

THE ANNUAL SYMPOSIUM OF ESRAG RICON-TAIPEI-PRECON

Friday June 11, 2021 - 8:30am-3:30pm CST & 8:30am-3:30pm EDT

THE NEW ENVIRONMENT



Dr Patricia Armstrong – Co-Host



Dr Christopher Puttock – Co-Host



Dr Tamara Galloway
– Microplastics



Dr Toddi Steelman
– Fire Ecology



Dr Ananda Kumar
- Living with Elephants



Una Hobday
– Edible plants



Robert Edwards
– Solar in schools



DS Joy Huang
– Alternate Energy



Brian Braginton-Smith
– Connected Communities



Ebru Debbag
– Textiles



Dr Geetha Jayaram
- What we eat



Dr Sibyl Anwander
– Net Zero Emissions



Dr Patricia Armstrong – Co-Host

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Dr Christopher Puttock – Co-Host

Part 1: Morning sessions		
Time	THE NEW ENVIRONMENT : why and why now?	Speaker
8:30 AM	Webinar Welcome and Overview	Dr Christopher Puttock
8:40 AM	Zoom Webinar orientation: Q&A	Trainer: Chris Zabriskie
8:45 AM	Webinar Protocol and Dignitaries	
9:00 AM	1 Planetary Health Session	Moderator: Dr Gunilla Östberg
9:05 AM	1.1 Microplastic pollution	Dr Tamara Galloway OBE
9:30 AM	1.2 Fire Socio-Ecology	Dr Toddi A Steelman
10:00 AM	Biodiversity and Sustainable Food Production	Moderator: Dr Christopher Puttock
10:05 AM	2.1 Living with Elephants	Dr M Ananda Kumar
10:30 AM	2.2 Edible plants – a solution to malnutrition worldwide	PDG Una Hobday OAM
11:00 AM	3 Energy Production Session	Moderator: Aur Beck
11:05 AM	3.1 Solar in remote island schools and information sharing	Robert Edwards OAM
11:30 AM	3.2 Ending fossil fuels - capturing GHG/heat pollution	DS Joy Huang
12:00 PM	Lunchtime Programs	



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Part 2: Afternoon sessions		
12:00 PM	Lunchtime Program	Moderator: Ingrid Hesser
12:10 PM	A1 I-Fix-The-Planet videos	Presenter: RIP Holger Knaack
12:40 PM	A2 Environmental Art	
1:00 PM	4 Circular Economy Session	Moderator: Dr Yaşar Atacık
1:05 PM	4.1 Connected Communities	Brian Braginton-Smith
1:30 PM	4.2 Textiles	Ebru Debbağ
2:00 PM	5 Well-being and Resilience Session	Moderator: Dr Rick Randolph
2:05 PM	5.1 Our plate affects our planet	Dr Geetha Jayaram
2:30 PM	5.2 Net Zero Rotary	Dr Sibyl Anwander
3:00 PM	Closing Remarks	Dr Patricia Armstrong
3:30 PM	End	Dr Christopher Puttock



Gunilla Östberg– Moderator

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Dr Christopher Puttock – Chair

SESSION 1 : PLANETARY HEALTH ELIMINATING POLLUTION AND INVASIVE SPECIES FOR A HEALTHY WORLD

The land, the water, and the air, the substrate for all life on this planet, has been damaged by the lack of good stewardship of these natural resources. As our human population approaches eight billion, the weight of our presence is undeniable and signs of the changes that we have made are everywhere.

Today we focus on human interventions by the way of two significant planetary environmental problems: microplastics throughout our ecosystems, and fire ecology exacerbated by changing weather systems and our rearrangement of the ecological landscape

9:00-9:30am Dr Tamara Galloway OBE

Professor of Ecotoxicology, University of Exeter
Exeter, England, UK

Topic: **Microplastics** : Microplastics and nano-plastics are now found as contaminants of sea water around the world. Why are they there? What impact do these small particles have on the marine food chain? Dr Galloway’s findings will astound you! Then, also what can be done to reduce this contamination of our blue planet.

Bio: Dr Tamara Galloway is Professor of Ecotoxicology at the University of Exeter and also holds an Honorary Chair at University of Exeter Medical School. Her research focus is in understanding how organisms adapt and survive in polluted environments and she studies the health effects of some of the most pressing priority and emerging pollutants: including complex organics, plastics additives, micro- and nano-particles. She is an expert member of several (inter)/national committees charged with environmental protection and is listed by Clarivate from 2017 as one of the world’s most highly cited researchers. Her work has won numerous awards including an OBE in 2019 and Queen's Anniversary prize in 2020.





