



Open Source in Asia

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Hi there, I'm Divya!

- Former systems nerd and people manager
- Open source advocate and maintainer
- Feline enthusiast



Our civilization runs on software

Bjarne Stroustrup, Inventor of C++

Our civilization runs on
open source
software

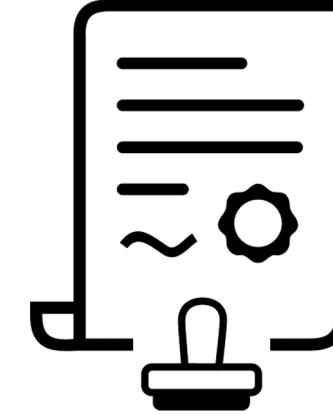
Main actors of the ecosystem



Contributors



Adopters



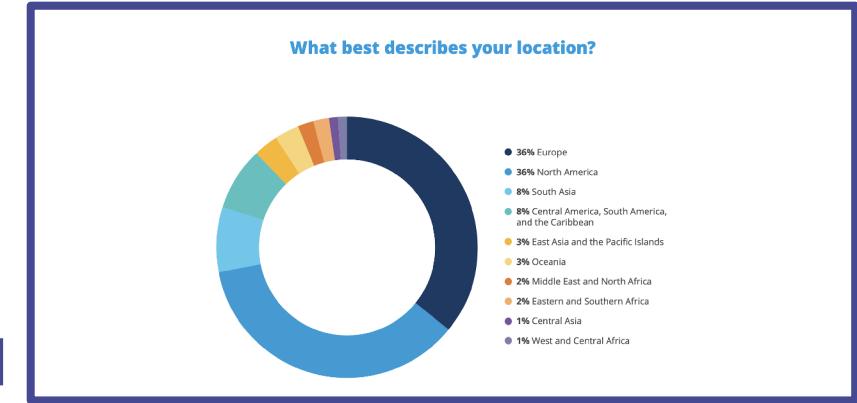
Policymakers



The contributor story

The statistics

- Traditional dominance of North American and Western European contributors (50-80%)*
- Asian countries like India, China, Japan making impact
- State of Octoverse (2022, 2023) lists India as the fastest growing developer economy on GitHub.



Source: Diversity, Equity, and Inclusion in Open Source, 2021, The Linux Foundation

* Regional Open Source Software Communities: The View From Dhaka, Bangladesh

Developer activity
from India = Developer
activity from US by
2025*

State of Octoverse report, 2022

*if growth rate is maintained

But, there's a catch...

- GitHub is just **ONE** platform
- Developer = anyone with a GitHub account
- Existing reports outside of GitHub not released at regular cadence and target specific geographies
- Result: Lack of granular and non-fragmented data

Geographic distribution

As the report greatly focuses on the regional differences and similarities in open source trends across the globe, the geographic distribution of the sample deserves special attention. We aimed to gather responses from all parts of the world, but given the Linux Foundation's primary presence in North America and Europe, we received most responses from those regions. A third-party panel provider supported our efforts to gather data from Asia Pacific. 64% of responses from this region came from Japan in order to create a World of Open Source: Japan Spotlight report to be published in December 2023. Three regions that we segment our data on are the Americas, Europe, and Asia Pacific. More detailed distribution within these three regions is summarized in Figure 1.

Source: Global Spotlight 2023, Linux Foundation

But, there's a catch...

