

The Marine Biological Association of India was invited by the American Fisheries Society (AFS) to team with other aquatic scientific societies worldwide to author a *“Statement of World Aquatic Scientific Societies on the Need to Take Urgent Action Against Human-Caused Climate Change, Based on Scientific Evidence.”* A Press Release Statement is being released on September 14, 2020 and list of Associations is attached.

## **World’s Leading Aquatic Scientific Societies Urgently Call for Cuts to Global Greenhouse Gas Emissions**

*Dire consequences for freshwater and marine resources without significant and fast action*

Bethesda, MD (September 14, 2020) In an unprecedented [statement](#) released today, the American Fisheries Society (AFS) joined forces with 110 aquatic scientific societies representing more than 80,000 scientists across the world to sound a climate change alarm. The societies call for drastically curtailed global greenhouse gas emissions to avoid the worst impacts of man-made climate change to fish and aquatic ecosystems. Unless urgent action is taken to reduce emissions, scientists predict catastrophic impacts to commercial, recreational, and subsistence fisheries and human health and global economies.

“Swift and resolute action by governments and by individuals to reduce emissions is essential to halt irreversible impacts to freshwater and marine ecosystems, fish, and fisheries from climate change. We must act now to safeguard our drinking water, food supplies, and human health and well-being. These grim predictions for the world’s aquatic ecosystems are not just theoretical. They are affecting us now and failure to act will imperil future generations,” said American Fisheries Society President Scott Bonar.

Climate change is already altering marine and coastal ecosystems with significant implications for wild capture fisheries and marine economies. Projected increases in ocean temperature are expected to reduce the maximum catch potential in most areas in the U.S. Many harvested stocks will shift from one area to another, or even across international boundaries with implications for seafood supply, ports, and associated businesses. Loss of habitat from sea level rise will lead to declines in the vast majority of commercially and recreationally harvested marine finfish and shellfish that are dependent on estuaries and coastal systems for some stage of their life cycle. Increased carbon dioxide absorption is changing ocean chemistry, rendering some waters too acidic for marine organisms with calcium shells, such as oysters and clams, and threatening the base of the marine food web.

"Coral reefs are threatened globally by rising temperatures, ocean acidification, surface runoff, and pollution. Unless dramatic action is taken to reduce greenhouse gases and local

environmental impacts, coral reefs as we know them will probably not exist by the end of this century," said Andréa Grottoli, President of the International Coral Reef Society.

Freshwater fish are especially threatened by the impacts of climate change. Forty percent of all in North America are today imperiled as a result of pollution, habitat loss, water withdrawals, and invasive species. Climate change coupled with these existing stressors will lead to significant declines in freshwater fish, with devastating consequences for cultural, recreational, and economic value of freshwater systems.

"Climate change is warming rivers, lakes, and streams throughout America, reducing habitat availability for freshwater fish, particularly coldwater species. Longer summers and warmer winters are reducing snowpack essential for maintaining blue ribbon trout fishing in the West. Anglers and the recreational tourism dependent businesses that depend on them will see drastic declines in the number of fish and days on the water," said AFS Executive Director Douglas J. Austen, Ph.D.

Across the globe, incomes, food security, and livelihoods of aquatic resource-dependent communities are already at risk. Climate change threatens food security by endangering fish, an essential source of protein for many across the globe.

"Fisheries provide a valuable protein depended on by billions of people, especially those in developing countries. Climate change is putting that key protein source at risk. The current trajectory of greenhouse gas emissions requires urgent attention to ensure the future of global fisheries," said Bronwyn Gillanders, President of the World Council of Fisheries Societies.

According to the Food and Agriculture Organization of the United Nations, fish accounts for 17% of animal protein consumed globally, fishing and aquaculture directly employ almost 60 million people, and global trade in fish products has reached US\$152 billion per year, with 54% originating in developing countries.

"Aquaculture, both freshwater and marine, employs over 21 million people and in 2018 accounted for 46% of global fish and seafood production and 52% of fish and seafood for human consumption. The impacts of human-caused climate change on production systems threaten this vital source of income and food security," said Jimmy Avery, President of the World Aquaculture Society.

In addition to reductions in emissions, aggressive policies and programs are required to mitigate the effects of climate change to freshwater fish and to preserve habitat essential for resilience. If we are to avoid losing countless species that provide immeasurable benefits to society, we must also mitigate the impacts of climate change on fish and fisheries and plan for adaptation required to ensure the long-term health of our freshwater, coastal, and marine ecosystems and the many economies that depend upon them. Intact, healthy habitats can help to provide resilience for fish and store carbon.

