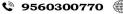


DAILY CURRENT AFFAIRS

4th August 2025









The Hindu Analysis 4th August 2025

Topics Covered

- The 'right to repair' must include 'right to remember
- How does the World Bank classify countries by income?
- Why is Hong Kong regulating and licensing stablecoins?

The 'right to repair' must include 'right to remember'

Syllabus:

GS Paper 2 – Governance

GS Paper 3 – Environment & Technology Environmental conservation – E-waste, Circular economy

The 'right to repair' must include 'right to remember'

n May 2025, the Indian government took a significant step toward promoting sustainable electronics. It accepted report proposing a Repairability Index for mobile phones and appliances, ranking products based on ease of repair, spare part access, and software support. New e-waste policies now include minimum payments to incentivise formal recycling. These are timely moves

But as India takes steps toward making repair a consumer right, we must also treat it as a cultural and intellectual resource - a form of knowledge that deserves preservation and support. India's digital and Artificial Intelligence (AI) policy landscape is evolving rapidly. Initiatives such as Digital Public Infrastructure (DPI) and the National Strategy on Artificial Intelligence (NSAI) emphasise innovation, data-driven governance and economic efficiency. Yet, the systems that quietly sustain everyday life – especially the informal repair and maintenance economy remain largely invisible in digital and policy

In an age of cloud backups and algorithmic processing, it is easy to forget the value of knowledge that cannot be codified. Much of India's repair expertise lives in muscle memory, quiet observation, and years of hands-on improvisation. This tacit knowledge is vital to India's material resilience. From mobile fixers in Delhi's Karol Bagh to appliance technicians in Chennai's Ritchie Street, repairers keep devices working well past their planned obsolescence. " we don't fix it, who will?" says a mobile repairer in Ritchie Street. "People throw things out. But we see what can be made new." Their tools may be modest and their workshops discreet, but their work reflects deep ingenuity. They restore devices not by consulting manuals, but by diagnosing faults through sensory cues, reusing components, and adapting creatively to constraints. Yet, this ecosystem is gradually eroding. As product designs become less repairable and consumer habits shift toward disposability, informal repairers find themselves increasingly locked out of markets, of skilling programmes, and of policy attention. What risks being lost is not only economic opportunity but also a vast, undocumented reservoir of knowledge that has long supported India's

Why tacit knowledge matters "Hearnt by watching my uncle," says an appliance repairer in Bhopal. "He never explained with words. He just showed me once, and expected me to try. That's how we pass it on." Tacit knowledge refers to forms of skill and intuition that are difficult to formalise. In India's repair economy, this expertise is typically passed down through mentorship, observation, and repetition - not through formal training or

certification. It is inherently adaptive and



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context-sensitive, qualities that structured digital systems, including AI, often struggle to replie As AI advances, it increasingly draws on insights shaped by this kind of labour. However mechanisms to acknowledge or equitably involve the contributors of this knowledge are still evolving. The result is a growing imbalance: AI systems continue to improve, while the communities enabling that learning often remain unrecognised. Globally, the Right to Repair movement has gained momentum. The European Union recently introduced rules requiring manufacturers to provide access to spare parts and repair documentation. In India, the Department of Consumer Affairs launched a Right to Repair framework in 2022, followed by a national portal in 2023 covering electronics automobiles, and farm equipment. Meanwhile, the United Nations Sustainable Development Goal 12 promotes repair as part of responsible consumption. India now has the opportunity to lead by recognising repair not just as a service but also as a form of knowledge work.

The blind spot in India's digital policy In 2021-22, India generated over 1.6 million tonnes of e-waste, becoming the world's third-largest producer. The E-Waste (Management) Rules, 2022 introduced Extended Producer Responsibility (EPR) – a principle that makes manufacturers responsible for post-use product management. However, while these rules encourage recycling, they make only a passing mention of repair as a preventive strategy. National skilling programmes such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) focus on short-term certifications for formal industrial roles. Repair work, which requires improvisation, diagnostic skill and creative reuse does not easily fit this framework. Similarly, the National Education Policy (NEP) 2020 celebrates Indian knowledge traditions and experiential learning but offers little guidance on how to support or transmit hands-on repair expertise Campaigns such as Mission LiFE (LiFEStyle For Environment) promote repair and reuse, but complementary efforts are needed to support the workers who make such sustainability practices possible. While policies now champion circularity, they risk leaving behind the very workforce whose skills make it real.

