IMPORTANT NOTE:

Please consider that the content in this presentation was prepared by, and belongs to, the respective panelists and does not necessarily represent the views or opinions of UNITAR and UNCTAD.
Programme

15:00 - Introductory remarks by

Mr. Richard Bolwijn
Head of Enterprise Branch, Division on Investment and Enterprise, UNCTAD

Ms. Suzanne Johnson
Senior Advisor to the UN Global Compact, Sustainable Ocean Business

Panelists
From 15:15 to 16:15

Ms. Angelique Antat
Principal Secretary, Entrepreneurship and Industry Department, Ministry of Investment, Entrepreneurship and Industry, Republic of Seychelles

Dr. Paul Pounder
PhD, Professor and Director of MBA Program, St. George’s University, West Indies

Ms. Nicole Leotaud
Executive Director, Caribbean Natural Resources Institute, Trinidad and Tobago

Q&A session

Ms. Tatiana Glad
Co-founder of Impact Hub Amsterdam, Netherlands

Mr. Timothy Bouley
CEO of BioFeyn, France

Ms. Judith Underwood
CEO of Blue Institute Labs, U.S.

15:10 - Virtual Davos-style discussion moderated by

Mr. Alex Mejia
Director of the Division for People and Social Inclusion, UNITAR

16:15 - Q&A session
Inaugural Remarks
Welcome Remarks

Mr. Richard Bolwijn

Head of Enterprise Branch,
Division on Investment and Enterprise,
UNCTAD
Welcome Remarks

Ms. Suzanne Johnson
Senior Advisor to the UN Global Compact,
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Moderator

Mr. Alex Mejia

Director of the Division for People and Social Inclusion, UNITAR
Globally, as of 11:09am CEST, 27 May 2021, there have been 167,958,998 confirmed cases of COVID-19, including 3,492,673 deaths, reported to WHO. As of 26 May 2021, a total of 1,545,967,545 vaccine doses have been administered.

Global Situation

167,958,998 confirmed cases

3,492,673 deaths

Source: World Health Organization

Source: WHO
COVID-19 AND ENTREPRENEURSHIP

The coronavirus (COVID-19) outbreak has caused a global health emergency and a global economic slowdown, among other consequences.

Trade, investment, growth, and employment are all affected and the crisis will have an impact on the achievement of the UN Sustainable Development Goals. Likewise, as with any crisis, the situation has become even worse in developing countries, where the stability or growth for start-ups and MSMEs has been significantly endangered. Every business that has been forced to close, leads to multiple stories of unemployment, economic and social dislocation, as well as staggering uncertainty.
COVID-19 AND ENTREPRENEURSHIP

It remains paramount that governments, in partnership with different stakeholders dedicate their support to drive competitiveness of micro, small and medium-sized enterprises (MSMEs) with a particular focus on those small businesses in developing countries.

“We need a fundamental rethinking of SME and entrepreneurship policies to improve business conditions and access to resources. We need a renewed measurement agenda to understand how countries, regions and cities can capitalize on their many diverse small businesses as drivers for inclusive and sustainable growth.”

- OECD Secretary-General Angel Gurría
The blue economy and entrepreneurship concept concerns marine economic activity as a driver of sustainable growth and development.

The ocean economy represents the world’s seventh largest economy and is valued at around $3 trillion annually.

Within this context, it is interesting to understand the role entrepreneurs play in redefining blue economic markets and developing better products, services and ways of working that reduce or even negate human and economic impact on the oceans.

Source: The World Bank
UNDERSTANDING BLUE ENTREPRENEURSHIP/ ECONOMY

The oceans cover 70% of our planet and are fundamental to the wellbeing of the biosphere and our survival. However, human impact has taken an enormous toll on the health of our oceans.

During the UN 2016 Global Integrated Marine Assessment it was announced that:

“The impacts of humanity on the ocean are parts of our inheritance and future. They have helped to shape our present and will shape not only the future of the ocean and its biodiversity as an integral physical and biological system, but also the ability of the ocean to provide the services that we use now, that we will increasingly need to use in the future and that are vital to each of us and to human well-being overall.”

Source: UN 2016 Global Integrated Marine Assessment; OECD
UNDERSTANDING BLUE ENTREPRENEURSHIP/ ECONOMY

The global ocean economy is valued at contributing approximately 3% to the world’s GDP, according to a 2016 OECD study. Globally, approximately 350 million jobs are linked to the oceans through fishing, aquaculture, coastal and marine tourism, and research activities. Further, many ocean-based industries have the potential to outperform the growth of the global economy as a whole, including boosting employment. Over the next 15 years and through to 2030, the ocean economy could more than double its economic contribution to the global GDP.