"When healthy, aquatic ecosystems are important allies that capture carbon and reduce climate warming, but when damaged, they may let go of the large amounts of carbon they hold. We need to protect our healthy aquatic ecosystems to maintain their crucial storage of carbon to help reverse the effects of climate change," said Antonio Camacho, Chairperson of the European Federation for Freshwater Sciences.

	<b>Society</b>	<b>email</b>
1.	American Fisheries Society	scott_bonar@msn.com
2.	American Institute of Fishery Research Biologists	kim.anthony@aifrb.org
3.	American Society of Ichthyologists and Herpetologists	christopher.beachy@selu.edu
4.	American Water Resources Association	bcody@codyresearch.com
5.	Asian Fisheries Society	agferrer@upv.edu.ph
6.	ASOCIACIÓN DE OCEANÓLOGOS DE MÉXICO, A.C.	cpeynador@lorax.com.mx
7.	Asociacion Internacional de Hidrogeologos - Mexico Chapter	lizwehncke@gmail.com
8.	Asociatia Romana de Limnogeografei (Romanian Limnogeographical Association)	gastescu_petre@yahoo.com
9.	Association Française de Limnologie / French Limnological Association	christophe.piscart@univ-rennes1.fr
10.	Associazione Italiana di Oceanologia e Limnologia	nico.salmaso@fmach.it
11.	Australian Coral Reef Society	austcoralreefsoc@gmail.com
12.	Australian Meteorological and Oceanographic Society	slfiddes@gmail.com
13.	Australian Society for Fish Biology	Alison.King@latrobe.edu.au
14.	BirdLife Australia	paul.sullivan@birdlife.org.au
15.	Blue Ventures	al@blueventures.org
16.	British Phycological Society	secretary@brphycsoc.org
17.	Canadian Aquatic Resources Section (CARS) of AFS	c.hasler@uwinnipeg.ca
18.	Canadian Centre for Evidence-based Conservation	stevencoock@cunet.carleton.ca
19.	Canadian Conference for Fisheries Research	stevencoock@cunet.carleton.ca
20.	Canadian Society of Zoologists	sleys@ualberta.ca
21.	Coastal & Estuarine Research Federation	spark@cerf.science
22.	Coastal Research and Education Society of Long Island (CRESLI)	president@cresli.org
23.	Community of Arran Seabed Trust	email@arrancoast.com
24.	Conchological Society of Great Britain and Ireland	martinjwilling@gmail.com
25.	Croatian Association of Freshwater Ecologists (CAFÉ, HUSEK)	
26.	Czech Limnological Society	kalous@af.czu.cz
27.	Deep Ocean Stewardship Initiative: Climate and Fisheries Working Groups	llevin@ucsd.edu
28.	Desert Fishes Council	mmgbean@gmail.com

29.	EFYR European Fresh and Young Scientists	
30.	European Federation of Freshwater Sciences and Associated Societies	antonio.camacho@uv.es
31.	Finnish Limnological Society	
32.	Fisheries Society of the British Isles	g.r.carvalho@bangor.ac.uk
33.	Freshwater Fisheries Society of BC	Adrian.Clarke@gofishbc.com
34.	Freshwater Mollusk Conservation Society	jtiemann@illinois.edu
35.	German Ichthyological Society	F.Herder@leibniz-zfmk.de
36.	German Limnological Society (DGL)	markus.weitere@ufz.de
37.	Gilbert Ichthyological Society	Christina.Murphy@oregonstate.edu
38.	Hungarian Hydrological Society	
39.	Hydroecological Society of Ukraine	novitskyroman@gmail.com
40.	Iberian Association of Limnology	bonada@ub.edu
41.	Ichthyological Society of Japan	s-gento@kahaku.go.jp
42.	Ichthyological Society of Ukraine	demvik.fish@gmail.com
43.	International Association for Danube Research	crisrina.sandu@danube-iad.eu
44.	International Association for Great Lakes Research (IAGLR)	everhamme@limno.com
45.	International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC)	sbalayon@seafdec.org.ph
46.	International Coral Reef Society	grottoli.1@osu.edu
47.	International Federation of Hydrographic Societies	eric.langlois@pm.me
48.	International Peatland Society	marko.pomerants@peatlands.org
49.	International Phycological Society	vis-chia@ohio.edu
50.	International Seaweed Association	daniel.robledo@cinvestav.mx
51.	International Society of Limnology	<a href="mailto:mehner@igb-berlin.de">mehner@igb-berlin.de</a>
52.	International Water History Association	danielwdmacfarlane@gmail.com
53.	Irish Freshwater Sciences Association	
54.	Lake Victoria Fisheries Organization (LVFO)	smahongo@lvfo.org
55.	Living Oceans Society	kwristen@livingoceans.org
56.	Macrolatinos@ Network	alonso.ramirez@ncsu.edu
57.	Malacological Society of London	J.W.Grahame@leeds.ac.uk
58.	Marine and Oceanographic Technology Network	rhondajmoniz@gmail.com
59.	Marine Biological Association of the United Kingdom	matfr@MBA.ac.uk
60.	Marine Stewardship Council	alene.wilton@msc.org
61.	National Association of Marine Laboratories (NAML)	robt.dickey@austin.utexas.edu
62.	Netherlands Malacological Society (Nederlandse Malacologische Vereniging)	sylviavl@xs4all.nl
63.	North American Lake Management Society	pthomas@nalms.org
64.	Oceania Condriichthyan Society	brit.finucci@gmail.com
65.	Ocean Conservation Society	mbearzi@oceanconservation.org