As sustainability becomes a national priority, policymakers and technologists are reconsidering how we design, discard, and extend the life of everyday products. One emerging idea in research is 'unmaking' – the process of taking apart, repairing or repurposing devices after their first use, revealing design flaws and opportunities for reuse. Breakdowns and repairs are not failures; they are feedback loops and sources of practical insight. A discarded circuit board can become a teaching tool. A salvaged phone part

A broken appliance can be repaired and reused Informal repairers perform this work daily. Their labour sits at the centre of the circular economy, where reuse is not an afterthought but a design principle. Recognising them as stewards of sustainability – not marginal figures – can reshape how we think about environmental and

AI-enabled solutions for repair justice India's culture of jugaad and frugality long pre-dates today's tech-forward policies. Repairers ve always adapted across devices and decades, with minimal support. As the country invests in AI infrastructure and digital public goods, it must align these ambitions with the ground realities of repair. Most modern gadgets are built for compactness and control, not repair. According to a 2023 iFixit global report, only 23% of smartphones sold in Asia are easily repairable due to design constraints. To change this, design norms and procurement policies must include repairability from the start. To make technology genuinely sustainable, public policy must consider not only how products are manufactured and used but also how they break down, are repaired, and find new life. A shift toward designing for "unmaking", where disassembly and repair are anticipated from the outset, should inform both hardware standards and AI-integrated systems

This transition will require coordinated institutional action. The Ministry of Electronics and Information Technology can embed repairability criteria into AI and procurement policies. The Department of Consumer Affairs could expand the Right to Repair framework to include product classification and community involvement. Platforms such as e-Shram, under the Ministry of Labour and Employment, can formally recognise informal repairers and connect them to social protection and skill-building schemes. The Ministry of Skill Development and Entrepreneurship can consider training programmes to account for the tacit, diagnostic nature of repair work, which does not conform to standardised industrial templates. To support this, decision trees can help codify typical repair pathways, while Large Language Models can capture, summarise, and translate tacit repair narratives into structured, shareable knowledge, enabling broader learning without stripping local context or expertise.

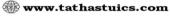
Supporting this ecosystem is not merely a

question of intellectual property or technical efficiency. It is about valuing the quiet, embodied labour that sustains our digital and material live - an essential step toward a just, repair-ready technological future. As philosopher Michael Polanyi observed, "We know more than we can tell." By choosing to remember what cannot be digitised, we preserve the human wisdom essential to a meaningful technological future

As India invests in AI infrastructure and digital public goods, it must align these ambitions with the ground realities of repair and an established culture of and frugality



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Key Takeaways from the Article

India's Policy Steps (2025):

- Accepted the proposal to create a Repairability Index for electronic products (ease of repair, spare part availability, software support).
- Updated e-waste policy includes minimum payments to incentivise formal recycling.

Neglect of Tacit Repair Knowledge:

- India's informal repair sector is rich in tacit knowledge (non-codified, experiential learning).
- Example: Mobile and appliance repairers in Delhi's Karol Bagh and Chennai's Ritchie Street diagnose issues through sensory skills, without manuals.

Right to Repair Framework:

- Launched by the **Department of Consumer Affairs (2022)**, with a **national portal (2023)** covering electronics, automobiles, and farm equipment.
- Inspired by global moves like EU legislation mandating repair access and UN SDG 12 on responsible consumption.

E-waste Challenges:

- India is the 3rd largest e-waste producer globally (~1.6 million tonnes in 2021-22).
- E-Waste Management Rules, 2022 Introduced Extended Producer Responsibility (EPR) but lacked emphasis on repair as a preventive measure.

Skill & Education Policy Gaps:

- PMKVY: Focused on formal industrial roles; not adaptive to creative, improvisational repair skills.
- **NEP 2020:** Promotes experiential learning and Indian knowledge systems, but lacks guidance on hands-on repair training.
- Mission LiFE: Encourages repair and reuse behavior, but lacks direct support for informal repairers.

