Hard Facts, Hidden Problems: A Review of Current Data on Fishing Subsidies*. WWF Technical Paper, World Wildlife Fund (WWF). Washington, D.C.
- 2000 World Bank. 2000. *Cities, Seas and Storms: Managing Change in Pacific Island Economies*. Co-author focusing on coastal fisheries. Regional Economic Report to the Pacific Islands. World Bank, Washington, D.C.

Book Chapters and Sections

- 2018 Franz, N., Basurto, X., Beveridge, M., Dabbadie, L., De Young, C., Ellenbroek, A., Gentile, A., Lovatelli, A., Reantaso, M., Siar, S., Viparthy, K., Virdin, J., Watanabe, H. and L. Westlund. 2018. Small-scale fisheries and aquaculture, Part 3. In FAO. 2018. *The State of World Fisheries and Aquaculture – Meeting the Sustainable Development Goals*. Rome.
- 2016 Virdin, J. 2016. Box 1.C.5. *Harnessing the Riches of Pacific Tuna Fisheries*. In World Bank. *Reducing Vulnerabilities*. World Bank East Asia and Pacific Update October 2016. World Bank. Washington, D.C.
- 2006 World Resources Institute. 2006. *World Resources 2005*. Lead writer chapter 2 focus on coastal fishing communities, “*Ecosystems and Livelihoods of the Poor*.” World Resources Institute. Washington, D.C.

Selected Presentations

- 2017 **The Ocean Conference**, United Nations
Panelist for the following side events: “*Financing for the Blue Economy in Small Island Developing States*” hosted by the Government of Grenada and the Organization for Economic Cooperation and Development; “*Adopting the Blue Economy: A viable path to Sustainable Development in Small Island Developing States Combined with Promoting the transition to Blue Growth and Blue Economy in Small Island Developing States and least developed countries*” hosted by the Government of Grenada, the Government of the Kingdom of the Netherlands, UN FAO, the Government of Cabo Verde, Ministry of Economy and Employment and The Nature Conservancy; and “*The Role of the Oceans in Sustainability: Benefits of Achieving SDG 14 for all Sustainable Development Goals*” hosted by the Nippon Foundation Nereus Program, New York, New York.
- 2017 **Blue Vision Summit**, Blue Frontier
Panelist: “*The Blue Economy*,” Washington, D.C.

- 2017 **North Carolina's Coastal Conference**, North Carolina Sea Grant Office
Presentation: "*North Carolina's Ocean Economy*," Raleigh, North Carolina.
- 2017 **West Africa Regional Fisheries Program conference**, Sub-Regional Fisheries Commission
Presentation: "*The West Africa Regional Fisheries Program: A Summary of Experiences in Phase One in Cabo Verde, Guinea-Bissau, Liberia, Senegal and Sierra Leone*," and "*West Africa's Coastal Bottom Trawling Fishery: A Review of Guinea-Bissau, Guinea, Sierra Leone and Liberia*," Dakar, Senegal
- 2016 **Grenada Blue Growth Investment Conference**, Government of Grenada
Presentation: "*A Conceptual Framework for the Blue Economy*," St. Georges, Grenada
- 2016 **American Society of International Law**, 110th Annual Meeting
Panelist: "*Steering Africa's Blue Economy: The Role of International Law and Lessons for Other Maritime Regions*," Washington, D.C.
- 2016 **Pacific Islands Forum Fisheries Agency**, Forum Fisheries Committee
Presentation: "*Pacific Possible: Tuna Fisheries*," Port Vila, Vanuatu
- 2016 **Caterpillar Executive Leadership Program**, Duke Corporate Education
Presentation: "*The Blue Economy*," Duke University
- 2012 **Korea Maritime Institute**, Symposium on the Blue Economy
Discussant and Presentation: "*Lessons from the World Bank's Oceans Portfolio*," Seoul, South Korea
- 2012 **Chatham House**, Symposium on Combatting Illegal Fishing
Presentation: "*Lessons from the West Africa Regional Fisheries Program*," London, United Kingdom
- 2002 **International Society for Ecosystem Health**, Healthy People, Healthy Ecosystems Conference
Presentation: "*Measuring Urban Environmental Health in Chattanooga, TN*," Washington, D.C.
- 2002 **Organization for Economic Cooperation & Development (OECD)**, Informal Experts Meeting on Adaptation to Climate Change
Presentation: "*Applying Principles of Collaborative Management of Coastal Resources to Adaptation Planning and Implementation in Small Island States*," Paris, France.
- 2001 **United Nations Development Program (UNDP), Policy Discussion Paper**, United Nations Framework Convention on Climate Change (COP 7)
Presentation: "*Understanding the Synergies between Climate Change & Desertification*," Marrakech, Morocco.