Source: UN 2016 Global Integrated Marine Assessment; OECD
THE BLUE ECONOMY

- uses smart shipping to lessen the impacts on the environment
- is inclusive and improves the lives of all
- is based on sustainable fisheries
- harnesses renewable energy
- creates jobs, reduces poverty and ends hunger
- conserves marine life and oceans
- protects coastal communities from the impacts of climate change
- takes action against illegal fishing
- tackles marine litter and oceans pollution

Source: Ocean Action Hub
Programme

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Principal Secretary,
Entrepreneurship and Industry Department,
Ministry of Investment,
Republic of Seychelles
THE REPUBLIC OF SEYCHELLES

Panelist:
Principal Secretary of the Entrepreneurship and Industry Department, Ms. Angelique Antat,
Ministry of Investment, Entrepreneurship and Industry,
Republic of Seychelles
GEOGRAPHICAL FACTS

1.358 square kilometres of ocean.

Why Seychelles must explore Blue Economy?
- Perfect position to explore our resources.
- Reduce reliance on tourism.
- Introduce sustainability in the preservation of our islands.

The pillar of the economy is tourism.

Why Seychelles must stop relying solely on tourism?
- Volatile industry.
- Weaknesses exposed during COVID-19.
Seychelles has been an advocate for sustainable marine ecosystem.

The Blue Economy Roadmap 4 Key Pillars:
- Economic Diversification and Resilience: reduce economic vulnerability and reliance on a small number of sectors and to increase the % GDP derived from marine sector.
- Shared Prosperity: create high value jobs and local investment opportunities.
- Food Security and well-being.
- Integrity of Habitats and Ecosystem Service, sustainable use, and climate resilience.
Seychelles’ Conservation Climate Adaptation Trust (SeyCCat):
- **Vision**: SeyCCAT envisions for Seychelles’ ocean and islands to be stewarded by the people of Seychelles, generating sustainable benefits for future generations to share.
- **Mission**: SeyCCAT strategically invests in ocean stakeholders to generate new learning, bold action and sustainable blue prosperity in Seychelles.

Eco-Sul Consulting and SeyCCAT conjunctly conducted a study in partnership with Enterprise Seychelles Agency (ESA).

Why can’t our young entrepreneurs venture into Blue Economy successfully?
- Lack the ability to identify and create sustainable job opportunities and enterprises in the Blue Economy.
- Are generally risk averse which is why they choose the “copycat” approach.
- Fear failure due to the lack of support hence, making it a major obstacle in starting a business, amongst others.

**BLUE GRANTS FUND DEFERRED FROM BGF #3**
- **GRANT VALUE**: SCR 1,000,000
- **SUBMITTED BY**: ENTERPRISE SEYCHELLES AGENCY
- **GRANT USE**: ENTREPRENEURSHIP DEVELOPMENT IN THE BLUE ECONOMY SECTOR THROUGH CAPACITY BUILDING FOR MSME’S & ESA STAFF.
Government of Seychelles is the recipient of a Grant from the Fund for African Private Sector Assistance (FAPA) to assist in the financing of the Support to Blue Economy MSMEs Technical Assistance Project.

Components of the project:
- Enhancing development opportunities in the Marine Biotechnology sector;
- Reinforcing technical capability in Research and Development and setting-up of an incubator for MSMEs; and
- Capacity building and fostering a culture of entrepreneurship.
CONTRAINTS

COVID-19 has made us rely heavily on the use of technology!

We must push for easier adoption to provide a platform for success for our entrepreneurs and MSMEs.

Seychelles as a Small Island Developing State is faced with the following constraints:

- Scarce land;
- Lack of infrastructural and technological support; and
- Limited ability to conduct Research and Development.
Science, Technology and Innovation Policy Review to teach our entrepreneurs and MSMEs to be confident.

With assistance of UNCTAD and AFDB we should have in place our Entrepreneurship Policy Strategy and EMPRETEC Seychelles.

Policy review and EMPRETEC Seychelles will provide us with the much needed framework for successful dive into Blue Economy.