Gunilla Östberg– Moderator

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9:30-10:00am Dr Toddi A Steelman

Stanback Dean of the Nicholas School of the Environment
Duke University, Durham, North Carolina, USA
President -- International Association of Wildland Fires

Topic: **Fire Socio-Ecology** : Humans have manipulated fire for thousands of years. In a warming and, in some places, drier world fire management is a survival issue. Dr Steelman brings her multidisciplinary expertise to how humans have exacerbated wildfires, and how communities and agencies interact towards more effectively managing the flames.

Bio: Dr Toddi Steelman's research focuses on improving the governance of environmental and natural resources, emphasizing the role of the public and community in science, policy, and decision-making interactions. She has a 20-year history working on the human dimensions of wildfire research and has conducted research on community aspects of wildfire management in Canada and the United States. Dr Steelman was co-founder, with Dr Branda Nowell, of the Fire Chasers project at North Carolina State University (www.firechasers.ncsu.edu), which focuses on advancing the science of adaptive capacity toward more disaster resilient communities.





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Dr Pat Armstrong – Co-Host

SESSION 2 : BIODIVERSITY PRODUCING FOOD WITHOUT DAMAGING THE LIFE THAT SUSTAINS US

Biodiversity, the plants and animals of the air, sea, and soil, provide the life-giving services, the resources that fill our lungs with oxygen and stomachs with food. Thirty percent of the world's forests have been replaced with farmland and in many places our farming practices have changed soil to wasteland. Our seas have been scoured for anything living turning the ocean into aquatic deserts.

Today we focus on human interventions by the way of two significant biodiversity environmental problems: living with our large animals, and the vast diversity of local plant foods that we are ignoring at our peril and their extirpation.

10:00-10:30am Dr M Ananda Kumar

Senior Scientist, Nature Conservation Foundation
Mysore, India

Topic: **Living with Elephants** : Human-elephant conflict has been one of the international conservation issues. In India the daily interactions between people and elephants endanger lives on both sides, besides extensive property damage. Can mobile technology and community participation promote coexistence in these contested landscapes?



Bio: Dr Ananda Kumar is a senior scientist at the Nature Conservation Foundation, Mysore, India. He has studied ecological and behavioural aspects of Asian elephants and their interactions with people in the Anamalai Hills of Tamil Nadu in southern India. Dr Kumar has been involved in the conservation of Asian elephants in the human-dominated landscapes for nearly two decades. He was the recipient of the Carl Zeiss Wildlife Conservation Award in 2012, Whitley Fund for Nature (Green Oscar) award in 2015, and Vasundhara Satkar Award in 2016.



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10:30-11:00am PDG Una Hobday OAM

Chair - Plant Food Solutions Rotary Action Group (PFSRAG)
Hobart, Tasmania, Australia

Topic: **Edible plants** : There are thousands of edible plants worldwide that are largely ignored as local foods. Over four decades Tasmanian agricultural scientist Bruce French AO has created the world's largest database of these plants. Hear how these data can be used globally as educational materials to address malnutrition, and food security.

Bio: PDG Una Hobday was the first female president of a Rotary Club, the RC Hollywood Western Australia, also the first female District Governor in the southern hemisphere being elected DG District 9540, 1999 – 2000. She has held many Rotary District roles in Western Australia and Tasmania, having moved to the Island State in 2001. She is currently a member of Rotary Club of Hobart. Her working life commenced as a General Nurse at The Alfred Hospital in Melbourne. In latter years she has fulfilled administrative roles in health such as a District Health appointment, Manager Alcohol and Drug Service and State Manager for Adoption Services. Una is Chair of Food Plant Solutions Rotary Action Group.





Aur Beck – Moderator

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Dr Christopher Puttock – Chair

SESSION 3 : CLEAN ENERGY PRODUCING ENERGY WITHOUT OVERHEATING OUR WORLD

For the past 200 years more than 80% of our energy needs have been supplied by fossil fuels. This was heat and light, transformed by plants, locked into carbon and stored deep underground. Life on earth took several hundred millions years to sequester this heat and power away. Humanity is now liberating this energy literally thousands of times faster than it was made. Consequently, every second we are overheating our world.