Emerging Concepts:

- **Unmaking:** Reversing design to enable reuse, learning from breakdowns.
- **Design for Disassembly:** Should be integrated in manufacturing norms.
- I & tacit knowledge: Tacit repair expertise can feed into AI models if captured properly.

Global Data:

Only 23% of smartphones sold in Asia (iFixit 2023 report) are easily repairable.

Way Forward

Repair sector improvements

Product Design



Formal

Integrate repairers into e-Shram for benefits.



Skilling **Programs** Revamp PMKVY for

training.

Mandate repairability standards in product design. adaptive repair



Al Knowledge Preservation

Use LLMs to preserve tacit repair knowledge.



Expand Framework

Include community participation and technician





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How does the World Bank classify countries by income?

Syllabus:

GS Paper 2 – International Relations / Governance

How does the World Bank classify countries by income?

The World Bank's income groups are widely used in global data. This article explains how they are defined and updated

DATA POINT

Bertha Rohenkohl Pablo Arriagada

7 hen people talk about countries as 'rich' or 'poor', they can mean many different things. But for researchers and policymakers, it helps to have a way to compare countries by income using clear criteria. One widely used approach is the World Bank's income classification system, which places countries into four groups: low, lower-middle, upper-middle, and high-income countries.

Every year, the World Bank assigns each country to an income group based on its gross national income (GNI) per capita. GNI per capita is a measure of the average income of a country's residents, including income that is earned abroad. Since countries report GNI in their local currencies, the World Bank converts these figures into U.S. dollars using exchange rates. It then places countries in one of four income groups based on specific thresholds. Maps 1 and 2 show how countries were classified by income in 2014 and 2024.

The income thresholds that senarate groups were first set in the late 1980s when this classification system was introduced. At that time, these were aligned with the World Bank's policies for lending money to countries. The Bank used average incomes to determine which countries were eligible for concessional loans.

This threshold for receiving such loans became the boundary between low-income and middleincome countries. The Bank then added two more thresholds to allow for further distinctions. These were chosen based on the distribution of country incomes at the time, rather than on lending rules.

Today, the thresholds are no longer linked to the Bank's operations, but they have been updated yearly to account for inflation. This adjustment is based on a measure of global inflation.

This means that the classification is absolute. Countries are put into groups according to predetermined thresholds, and a country's placement depends only on its GNI per capita, not on how it stacks up relative to other countries. The thresholds for the latest income groups are (in U.S. dollars): low income: \$1,135 or less; lower-middle income: \$1,136 to \$4,495; upper-middle income: \$4,496 to \$13,935; high income: More than \$13,935.

If a country's GNI per capita crosses a threshold, it moves into a new income group in the following update. Because GNI per capita changes over time, and thresholds are revised annually, countries can move between income groups over time. These movements may reflect real changes in income, shifts in exchange rates, or updates to population data.

In the long run, most countries have moved up the income ladder as their economies have grown. However, countries can also move down - and some have, particularly in periods of war and economic crisis. Two examples are Syria and Yemen, which went from low-middle income to low income in 2017.

When we hear that there are four income groups, we might imagine that the world's population is evenly divided across them, with around 25% of people living in each. But this isn't the case. Again, these groups are defined based on absolute thresholds, not relative cut-offs that change based on other countries' progress.

In 2004, 37% of the population lived in low-income countries. Today, that share has fallen to less than 10%. In the same period, the share of upper-middle income countries increased from less than 10% to 35%. You can see this change in Charts 3, 4 and 5.

Bertha Rohenkohl is Research and Data Economics Lead and Pablo Arriagada is Data Scientist at Our World in Data

Income thresholds

The data for the charts were sourced from Our World in Data's story titled "How does the World Bank classify countries by income?"



