

# SIDS and socioeconomic development: Bioprospecting as a viable option

UNCTAD side event:

Sustainably harnessing the potential of marine bioprospecting for socioeconomic development in Small Island Developing States (SIDS)

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## SIDS and their development challenges

- Climate change / environmental degradation and pollution / prone to natural disasters, hence low resilience
- Remote location (many), hence difficult to engage with the global economy (through R/GVC)
- Small population, hence unattractive for FDI
- Small, undiversified economies, hence prone to external shocks
- Additional economic vulnerability: high external debt and thus high cost of borrowing on international markets
- Poverty (in some), a result of lack of quality growth, an effect of low productive capacities, as measured by Productive Capacity Index



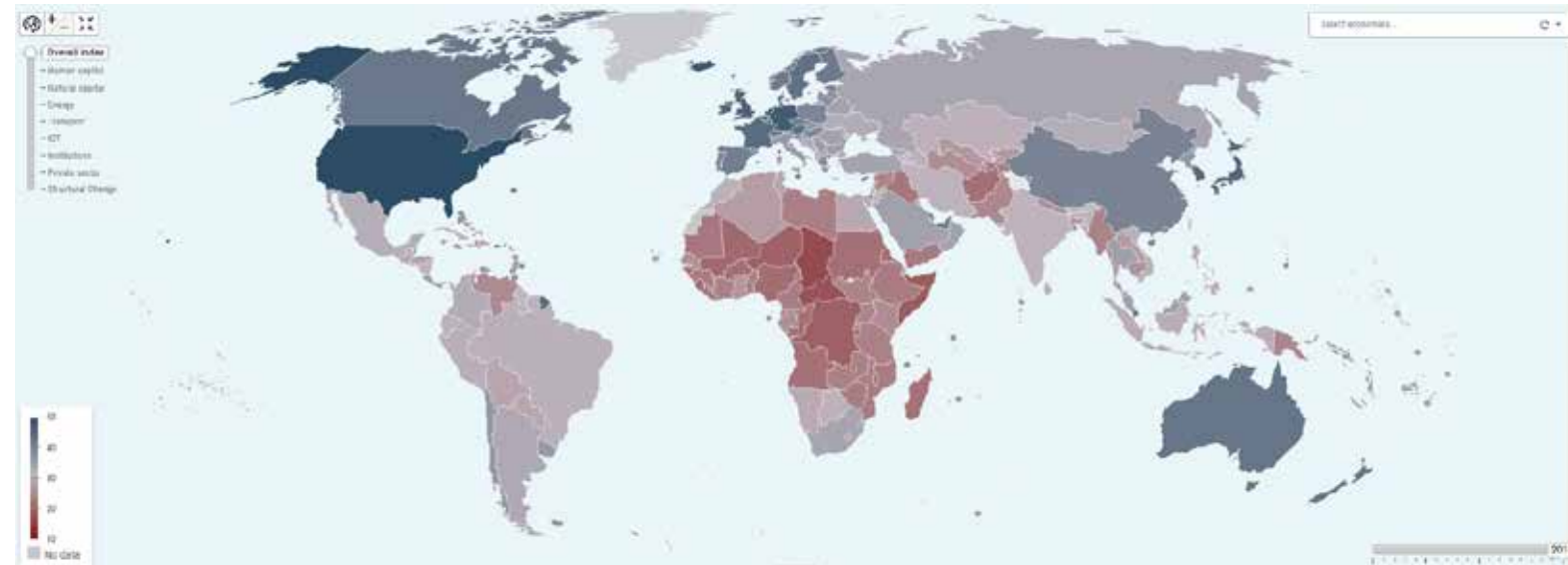
# Productive capacities

Productive capacities are: the productive resources, entrepreneurial capabilities and production linkages, which together determine the capacity of a country to produce goods and services and enable it to grow and develop.

The overall Productive Capacities Index summarizes the state of productive capacities in economies.

The overall PCI is broken down into the following eight categories:

- information and communication technologies,
- structural change,
- natural capital,
- human capital,
- energy,
- transport,
- the private sector,
- institutions.