Seychelles undoubtedly looks forward to contributing more extensively to the development of a Blue future!
THANK YOU
Dr. Paul Pounder

Professor and Director of MBA Program,
St. George’s University,
West Indies
Blue Entrepreneurship and MSMEs resurgence - The case of Barbados

Dr. Paul Pounder
St. George’s University
Impact of COVID 19 on the blue economy

• Pressure to fish and sell from home environment as fish markets are closed and access restricted – reduced standards.
• Decreased law enforcement at sea as energies are focused elsewhere. Protected fishing areas left vulnerable.
• Traditional supply chains are disrupted – cruise lines, hotels and restaurants cease operations. Reduced opportunity to sell fish.
• Water sports are stopped – No sport fishing, no jet skis, no leisure craft. Less activity around shore reefs.
• Beach workers’ trade at a stand still – No umbrella or beach chair rentals, no beach bars opened, no beach massages or beach parlor treatments. Linked to reduction of waste on the beach.
• Blue economy workers (fisherfolk and beach operators) and their families shared a similar fate with other workers that could not apply their trade. However, these blue economy workers are already among the most disadvantaged in our society.
Noted shifts to Blue Economy

More part time fishermen and hobby fishers are spending more time fishing.

More consumers are trending to buying local fish as international stock (salmon and lobster) has been reduced due to disrupted supply chains.

More consumers are buying fish from local fish markets and avoiding super markets.
Blue entrepreneurship adaptations from COVID-19 crisis

• The closure of fish markets lead to selling from Fisherfolks’ homes and home delivery services.

• Decline in demand from supermarkets, restaurants and other traditional channels meant more stockpiling in local refrigerated facilities

• Consumer preferences for contactless deliveries

• Longer lines at fish markets with controlled entrances (6-ft apart and temperature checks)

• Reduction in the number of middlemen for health reasons
Government Policies and Initiatives—Blue Entrepreneurs

• The Ministry of Maritime Affairs & Blue Economy started in 2018
• Upgrade of several fish markets- development of attractive spaces that promote vending and entrepreneurship to encourage access to local goods.
• Make markets self sustainable with solar panels for energy and ice makers.
• Upgrade fishing facilities to the WTO phytosanitary standards to gain access to the European market
• Enhance fish landings around island
• Setting up Fish Aggregating Devices (FADS) which allow fishermen to know where to go and get fish
• Offer technical assistance and funding to fisher folks – innovative boat financing tools – build and lease
• Several other initiatives exist that encompass integrating local lifestyles and businesses
  - Single use plastics
  - Turtle project
  - Sargassum control
  - Lion fish
Sustainable use of marine resources

1) To date there is some activity towards marine resources sustainability
   - Reduction in the use of single use plastics
   - Cleaning of beaches and shores
   - Education in marine knowledge

2) Areas for improvement
   - Avoiding overfishing and setting up quotas
   - More scientific research on ocean ecosystem – especially with recent volcanoes and earthquakes in surrounding areas
In closing

A sustainable blue economy only emerges when there is a balance between long-term capacity of ocean ecosystems and the economic activity derived from the ocean.

We have started the process towards a sustainable blue economy but there is still a long way to go.
Ms. Nicole Leotaud

Executive Director, Caribbean Natural Resources Institute,
Trinidad and Tobago
Who in the blue economy is drowning?

COVID-19 and Caribbean local blue enterprises

UNCTAD-UNITAR Webinar: Blue entrepreneurship and MSMEs resurgence

May 27, 2021
Nicole Leotaud
Caribbean Natural Resources Institute (CANARI)
Community-based informal micro-enterprises are a pathway to an inclusive blue economy

Apiculture in mangroves

Community-based ecotourism

Mariculture farming ‘seamoss’ algae

Credit: FoProBiM, Haiti

Credit: Eco South Tours, Saint Lucia

Credit: La Baye Alternative Livelihood Org, Grenada
“We are not all in the same boat. We are all in the same storm.”

– Damian Barr, writer and broadcaster

Illustration: Barbara Kelley, WSJ Opinion
Challenges faced by Caribbean local blue enterprises

Institutions are disconnected from the needs of local blue enterprises

- Legal, regulatory and fiscal framework not in place to support hybrid social-green/blue community enterprises
- Limited existence of micro-finance and inaccessible by informal micro-entrepreneurs
- Business support services do not target/accommodate local blue enterprises

Biodiversity loss and climate change are impacting along value chains

- Coastal mangroves, coral reefs and other ecosystems being lost and degraded
- Climate change impacts along the value chain: sea level rise and warming, more intense storms and hurricanes, higher storm surge, droughts

Credit: CANARI
COVID-19 impacts on local blue enterprises

- Restricted operations and access to customers due to local lockdowns
- Closure of access to international markets – borders closed so no international tourists; international shipping reduced
- Competition and unsustainable use by coastal communities seeking subsistence and survival
- Bureaucracy blocked access to social safety nets and COVID-19 relief
- Limited access to health services and vaccines in the Caribbean mean risk aversion and long-term worries
Local blue enterprises responses to COVID-19

