



Bev Holmes (Chair)

President & CEO, Michael Smith Health

Research BC, Canada



Stefan Leslie

CEO, Research Nova Scotia, Canada



Chafic Mokbel

Professor, Computer Engineering,

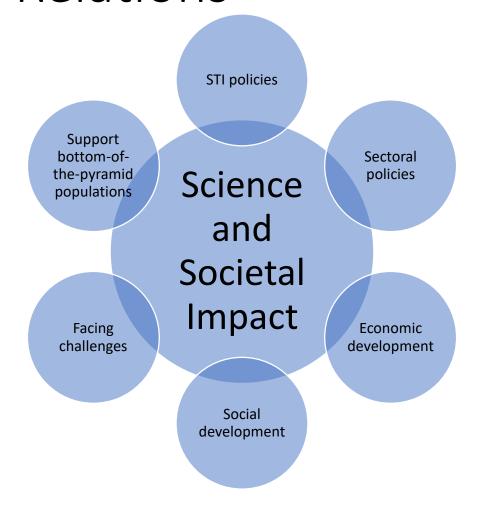
University of Balamand, Lebanon

Societal Impact to Serve Alignment in Developing Countries

Societal Impact of Science AESIS Conference, Halifax, June 2023

Chafic Mokbel
Erasmus+ HERE Lebanon, University of Balamand

Science and Societal Impact: Complex and Multifaceted Relations



Alignment: Mutual Benefits

- To face global challenges and respond to local needs
 - Societal
 - Democracy, tolerance, demographic changes, economic development, education, ...
 - Related to the physical world
 - Climate change, sustainability, pandemic, health, ...
 - Technological
 - Fast development of ST, digital transformation, AI, ...

Examples

Positive Benefits

- Facing Covid
- Mobile Money
- Mobile Health
- Distance learning

Not as Expected

- Turkish earthquake
- STI in MENA region

MENA Region and Alignment

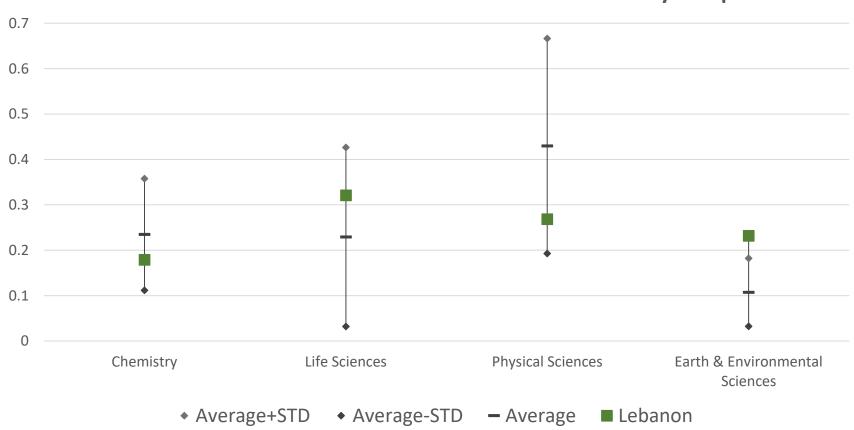
Rank/Country	Count	Share	Rank/Country	Count	Share
1. China	23669	19601	6. France	4355	1895
2. USA	24097	16813	7. South Korea	2363	1464
3. Germany	8125	4033	8. Canada	3005	1311
4. UK	6975	3105	9. Switzerland	2953	1235
5. Japan	4463	2682	10. India	1816	1228
29. Saudi Arabia	386	122	71. Algeria	18	5
30. Iran	253	111	77. Oman	16	4
38. Turkey	363	80	79. Lebanon	17	4
45. UAE	134	30	88. Jordan	14	2
57. Egypt	178	12	91. Iraq	19	2
61. Qatar	80	9	99. Kuwait	54	1
66. Morocco	61	8	104. Tunisia	11	1