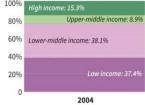
Map 1: Countries classified by income in 2014

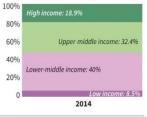


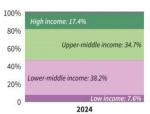
















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Key Takeaways from the Article

Four Income Groups (Based on GNI per capita in US\$):

• Low income: \$1,135 or less

Lower-middle income: \$1,136 – \$4,495
 Upper-middle income: \$4,496 – \$13,935

High income: More than \$13,935

Basis of Classification:

• Based on Gross National Income (GNI) per capita, which includes income earned abroad.

• GNI values are converted into USD using exchange rates, and thresholds are absolute, not relative

Historical Context:

- Introduced in the late 1980s, initially linked to World Bank lending policies.
- Originally used to determine eligibility for concessional loans.
- Now, thresholds are adjusted yearly to account for global inflation but are not linked to lending anymore.

Nature of Classification:

- Countries move **up or down** based on:
 - Real changes in income
 - Exchange rate fluctuations
 - Population data updates

Population Distribution Across Income Groups:

- 2004: 37% of global population lived in low-income countries
- 2024: Less than 10% in low-income, 35% now in upper-middle income
- Shows a shift in global prosperity, though not evenly distributed.

Country Transitions:

- Most countries move **up** the income ladder over time.
- Some like **Syria and Yemen** have moved **down** due to war and crises (e.g., from lower-middle to low-income in 2017).

Way Forward

- Broader Indicators Beyond GNI:
 - Supplement income classification with **multidimensional poverty** indices or **Human Development Index (HDI)** for holistic development assessment.
- Policy Focus on Countries at Threshold Margins:
 - Tailor support policies for countries hovering near the thresholds, especially those vulnerable to external shocks.
- Enhanced Data Quality and Transparency:
 - Improve **population and income data collection** to better reflect ground realities and reduce reclassification errors.





- **Dynamic Support Models:**
 - Revise World Bank's lending and aid frameworks to adapt to countries moving out of lowincome categories but still needing support (e.g., "transition support" models).
- **Regional Collaboration for Income Stability:**
 - Encourage regional development frameworks (e.g., SAARC, ASEAN) to stabilize GNI growth and minimize downgrades due to economic crises.

Why is Hong Kong regulating and licensing stablecoins?

Syllabus:

GS Paper 2 – Governance & International Relations

Government policies and interventions for development in various sectors (Fintech, Digital Regulation) GS Paper 3 – Economy and Technology Awareness in the fields of IT, Computers, and Cryptocurrencies



Why is Hong Kong regulating and licensing stablecoins?

Stablecoins are a class of cryptocurrencies, with their values linked to assets. Hong Kong is preparing the implementation of a regulatory regime for those issuing stablecoins, prompting enthusiasm in the fintech sector while authorities push for a more cautious approach

The story so far.

The story so

caution.

What is the new stablecoin licensing system in Hong Kong?

The Hong Kong Monetary Authority amounced that the Stablecoins Ordinance will come into effect from Ordinance will come little ordinance of the Come of the Come

cryptocurrency coins such as Bitcoin GTC) and Ether CTHD or even tokens such as Shiba Inu (SHIB), whose values can wildly rise and fall due to investor sentiments and other factors, stablecoins are designed to maintain relatively steady. This so called stability is achieved through the process of "pegging" the stablecoin to an asset such as fiat currency (Bite U.S. Dollars, Et.), a commodified good to the stable coin to an asset such as fiat currency (Bite U.S. Dollars, Et.), a commodified good to the stable coin to an asset such as fiat currency (Bite U.S. Dollars, et.), a commodified good to the stable coin form the stable coin form the stable coin form the stable coin form good to the stable coin should ideally remain around \$1. from CBDCs, and the stable coin for central Bank Digital Currencies, which are digital currencies officially issued and controlled by a government's central bank. Meanwhile, stablecoins can be privately issued and can also be pegged to foreign currencies.

Why do stablecoins require

to begin issuing stablecoins, and that in the beginning it would "at most grant a handful of stablecoin issuer licences. In other words, a large number of applican will be disappointed," per Mr. Yue in an official statement.