Today we focus on human interventions by the way of two significant energy environmental problems: the way we can capture and use of energy locally, and our transition away from fossil fuels.

11:00-11:30am Robert Edwards OAM

CEO - Its Time Foundation
Plastic Free Oceans & Sustainable Social

Topic: **Solar in Schools:** The technology for producing energy is now readily available and energy storage is rapidly catching up. Using solar arrays to capture energy to power education in schools is now a matter of resolving priorities. Environmental education and well-being can be rapidly enhanced by these solar installations.

Bio: Rob Edwards is the founder of *Its Time Foundation*. He worked in the health industry for twenty-five years including five years in cardiac rehabilitation and two years with disadvantaged youth. He was Managing Director of Health Futures Pty Ltd (1992-2008), leaving that position to focus on *Its Time*. He also founded *Plastic Free Oceans* and *Sustainable Social* and with others established the Climate Peace Forum. In 2020 Rob was awarded the Order of Australia Medal for his charitable work. When not working with the Foundation, Rob is a professional speaker.





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11:30am-12:00pm Joy Huang DS 3523

CEO - Sun Power Silicon Co, Ltd. Taipei, Taiwan

Topic: **Alternate Energy** : Fossil fuels have been the keystone of energy for the industrial revolution. Their use remains unabated in society today. They are also the uncontested primary source of greenhouse gases and heat pollution that impacts the climate all over the world. How quickly and radically can their use be curtailed to reverse climate disruption with future-oriented policies?

Bio: DS Joy Huang is the CEO of Sun Power Silicon Co, Ltd. Her extensive background consists of renewable energy, architecture, and urban design. She is also in charge of an architecture firm and two renewable energy companies in Taiwan. She has been part of the Rotary family since 1999 and has participated in Rotary events and projects in more than eight countries during this time. As a philanthropist and a Rotarian, DS Joy has been constantly recognized for her dedication and service to the community.





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Dr Yaşar Atacık – Moderator

Dr Christopher Puttock – Chair

SESSION 4 : CIRCULAR ECONOMY RESPONSIBLY CREATING, USING AND REPURPOSING COMMODITIES

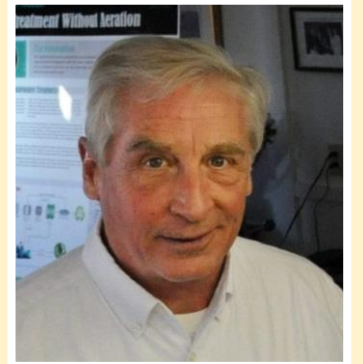
Over the past several millennia humanity deviated from natural circle of life by creating a linear economy of things. Humans made products to be durable then disposable when past their useful life. This was a trickle two centuries ago and now rapid torrent of permanent waste. The circular economy emulates the circle of life, designing commodities that will have a new life when the first purpose has been consumed.

Today we focus on human interventions by the way of two significant circularity environmental problems: the way we use resources in our communities, and vast, largely unnoticed, environmental costs of our clothing.

1:00-1:30pm Brian Braginton-Smith

ED - Lewis Bay Research Center; Aquagen-ISI, Massachusetts, USA

Topic: **Circularity & Community Resiliency** : In connected communities, wastewater is converted to clean water, energy, oxygen and food. They also capture excesses of carbon dioxide, nutrients and methane. Resource reclamations driven by reuse, repurposing and recycling, are managed by microgrid-based SMART Internet of Things networks. These elements underpin the assessment of Net-Zero Communities.



Bio: Brian Braginton-Smith is Executive Director of the Lewis Bay Research Center in Massachusetts, USA, President and CEO of Aquagen-ISI, and Smart Cities Director of Boston Greenfest. He has spent his career working in ocean and environmental science, collaborating with the U.S. Department of Commerce, NOAA, and the U.S. Department of Energy. Brian began the discussion on offshore wind which bore fruit in the Cape Wind Project. He has been working on advanced infrastructure systems evolution, alternative resource development, and ultimately the Connected Community nexus. He is now developing the Cape Cod Watershed Institute as well as a living laboratory for experiential learning and a net-zero campus at his *alma mater*, Dennis-Yarmouth High School, where he was an Interact member for four years. Brian is a member of the Yarmouth, Massachusetts Rotary Club, and a Paul Harris Fellow



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1:30-2:00pm Ebru Debbağ

Permatürk Foundation, Istanbul, Turkey

Topic: **Textiles** : The very significant pollution source in the world is clothing. Textile pollution begins with farming and synthetic fabrics. After wasting closet space for many years, they end up as trash in landfills, leading to greenhouse gas emissions and soil and water toxins. Ms Debbağ will help us through this maze to minimize the environmental damage of our fabric footprint.