66.	Philippine Association of Marine Science	pmas16.secretariat@gmail.com
67.	Phycological Society of America	dcasamat@unf.edu
68.	Polish Hydrobiological Society	marszel@umk.pl
69.	Romanian Ecological Society	
70.	Scientific Committee on Antarctic Research	steven.chown@monash.edu
71.	Serbian Water Pollution Control Society SWPCS	
72.	SIL Austria	martin.kainz@donau-uni.ac.at
73.	Slovak Ichthyological Society	jaroslav.andreji@uniag.sk
74.	Slovak Limnological Society (SLS)	bitusik@orangemail.sk
75.	Sociedad Chilena de Limnología	jorge.nimptsch@uach.cl
76.	Sociedad Científica Mexicana de Ecología, A.C.	soc.mex.ecol@gmail.com
77.	Sociedad Iberica de Ictiologia	pmgg@ualg.pt
78.	Sociedad Ictiológica Mexicana	mnav0424@gmail.com
79.	Sociedad Mexicana de Planctologia A.C.	gaceves@ipn.mx
80.	Sociedad Mexicana para el Estudio de Los Florecimientos Algales Nocivos (SOMEFAN) - Mexican Society for the Study of Harmful Algal Blooms	aramis.olivos@gmail.com
81.	Sociedade Brasileira de Carcinologia	presidente@crustacea.org.br
82.	Société Française d'Ichtyologie	philippe.keith@mnhn.fr
83.	Society for Conservation Biology Marine Policy Section	eknight@pewtrusts.org
84.	Society for Freshwater Science	alonso.ramirez@ncsu.edu
85.	Society for the Study of Amphibians and Reptiles	marty.crump@usu.edu
86.	Society of Canadian Limnologists/Société canadienne de Limnologie (SC)	bjoern.wissel@uregina.ca
87.	Society of Wetland Scientists	lbattagl@siu.edu
88.	Southern African Soc. Aquatic Scientists	Victor.Wepener@nwu.ac.za
89.	Spanish Malacological Society (Sociedad Española de Malacología)	casanova@uma.es
90.	Swiss Hydrological and Limnological Society	dorothea.hug@gmail.com
91.	The Australian Freshwater Sciences Society	mreid24@une.edu.au
92.	Australian Marine Sciences Association	rachel.przeslawski@ga.gov.au
93.	The Brazilian Society of Ichthyology	contato.sbi@gmail.com
94.	The Coastal Society	tebigford@gmail.com
95.	The Freshwater Biological Association	llavictoire@fba.org.uk
96.	The Hydrographic Society of America	richard.t.brennan@noaa.gov
97.	The Hydrozoan Society	aino.hosia@uib.no
98.	The Institute of Fisheries Management	Paul.coulson@ifm.org.uk
99.	The Japanese Society of Fisheries Science	fishsci@d1.dion.ne.jp
100.	The Limnological Society of Turkey	
101.	The Marine Biological Association of India	mbai@rediffmail.com

102.	The New Zealand Freshwater Sciences Society (NZFSS)	kate@kmwater.co.nz
103.	The Society for Marine Mammalogy	president@marinemammalscience.org
104.	The World Council of Fisheries Societies	Bronwyn.gillanders@adelaide.edu.au
105.	Vietnam Fisheries Society (VINAFIS)	nchoi52@gmail.com
106.	Western Indian Ocean Marine Science Association	r.bhagooli@uom.ac.mu
107.	Wild Oceans	plgromen@wildoceans.org
108.	World Aquaculture Society	javery@drec.msstate.edu
109.	World Sturgeon Conservation Society	aerespe@mac.com
110.	Zoological Society of Pakistan	arshaksbs@yahoo.com