- Non-code efforts prominent in Asian region*
- In-person events prioritized over virtual collaboration
- Efforts often organized by students and early career folks
- OSS outreach targets students and early career folks
- Lack of support for OSS contributors from employers**

* Regional Open Source Software Communities: The View From Dhaka, Bangladesh

** Report on the 2020 FOSS Contributor Survey

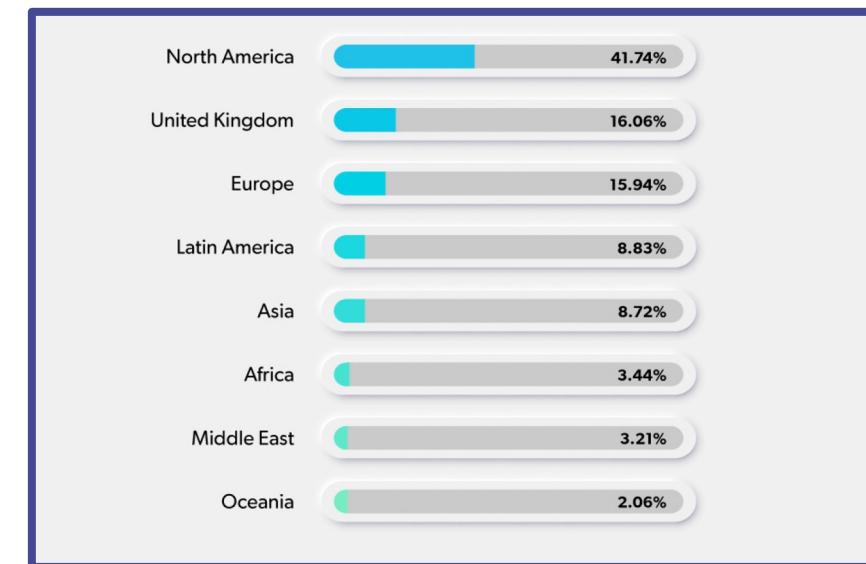
Country	% of Respondents Paid for FOSS	Total Responses
United States of America	63.8%	174
Germany	58.7%	75
France	37.1%	35
United Kingdom	42.9%	28
Canada	57.1%	21
Netherlands	75.0%	20
India	15.8%	19
China	29.4%	17
Austria	63.4%	11
Brazil	45.5%	11
Japan	45.5%	11
Australia	30.0%	10
Other	43.5%	145