MENA	1577	384
19. Taiwan	896	387

(Latest Nature Index)

MENA Region and Alignment

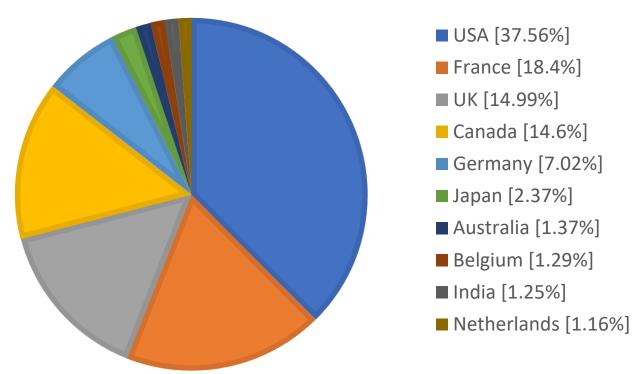
Distribution of normalised Nature index share in MENA by discipline



MENA Region and Alignment

Very weak regional cooperation

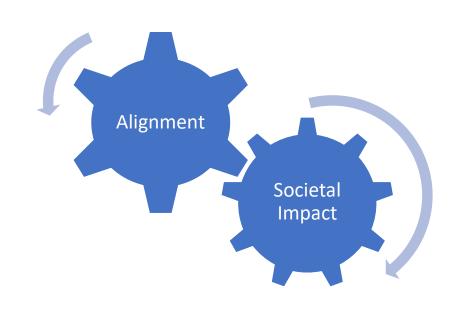




Alignment Exists at Policy Level in Developing Countries...

- Institutional level
 - Many institutions
- National level
 - Example: Five Year Plan for Higher Education (E. Hazelkorn, T. Boland)

Alignment Exists at Policy Level in Developing Countries...





Alignment Exists at Policy Level in Developing Countries...

- But challenges remain:
 - Implementation
 - Some specific policies
 - Nearly inexistant at regional level

Examples of Local Challenges in Developing Countries

- Political
 - Not considered as pillar of socio-economic policies
 - Other priorities: poverty, health, ...
- Structural and systemic
 - Weak private investment and interest
 - Teaching oriented universities
 - Competition instead of coordination
 - Weak link to innovation [ecosystem]
- Tools
 - No monitoring or evaluation tools
 - Lack of IPR system

Possible Risks

- Facing global challenges
 - As consumers of scientific and technological results
 - With possible pitfalls
- Responding to local needs
 - Limited interest
 - Lack of efficiency

Supporting Instruments/Processes and Promising Experiences

- International Agencies
 - UNESCO, World Bank, UNDP, WHO, ...
- Tempus/Erasmus+ Capacity building in Higher Education
 - Local needs
 - Regional collaboration
- Horizon international dimension
 - Example: the association of Tunisia
- Networks (and agencies)
 - IEEE, AUF, ...
 - USAID, DAAD, AFD, ...

Societal Impact as a Catalysis



Societal Impact as a Catalysis

- Societal impact
 - Attract political interest
 - Shift STI to become a pillar of socio-economic policies
 - Focus on other priorities: poverty, health, ...
 - Regulate structural and systemic processes
 - Attract responsible private investment and interest (impact investment)
 - Engage universities to tackle local issues
 - Explain the prevailing coordination on competition
 - Contextualise innovation [ecosystem]

Societal Impact as a Catalysis

- Regional alignment
 - Many common socio-economic challenges and issues
 - ... that can often be translated to societal impact
 - Need for better alignment

Remaining Balances



- Societal impact assessment
 - Global and context-based?
 - Who and how to define the indicators?
- Societal impact in instruments
 - Alignment to face global challenges and respond to local/regional needs
 - How to involve local stakeholders?
 - How to share good practices and pitfalls to avoid?

Thank you



"Determine and agree on the outcome as the basis for evaluation, there will be different measures of impact for different stakeholder groups along the way to that outcome."