



STI for reducing inequality within and among countries (SDG 10)

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The inequality challenge

Despite economic growth & social advances, inequality is on the rise

Asia-Pacific combined income inequality, measured by the Gini coefficient, has increased by over 5 percentage points in the last 20 years¹

Reducing inequality *between* countries

Build domestic STI capabilities

1. Initially focus on tech. transfer from abroad & technology diffusion
2. Education, education, education
3. Progressively build domestic research capabilities
4. Mainstream innovation and S&T policy



Reducing inequality *within* countries

Promoting inclusive innovation

Technology & innovation serves the welfare of lower-income/ excluded groups

‘Innovations for the poor’ and *‘Innovations by the poor’*

Multiple dimensions

- **Social** (women, persons with disability, older generations, indigenous communities)
- **Economic** (smaller firms, inclusive business)
- **Geographical** (rural, remote, Least Developed Countries)





INCLUSIVE BUSINESS LEADERS CONFERENCE

(A locally organized APEC Event)

28 NOVEMBER 2018
Philippine International Convention Center
Pasay City, Metro Manila, Philippines

Presented by **PBSP**
Philippine Business
for Social Progress
Business Interest, Same Spirit

In partnership with **boi dti**
BOARD OF
INVESTMENTS
ACCREDITED BY
TRUST & INTEGRITY
PHILIPPINE





The JAM Trinity, India

A low-cost and accessible financial infrastructure supporting financial services previously out of reach for citizens. It links:

- Government-sponsored bank accounts (JAN DHAN)
- Universal biometric digital identity (AADHAAR), and
- Mobile numbers.

Large scale positive impacts:

- Saved the Government US\$8.1 billion (by enabling welfare payments to reach the right people)

Technical and legal challenges



Inclusive business (IB)

Provide goods, services, and livelihoods on a commercially viable basis, either at scale or scalable, to people living at the base of the pyramid making them a part of the value chain of companies as suppliers, distributors, retailers, or customers¹

Innovative imperative: IB often face greater challenges to do well while doing good

Large scale positive impacts:

Example The Philippines – The Board of Investment²

- In 2018, the agency approved 5 IB models in agriculture- and tourism-based industries.
- Collectively target to source \$57 million worth of goods and services from MSEs,
- Directly hire at least 185 and engage over 1,000 individuals, at least 30% of which are women, from marginalized sectors

¹ As defined by the G20

² <https://www.scoop.it/topic/inclusive-business-in-asia/p/4105420992/2019/02/14/philippines-boi-inclusive-business-tax-incentives-are-working>

Grassroots innovations

Mitticool is a natural refrigerator made entirely from clay to store vegetables and fruits and for cooling water. It provides naturally coolness to the stored material without requiring any electricity or any other artificial form of energy.

www.mitticool.in

Innovator: Mansukukh Prajapati

Supporting agencies: GIAN and National Innovation Foundation, India

- Test
- Product development
- Intellectual Property Right



Assistive technologies

For example to support rural mobility

A versatile wheelchair that can be used both indoor and outdoor + short-distance and long-distance traveling

Challenges

Need for locally adapted products

Niche markets

Standards



Setting the context: leaving no one behind

Leaving no one behind

- Reducing inequalities between groups and between individuals
- Prioritizing those furthest behind
- Proactive policies are required

Leaving no one behind in Technology and Innovation Policies

- 3 **A**'s: **A**ccessibility, **A**ppropriateness, **A**ffordability
- Inclusion prior to, during implementation, and after roll out
- Engage everyone, target particularly disadvantaged/ underrepresented groups
- Holistic approaches
- **Multiple complementary approaches:**
 - Whole of government
 - Promoting inclusive technologies and innovations (e.g. grassroots innovations)
 - Promoting inclusive growth
 - Programmes that enable women, people living in poverty, older generations, other disadvantaged groups to develop, access and use of technologies

The story so far

Strategy

Country example

Strategic approaches

- Crafting STI policies for inclusive outcomes
- Mission-oriented policies directly addressing inclusivity challenges
- Technology appraisals from an inclusivity lens



5th Science and Technology Basic Plan



Aadhar' digital ID for financial inclusion



5th Science and Technology Basic Plan

Promoting inclusive technologies & innovation

- Public research programs on enhancing inclusivity
- Development, diffusion of 'appropriate' tech.
- Supporting grassroots innovations
- Facilitating international technology transfer



Research on social problems



Empowering rural communities



Honeybee network, GAIN and NIF



Small-scale hydropower

Promoting inclusive growth

- Promoting inclusive businesses
- Empowering SMEs to innovate
- Enabling SMEs to participate in the digital economy



Sagip Saka' Bill (2017); 'Go Local!'