Source: Report on the 2020 FOSS Contributor Survey



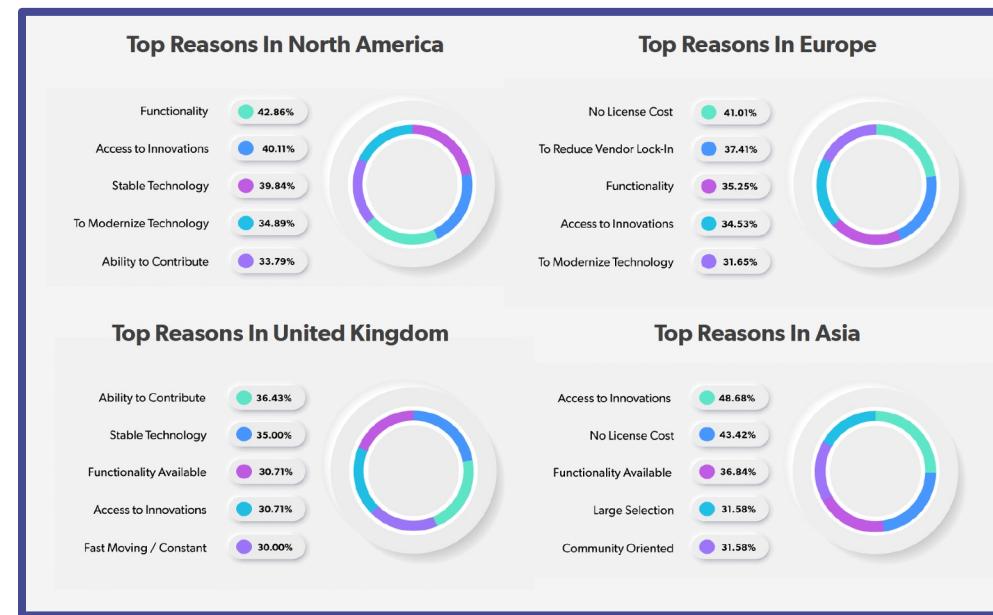
The adopter story

OSS Adoption across geographies



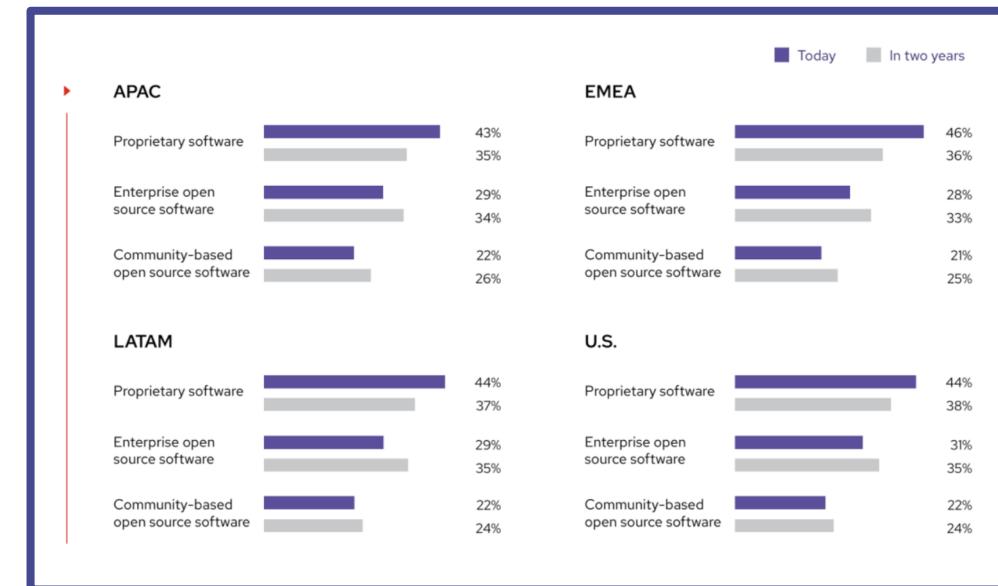
Source: 2023 State of Open Source report, OpenLogic + OSI

The why



Source: 2023 State of Open Source report, OpenLogic + OSI

✨(No) Surprise✨



Source: 2022 The State of Enterprise Open Source report, a RedHat report



🔥 APAC adoption trends 🔥

Top use case for enterprise OSS adoption = IT modernization

2022 The State of Enterprise Open Source report, a
RedHat report

80% of IT leaders to
increase their use of
enterprise OSS with a
heavy focus on
emerging tech