- Innovating to reach local markets
- Exploring value-added products
- Developing capacity to use ICTs for marketing and promotion
- Forming partnerships among enterprises within and across countries
Good practices in capacity building supporting local blue enterprises

1. Mentoring to build capacity in marketing, business management and organisational strengthening
2. Providing access to micro-finance with mentoring
3. Building capacity to use ICT tools to access digital markets and support
4. Climate proofing along their value chains
5. Fostering peer knowledge exchange and partnerships among enterprises and with those who can support them

Credit: FoProBiM, Haiti
Good practices in capacity building supporting local blue enterprises

6. Strengthening delivery of triple bottom-line benefits

Credit: FoProBiM, Haiti
Recommendations to support local blue enterprises for a just COVID-19 recovery

1. Invest in protecting and restoring coastal and marine ecosystems as the “blue capital” supporting local livelihoods and for climate adaptation
2. Measure the ‘invisible’ micro and informal enterprises and communicate impact to pull in additional support and partners
3. Build awareness of local products to develop local markets
4. Develop targeted policy, legislation, regulations, capacity building and micro-financing programmes
5. Protect them from investment in “big” blue economy initiatives that push them out of access to resources and the market
6. Allocate resources to civil society organisations and other intermediaries to scale out on-the-ground support and channel micro-finance

Credit: Sustainable Grenadines
Q & A session
Ms. Tatiana Glad
Co-founder of Impact Hub Amsterdam, Netherlands
About Impact Hub

Our purpose: accelerating the new economy, one that works for all, where impact is the norm.

How: We build the ecosystems that are needed for a just and sustainable society, where you can activate your first steps in sustainability, source and match innovative solutions, and accelerate your impact. We have 4 focus areas where we seek to contribute to systemic change: Food, Circularity, Fashion, Inclusion.
12+
Years of experience in accelerating impact businesses

90%
Of our growth program alumni make it!

4000+
Alumni from our start, grow, scale programs

€18M
Growth alumni companies have so far raised over €18M in funding.

50+
Programs run by Impact Hub Amsterdam

17,000+
Alumni can connect with 17,000+ Impactmakers in our worldwide network to grow their businesses
Global network.

One of the biggest impact networks around the world.

Inspiring Places
- We are a network of 100+ IMPACT HUBS in 55+ COUNTRIES.
- Impact Hubs hosted 11,000+ EVENTS each year across 5 CONTINENTS.

Vibrant Community
- 17,000+ MEMBERS from diverse and complementary backgrounds.
- 21 M Consumers bought products from our members.
- 150M People reached worldwide.

Impact Acceleration
- 12,800+ STARTUPS founded at Impact Hubs between 2012 and 2020.
- 460+ PROGRAMS ANNUALLY.

We are of the world’s largest multi-stakeholder communities and accelerators for social impact, with a unique global reach across developed and emerging markets.
Examples of entrepreneurship for our Blue Economy
For me, this is sustainability.
We take an ecosystems approach to engage diverse stakeholders on issues that matter.
1. Create Right Conditions
2. Build Entrepreneurship
3. Facilitate Access to Capital
4. Strengthen Connections
Join in the transition.

Feel free to reach out
tatiana.glad@impacthub.net
Mr. Timothy Bouley

CEO of BioFeyn,
France
The ocean contains more animal biodiversity than on land.

By mass, more than ¾ of all animals reside in the ocean and it is home to the majority of protists (e.g. protozoa, algae, mold)

32 of 33 animal phyla exist in the ocean and 15 varieties are exclusively present in the ocean

More than 40,000 unique biochemical compounds have been isolated from sea creatures
Only a tiny fraction of ocean life has been explored and understood.

**WHAT WE KNOW**

- **200,000** Identified marine species
- **4,000** Species for which we have biologic samples
- **500** Species for which we have genome assemblies

**WHAT WE DON’T KNOW**

- **1,800,000** (est.) Additional multicellular ocean organisms

We have identified only 10% of animal life in the ocean, stored biological samples of 0.2%, and assembled genomes of 0.0025%
Biotechnological applications of marine organisms

- Animal models
  - Assays
  - Anatomic
  - Physiologic

- Agricultural fertilizers
  - Seed coatings
  - Fishmeal
  - Algal-based marine proteins
  - Microbiome
  - Pigment
  - Genetic enhancement
  - Vaccines