Bio: Ebru Debbağ has more than 30 years fashion supply chain experience. She is currently consulting the global industry stakeholders in their transition to circularity through her platform Indigofriends which is based in NYC and Istanbul. Ebru is a graduate of the prestigious American Robert College of Istanbul (1987) and Istanbul Technical University, Textile Engineering (1991), and is also a part of the Singularity University network since 2016. Notable is Ebru's 27 years in Orta Anadolu where she led global sales, marketing, product development and R&D roles. She is currently leading sales, marketing and sustainability roles of Soorty Enterprises based in Pakistan. Ebru is a co-founder at Permatürk Foundation and on the board of Etkiyap Dernegi and Yuvam Dünya.



Rich Randolph – Moderator

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SESSION 5 : BE WELL/RESILIENCE LIVING IN HARMONY WITH NATURE AND OURSELVES

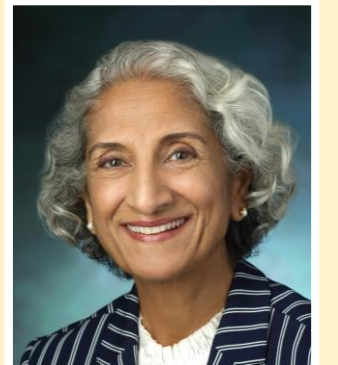
Long gone is the time when human presence was so insignificantly small as to not to make any noticeable impact on our planet. Today we look around ourselves and there is virtually no place where our footprint cannot be seen, felt, or heard. Our surroundings, our neighborly interactions, our natural and built environment, affects our well-being: our health, equity, and happiness. The joy of living requires this harmony and balance, the curiosity, sustainability and resilience we have with our world.

Today we focus on human interventions by the way of two significant behavioral problems: what we eat not only affects our health but also the environment, and then managing the burden of the oversized collective human footprint.

2:00-2:30pm Dr Geetha Jayaram DGE 7620

Armstrong Institute for Patient Safety and Quality
Johns Hopkins University School of Medicine Baltimore, Maryland, USA

Topic: **What we eat** : Our food-chain accounts for 80% of deforestation, 85% of fish-stock depletion and 70% of freshwater use. Even without climate change, and what and how much we eat affecting health, this path does not bode well for life on Earth. Dr Jayaram recommends stepping up to eat to beat climate change and biodiversity loss.



Bio: Dr Geetha Jayaram is the associate professor of psychiatry and behavioral sciences at the Johns Hopkins University School of Medicine and Armstrong Institute for Patient Safety and Quality. She was recipient of The Rotary Foundation Global Alumni Service to Humanity Award at the RI Convention in Sao Paulo, Brazil in 2015, being honored for her work over the past two decades for service to those in Baltimore who are poor and mentally ill, and for establishing a network of mental health clinics for women and children in her native India: serving more than two million people, the Maanasi Clinic in Mugalur, Karnataka. She also teaches at St. John's Medical College in Bangalore. She is locally renowned for her advocacy of health through plant-based diets.



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2:30pm-3:00pm Dr Sibyl Anwander

CEO - anwander consulting

Topic: **Net Zero Rotary** : The never-ending abundance of natural and biological resources, and the world as a waste dump, and humanity resilience to nature, never were viable realities. We need to address “Why” and “Why Now”. We need Net-Zero Rotary, for us and for all our service projects. Is Rotary ready to take on this challenge?

Bio: Dr Sibyl Anwander has worked as a researcher and lecturer in the field of Agricultural Economics at ETH Zürich (Swiss Federal Institute of Technology) before she took over the lead of Public Affairs and Sustainability with the Swiss Retailer Coop. In this function, she served on various boards of business initiatives for sustainable supply chains. She then became Head of Economics at the Federal Office for the Environment with a special focus on sustainable consumption and production, resource economics and sustainable finance. Since moving to Hamburg, she is working as an independent consultant for sustainability. Her expertise is in potentials of Natural Carbon Solutions (NCS) working toward Net Zero.