2022 The State of Enterprise Open Source report, a
RedHat report

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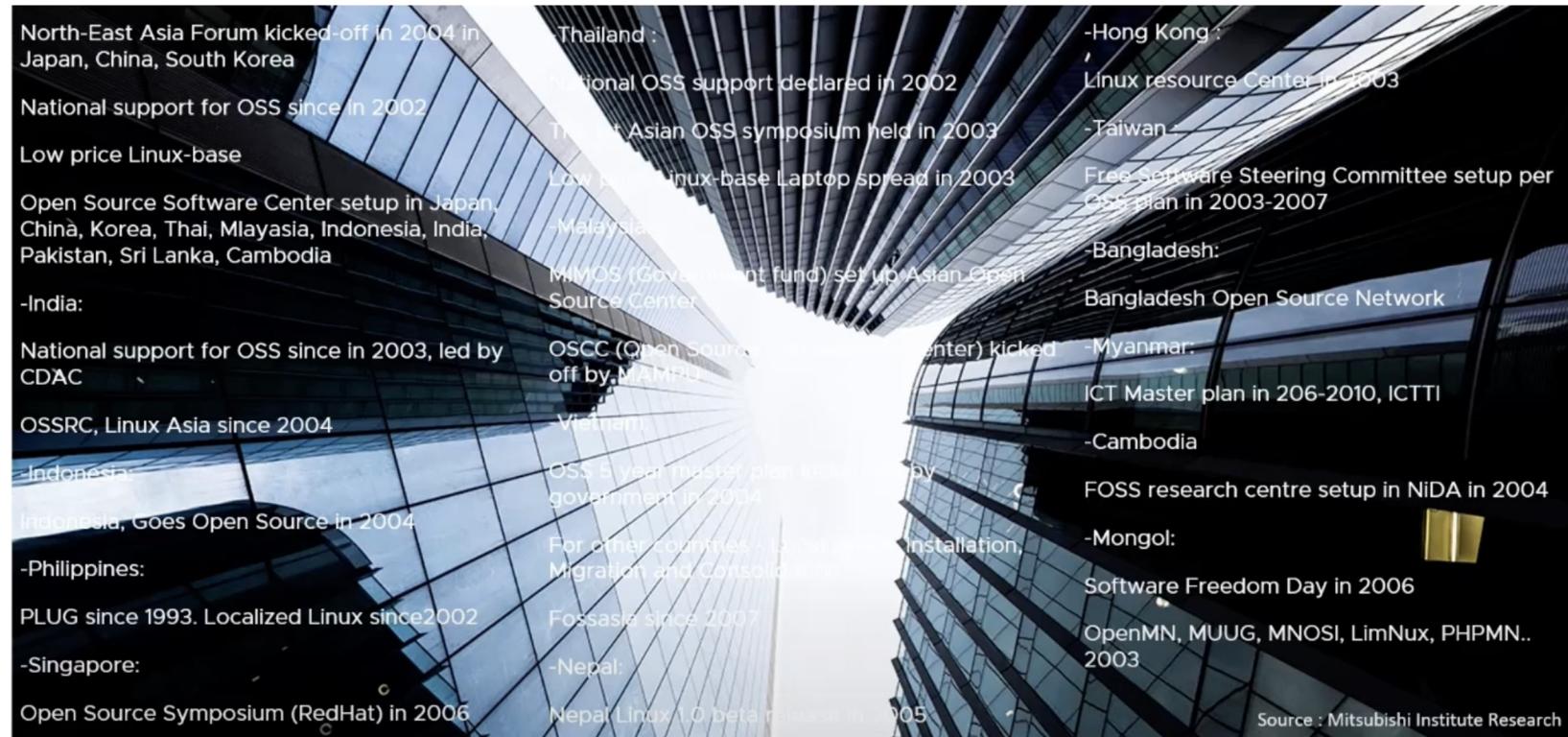
Top concerns around adoption of OSS* **

- Lack of skills, experience, and proficiency
- Lack of dedicated technical support
- Security & compliance adherence