# SIDS and their development opportunities

What do economists say on overall recommendations for SIDS` development:

- Use natural endowments (broadly defined)
- Diversify and restructure the national economy
- Engage with the global economy
- Create productive jobs
- Accelerate growth
- Make development inclusive

Identified economic sectors with potential to economically lift SIDS:

- Agriculture
- Seabed mining (??)
- Tourism and other services
- Blue Economy and/or Ocean Economy, defined by World Bank as "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem."

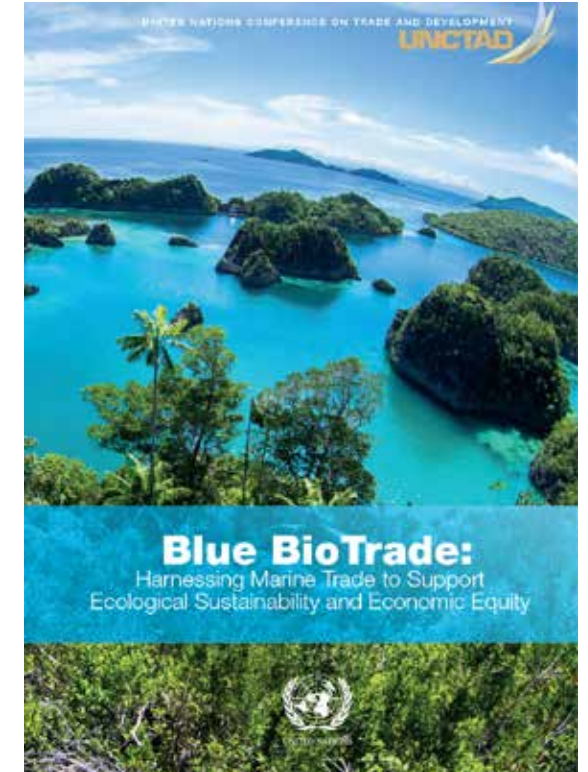
# Blue Economy and Blue BioTrade

BioTrade are “the activities of collection/production, transformation and commercialization of goods and services derived from native biodiversity under criteria of environmental, social and economic sustainability.”

Blue BioTrade by economic sector may include:

- (a) fisheries and aquaculture;
- (b) Bioprospecting for natural marine compounds;
- (c) Marine and coastal tourism, etc.

Bioprospecting is the systematic search for and development of new chemical compounds, genes, organisms, and natural products (WHO 2001).



# The Economics of Bioprospecting (I)

- Bioprospecting has a future: it is important, for example, in the context of pharmaceutical products development
- Bioprospecting may play an important role in economic diversification and thus building economic resilience
- Bioprospecting may create productive jobs (subject to adequate policies)
- Bioprospecting as an economic sector is unpredictable: it relies, for example, on scientific discoveries and is at the inception stage of its development
- Bioprospecting is expensive: developing a product requires significant amount of research
- Bioprospecting have limited resource base hence requires cultivation of this base:  
(Marine biotechnology presents three ways to overcome supply limitations: (i) aquaculture, fermenter cultivation, and genetic engineering; (ii) enzymatic synthesis; (iii) modification by chemical synthesis and semi-synthesis).
- Bioprospecting will not address all the development challenges of SIDS

# The Economics of Bioprospecting (II)

## Possible gains:

- New foreign (direct) investment
- Economic diversification and thus greater resilience
- Job creation
- Improved quality of human capital (if accompanied by an adequate strategy)
- Better positioning in the global economy through G/RVC and through greater value-added input
- Poverty reduction.

## Possible negative effects:

- Environmental degradation (if no proper regulations in place)
- Jobless growth and no effect on poverty reduction (if no proper (national) strategies implemented)
- Overdependence on the new sector

## The Economics of Bioprospecting (III)

### Key recommendations for further discussions:

- Protect natural environment and biodiversity
- Develop a robust and comprehensive strategy on bioprospecting, particularly, on sustainable harnessing, and job creation, as part of a broader strategy of structural economic transformation
- Engage with the outside world/global economy and do it smartly
- Use the process to diversify the national economy and create productive jobs

### Next steps for SIDS:

- Developing legal framework for sustainable harnessing
- Developing sectoral development strategy





# Thank you!