Selected Media Pieces

- 2018 **Economist World Ocean Initiative**, interview, June 6, 2018
"Voices from World Ocean Summit: An Interview with John Virdin of Duke University"
<http://www.woi.economist.com/voices-from-world-ocean-summit-john-virdin/>, last accessed: 6/6/2018
- 2018 **Economist Intelligence Unit**, Insights blog
"Blending capital to fill the ocean's fisheries finance gap", February 6, 2018
<http://www.eiuperspectives.economist.com/sustainability/blending-capital-fill-ocean's-fisheries-finance-gap>, last accessed: 2/7/2018
- 2016 **The Hill**, Op-Ed, Energy and the Environment

- “Transitioning to a ‘Blue Economy’ can Reshape the Ocean Landscape”, November 18, 2016
<http://thehill.com/blogs/pundits-blog/energy-environment/306743-transitioning-to-a-blue-economy-can-reshape-the-ocean>, last accessed: 1/10/2017
- 2016 **ABC Pacific Beat**, radio interview
“Fisheries reforms could create US\$344 million in extra revenue: World Bank”
[http://www.abc.net.au/news/2016-05-12/fisheries-reforms-could-create-us\\$344-million-in/7407072](http://www.abc.net.au/news/2016-05-12/fisheries-reforms-could-create-us$344-million-in/7407072), last accessed: 8/9/2016
- 2015 **The Hill**, Congress Blogs
“We Can End Illegal Fishing in the Ocean”, August 31, 2015
<http://thehill.com/blogs/congress-blog/energy-environment/252033-we-can-end-illegal-fishing-in-the-ocean>, last accessed: 11/15/2015
- 2015 **World Bank**, Praxis Discussion Series
Praxis Discussion: “Fishing for a Sustainable Future,” Panelist
<https://www.youtube.com/watch?v=4HSQxMpsqkY&index=3&list=PL6FE8A490B08CB2DB>, last accessed: 7/6/2016
- 2015 **Economist Intelligence Unit**, Insights blog
Co-Author with Linwood Pendleton, “Is blue growth the beginning or end of a healthier ocean?”
March 17, 2015
<http://www.economistinsights.com/opinion/blue-growth-beginning-or-end-healthier-ocean>, last accessed: 1/12/2015
- 2000 **The Environmental Magazine** 11 (1)
Buying Back Our Fish, January – February, 2000
- Peer Review, Committee Participation*
- 2018 – Present **China Council for International Cooperation on Environment and Development**
Special Policy Study on Global Ocean Governance and Ecological Civilization
Working Group member
- 2017 – Present **Encourage Capital**, Pescador Holdings company
Sustainability Advisory Board member
- 2016 – Present **World Food Policy Center**, Duke University
Steering Committee member
- 2016 **North Carolina Sea Grant Coastal Conference 2017**, North Carolina Sea Grant Office
Conference Steering Committee member
- 2016 **Blue Economy Challenge**, Conservation X Labs
Panel reviewer for proposals for Blue Economy Challenge on sustainable aquaculture;
<http://theblueeconomychallenge.com/>
- 2016 **BiodivERsA 2015**, Secretariat for a network of pan-European research funders
Peer Reviewer on call for proposals for understanding and managing biodiversity dynamics in Seascapes; www.biodiversa.org
- 2015 **World Bank**
Peer reviewer for concept notes and reports on fisheries governance reform in the Caribbean, Maldives, Mauritius, Oman, Solomon Islands, and West Africa
- 2015 **Economist Intelligence Unit**
Member of Research Advisory Group for the Economist World Ocean Summit in 2015

Honors

- 2013 **World Bank, Vice President's Unit Team Award**
Recognition of outstanding achievement for the West Africa Regional Fisheries Program
- 2008 **The McCallie School, Chattanooga, TN**
Alumni Achievement Award
- 2004 **World Bank, Spot Award**
Spot award for contribution to the Coral Reef Rehabilitation and Management Program (COREMAP II) Preparation team
- 2004 **World Bank, Spot Award**
Spot award for co-authorship of "Saving Fish and Fishers" a World Bank strategy for re-engaging in the fisheries sector
- 1999 **Teaching Fellow, Hydrogeology, Yale School of Forestry & Environmental Studies**
- 1999 **Teaching Fellow, Molecular & Cellular Developmental Biology, Yale University**
- 1996 **Pi Sigma Alpha member**
National Political Science Honor Society

Education

Delaware College of Earth, Ocean and Environment Newark, Delaware
PhD in Marine Policy, May 2016
Research on Institutional Frameworks for Rebuilding Marine Fisheries

Yale School of Forestry and Environmental Studies New Haven, Connecticut
Master's degree in Environmental Studies (MES), December, 1999
Concentration in Coastal & Watershed Ecosystems

Duke University Marine Biology Lab Beaufort, North Carolina
Marine Conservation Biology coursework, Summer 1997

Wake Forest University Winston-Salem, North Carolina
B. A. Political Science, Cum Laude, May 1997

Otago University Dunedin, New Zealand
Cultural Studies, Spring 1995

Personal Information

Languages: English (Native) French (Good)
Country Experience: Cape Verde, Eritrea, Federated States of Micronesia, Fiji, Gambia, Ghana, Grenada, Guinea, Guinea-Bissau, Indonesia, Kiribati, Liberia, Marshall Islands, Mauritania, Nigeria, Oman, Saint Lucia, Senegal, Sierra Leone, Solomon Islands, Tonga, Trinidad & Tobago, Tuvalu