* 2022 The State of Enterprise Open Source report, a RedHat report

** 2023 State of Open Source report, OpenLogic + OSI

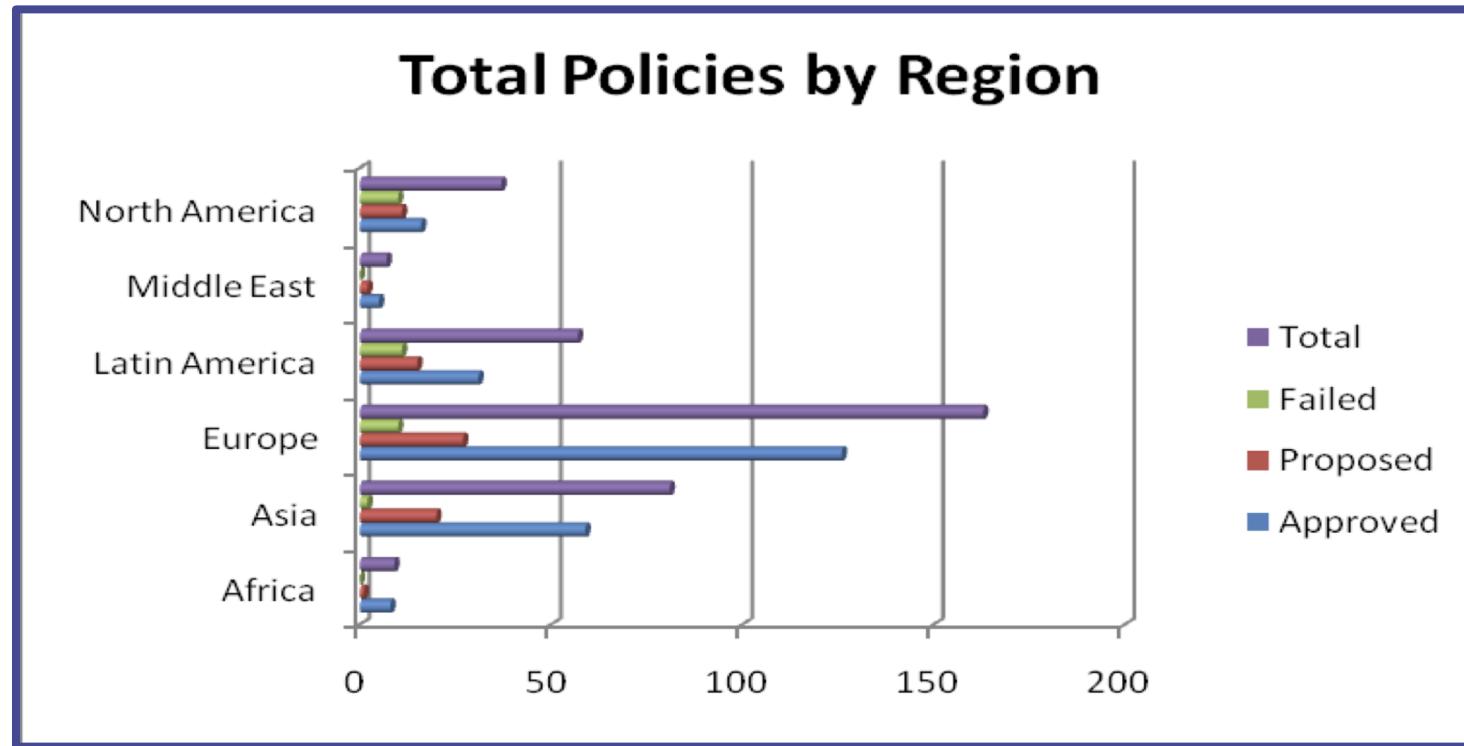
The policymaker story



Source: Mitsubishi Institute Research

“Prior to 2001,
globally, there was
almost no activity in
policy related to Open
Source”

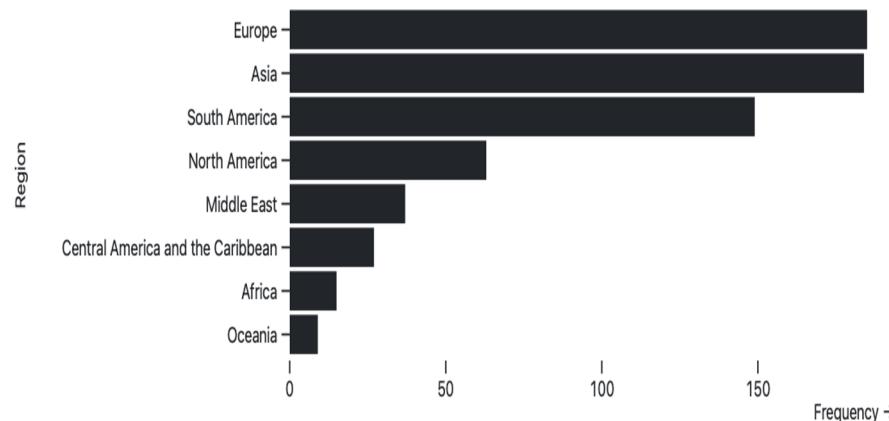
CSIS Government Open Source Software
Policies Dataset