- Aquaculture enhancers
  - Biofuels
  - Plastic substitutes
  - Biopolymers and coatings
  - Biomaterials

- Cosmetics
  - Anti-aging
  - Hair care
  - Colorants
  - Sun protection

- Drugs
  - Colds/flu
  - Hepes
  - HIV
  - Malaria
  - Tuberculosis
  - Infectious diseases
  - Alzheimer's
  - Anti-inflammation
  - Cardiovascular disease
  - Cancer
  - Epilepsy
  - Pain

- Environmental remediation
  - NCDs
  - Biosensors
  - Antifoulants

- Bioproductions for medicine
  - Bacterial toxins
  - Bone matrices
  - Collagen
  - Enzymes
  - Molecular labeling
  - Synthetic blood

- Enzymes
  - Industrial processes
  - Biomedicine
  - Environmental remediation

- Food enhancers/supplements
  - Nutraceuticals
    - Omega 3
    - Weight loss
    - Bakery items
    - Sugar replacement
    - Antioxidant additives

- Libraries
  - Gene sequences
  - Genetic blueprints

- Bioinformatics
There is tremendous precedent for applying living ocean resources to biotechnological challenges.

- **13 Nobel Prizes in medicine or chemistry**
  - action potential
  - kidney function
  - vision
  - fertilization
  - immune system

- **Dozens of approved and pipeline drugs**
  - HIV
  - Herpes
  - pain
  - hyperlipidemia
  - cancer
  - infections

- **Laboratory applications**
  - molecular marking
  - bacterial testing
  - cell culturing
  - catalyzing

- **Surgical bioproducts**
  - skin grafts
  - bone matrices
  - oxygen carriers

- **Cosmetic applications**
  - anti-aging
  - moisturizing
  - toning
  - sun protection
NANOTECH RENAISSANCE

Nanotechnology Patents in EPO: Number and Annual Growth Rate during the Past 20 Years

Total: 22k | NUMBER OF PATENTS IN EPO
Average: 15% | ANNUAL GROWTH RATE

mRNA Tech Used in COVID-19 Vaccines Could be Used to Cure HIV, Cancer and More
Published: Apr 12, 2021 | By Mark Terry
“It is a tremendous vindication for everyone working in controlled drug delivery” - Robert Langer
Feed additive (a.k.a. Feyn)
EXPONENTIAL IMPACT

- Shelf life: +50%
- Ingredient protection in salt water: 10x
- Ingredient protection in stomach: 10x
- Bioavailability: 20 to 185x
- Inflammation reduction: 8x
- Palatability: ∞
- Growth rate: +30%
- Improved survival: +40%
- Reduction in ingredient quantity: 10x
NUTRIENTS

ASTAXANTHIN

OMEGA-3s

VITAMINS

PHYTOGENICS
BETTER FISH

BIOFEYN SALMON

- Guaranteed high omega-3s
- High astaxanthin
- High iron
- High amino acids
- High micronutrients
- Environmentally friendly
- Better taste

REGULAR SALMON

- Less nutritious
- More polluting
- Uncertified
WHY NOW?

Oceans are trending in public consciousness and demand for ocean-safe products and services is growing.

Global Cooperation

Ocean-Branded Biotech Companies

Public Awareness Campaigns

Media

United Nations Institute for Training and Research
Ms. Judith Underwood
CEO of Blue Institute Labs, U.S.A.
1). What are the latest innovations in Blue Tech?

2). How can start-ups engage in this sector?

3). Lessons learned - are they transferrable in developing countries?
Ocean based Mitigation Options and Associated Annual Mitigation Potential in 2050

Source: The Ocean Panel 2019
- 12-month international Cohort of 24 Blue startups
- Mentoring & introductions
- Teaming opportunities
- Networking and socializing
- Ecosystem lead speakers
- Pitch contests
- Demonstration day
Call for Technical Mentors in BlueTech & Blue Economy

Blue Accelerator
Winter 2021 Remote Programming
Advanced Topics: Pilots & Prototyping

Join BLUE Institute Labs in supporting Startups in design, facilitation, and best practices for successful “Pilots & Prototyping”
For more information and to Register go to https://blueincubator.com/call-for-mentors
Thank you!

Contact info:
Judith Underwood, CEO
BLUE Institute Labs
ju@blueinstitutelabs.com

BLUE Institute Labs’ mission is to help create and scale the next generation of successful BlueTech companies by providing entrepreneurs and innovative startups with the ocean access, ecosystem entrée, adaptive workspace, and state of the art resources they need to develop, prototype, test, and commercialize their products and solutions.
Q & A session