SPRING; Collaborative Industry Project



Rumah Kreative Bumh

Removing barriers to technology

- Supporting STEM careers & education for women
- Promoting assistive tech. for persons with disability



Malaysia Education Blueprint (2013-25)



Research on assistive technologies for people with disabilities

Challenges for inclusive innovation in Asia-Pacific

“Inclusion: a right, not an afterthought”

Leadership	<ul style="list-style-type: none">• Ensuring high-level support for inclusive technology & innovation policies• Working in short-term political cycles• Economic growth dominates the agenda over inclusion
Understanding inclusive innovation	<ul style="list-style-type: none">• Lack of common definition of inclusive innovation• No one-size fits all• Different perspectives (e.g. bottom-up vs top-down; researcher vs. farmer)
Coordinating efforts	<ul style="list-style-type: none">• Implementing whole of government approaches• Multi-stakeholder buy-in (limited incentives for businesses to develop inclusive tech. and innovation)
Capacities and capabilities	<ul style="list-style-type: none">• Financial resources• Skills (e.g. product development, market)• Data (e.g. lack of relevant / disaggregated data to inform inclusive tech. & innovation policies)• Assessments (effective consultations, pre and post impact assessments)

The way forward for inclusive innovation in Asia-Pacific

Leadership	<ul style="list-style-type: none">• Generate alliances that support long-term inclusive innovation policies• Make the business case for inclusive tech. & innovation
Understanding inclusive innovation	<ul style="list-style-type: none">• Further analyse and share the variety of Asia-Pacific experiences in promoting inclusive technologies & innovation (in different local contexts, with different groups)• Assess socio-economic impact of technologies in different groups (including indirect/ unintended impacts)
Coordinating efforts	<ul style="list-style-type: none">• Explore different approaches to align action: Co-designing, co-creation, co-implementation• Create structures & incentives that facilitate whole-of-government, multi-stakeholder approaches
Capacities and capabilities	<ul style="list-style-type: none">• Build understanding on systemic and inclusive STI approaches among STI policy makers and non-tech policy makers• Build inclusive STI data collection and analysis capacities• Build capacities to assess impact of STI policies

Partners, stakeholders and communities to mobilise...

- Development actors exploring innovation for inclusive development
- Grassroots innovators
- Persons with disability promoting assistive technologies and innovative solutions
- Female innovators
- Inclusive business leaders
- Academic leaders promoting ethical standards in research
- Impact investors
- Impact assessment experts
- Policy makers adopting inclusive targets in STI policies
- Policy makers developing technology-based transformative platforms
- Policy makers promoting grassroots innovation
- Policy makers supporting women in research ...

ESCAP's current work on **Inclusive** Technology and Innovation Policies

STRATEGIC APPROACHES

Inclusive targets in Cambodia's new Science, Technology and Innovation Policy

- Policy advice November – December 2018
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PROMOTING INCLUSIVE TECHNOLOGY & INNOVATION

Policies to promote grassroots innovations in Asia-Pacific

- Workshop on policies to support grassroots innovations, 27 January 2019, Ahmedabad, India
- Workbook on Policies and Strategies to Support Grassroots Innovations (forthcoming)

Research on Artificial Intelligence for Social Good to inform policies

- Research call (on going) and research network
 - In collaboration with Google and APRU
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PROMOTING INCLUSIVE GROWTH

Inclusive businesses in five South-East Asian countries

- Mapping inclusive businesses in Cambodia, Vietnam (2019)

Thank You



**Asia-Pacific
Research and Training Network on
Science, Technology and Innovation Policy**

<https://artnet.unescap.org/sti>

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