Source: CSIS Government Open Source
Software Policies Dataset

Regions

► Code

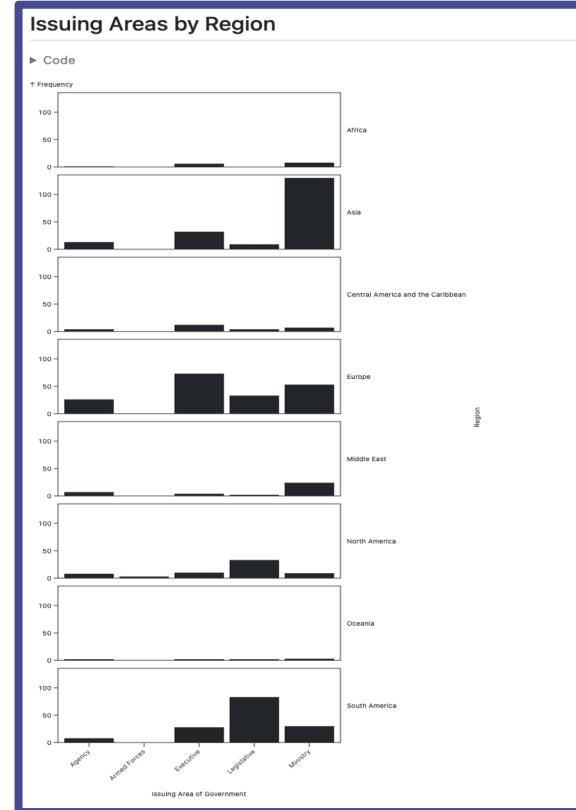


Source: CSIS Government Open Source Software Policies Dataset

In the last decade*

- Steep increase in the policies issued by Asian countries (~220%)
- Surge in approved initiatives
- Increase in ministerial authorities working on OSS
- Most activity directed toward transition from proprietary to OSS for reducing costs

* CSIS Government Open Source Software Policies Dataset



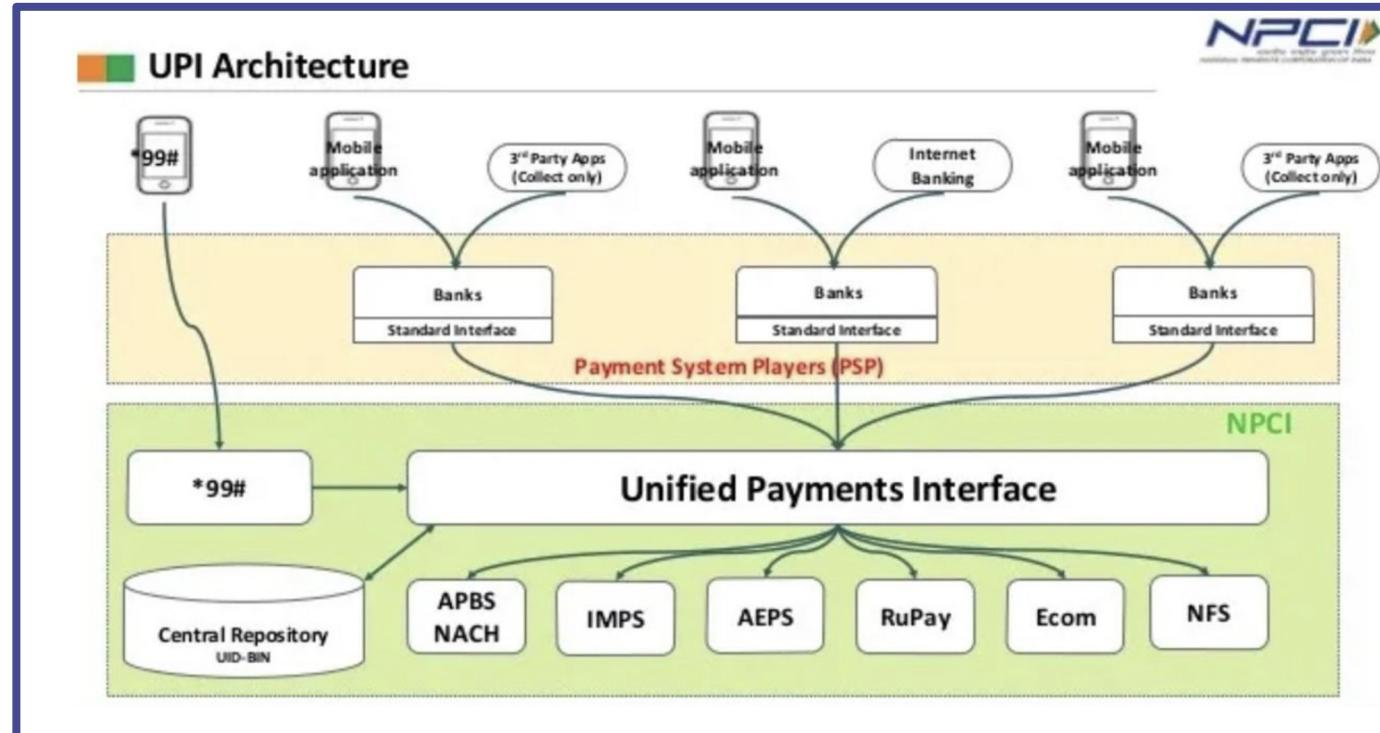
Source: CSIS Government Open Source Software Policies Dataset

Vis-à-vis sustainable development goals (India)



- In 2016, the NPCI launched Unified Payments Interface (UPI)
- Runs as an open source API layer above existing Immediate Payment System (IMPS)
- Leverages Java/Spring
- Crossed 10 billion transactions in Aug 2023*

* Wikipedia



Vis-à-vis sustainable development goals (India)



- Improves access to financial services with just a mobile phone for the entire population irrespective of the location.
- Contributes to improving financial inclusion, an important factor in achieving 7/17 SDGs*

* UNGSA Report., 2018

Vis-à-vis sustainable development goals (India)



- Financial inclusion index improved from 43.4 % in 2017 to 60.1% *
- International use thro cross border agreements in ~26 regions **

* Reserve Bank of India reports

** Wikipedia

Vis-à-vis sustainable development goals (China)*

- One of the first comprehensive measurements of SDGs in the world in a local context
- Introduced in Deqing, China and leverages OSS tech

* Design and implementation of crowdsourcing based China's national public geospatial information collection system, 2019

SDGs Local Monitoring - China's Pilot Practice

SNAPSHOT

Geographical coverage: China (Deqing County, Zhejiang Province)
Entity name: National Geomatics Center of China (www.ngcc.cn)
Entity type: Government
Implementation period: March 2017 - Ongoing
Key stakeholders and partnerships: Ministry of Natural Resources of China, Zhejiang Provincial Government, National Bureau of Statistics, Deqing County Government, an international multidisciplinary expert group

Relevant SDGs:

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER
15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS				

Click to learn more: sustainabledevelopment.un.org/partnership/?p=29982

Source: SDG Good Practices-A compilation of success stories and lessons learned in SDG implementation (First Edition), 2020

Vis-à-vis sustainable development goals (China)*

- Provides guidance on local development policymaking
- Uses geospatial techniques
- In compliance with the Global Indicator Framework

* Design and implementation of crowdsourcing based China's national public geospatial information collection system, 2019

Summary

- Asian footprint in the ecosystem is growing, albeit slowly
- Some major challenges include
 - Geographical and regional barriers
 - Lack of awareness and outreach

Summary

- Policymaking focus on modernization efforts toward reducing costs (~38%) + improving
 - digitization
 - e-governance
 - interoperability
 - awareness



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