What are stablecoins

Why do stablecoins require regulation?
Stablecoins play an important role both within and outside the crypto ecosystem within and outside the crypto ecosystem, even if they might not balloon in price like Bitcoin. Crypto investors often use stablecoins to facilitate easy trading on

crypto exchanges. Others around the world have used stablecoins to maintain the value of their savings when their native currencies are depreciating, or to save money on cross-border transactions. Agrentina, Turkey, and even Tailban occupied Afghanistan are some places where stablecoins are not just for trading, but a way to make daily life possible.

Stablecoins are a class of cryptocurrencies, with their values linked to assets. Unlike better known cryptocurrency coins such as Bitcoin (BTC) and Ether (ETH) or even tokens

trading, but a way to make daily life possible.

The numbers tell a compelling story as well. Tether (USDT), the fourth largest cryptocurrency by market capitalisation and the largest stablecoin, per Combafraet Cap, has a circulating supply of 162.75 billout USDT. Meanwhile, more testimated to be in circulation worldwide. Naturally, more governments are concerned about whether the highly engineered use of stablecoins could one day affect the value of the original flat currencies or commodities backing them up. Furthermore, what is the guarantee that every stablecoin pegged to the dollar curp by its issuer? Currently, it is largely up by its issuer? Currently, it is largely up by its issuer? Currently, it is largely up to stablecoin users to audit their issuers' reserves and make sure that their stablecoins are adequately backed. When a stablecoin issuer suddenly adds millions of dollars in assest, it naturally raises questions about where the money to back this is coming from, or whether it really exits. This is where regulation comes in.

Do stablecoins exhibit volatility despite being pegged to currencies? Despite their name and their backing, stablecoins can also exhibit volatility. In response to both technical factors and world events, stablecoins sometimes e come unpegged and their prices may rise or fall beyond the usual range, with sudden drops triggering panic amongst

investors. For example, USDT, which is pegged to the U.S. Dollar, has in the past fallen to prices as low as around \$0.92. Stablecoins have also collapsed entirely. In May 2022, Terra's cryptocurrency LINA and its linked algorithmic stablecoin USF both lost most panicking investors who no longer trusted these assets quickly sold them off to minimise losses, and the prices fell cose to zero. Billions of dollars were wiped from the crypto sector and the ensuing liquidity crunch triggered asset freezes across global crypto exchanges and fintech platforms.

Have other countries started to regulate stablecoins?
U.S. President Donald Trump in July signed the GENIUS Act that is designed to regulate stablecoins and protect the U.S. dollar, much to the joy of his pro-crypto

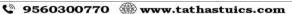
supporters.

As per the White House, the GENIUS supporters.

As per the White House, the GENIUS
Act requires 100% reserve backing with
Act requires 100% reserve backing with
Treasuries for atheories. Those issuing
this asset will also have to make monthly,
public disclosures of the composition of
their reserves, apart from complying with
marketing rules.

Other countries that have started to
regulate stableowins include Japan and
pregulate stableowins include Japan and
jurisdictions have more generic
regulations that cover stablecoins along
with other cryptor-related activities
in la jurisdiction, some of the country's
in la jurisdiction, some of the country's
upcoming regulatory regime will provide
an outlet for their own stablecoin
ventures.







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Key Takeaways from the Article

What are Stablecoins?

- Cryptocurrencies pegged to a stable asset (USD, Euro, Gold, etc.)
- Offer low volatility compared to Bitcoin or Ethereum.
- Used in crypto trading, cross-border remittances, and value preservation in high-inflation economies.

Hong Kong's Regulation (Effective August 1, 2025):

- Stablecoins Ordinance enforced by Hong Kong Monetary Authority (HKMA).
 - Makes it illegal to:
 - Offer unlicensed fiat-referenced stablecoins (FRS) to retail investors.
 - Actively market such unlicensed FRS in Hong Kong.

Licensing Requirements:

- Firms must apply to **HKMA** for licenses.
- Must maintain:
 - 100% reserve backing
 - Redemption & Asset stabilisation mechanisms
 - Compliance with AML/CFT (Anti-Money Laundering / Counter Financing of Terrorism) norms
 - Audited & disclosed assets

Why the Regulation is Needed:

- Protect investors from:
 - Fake or unbacked stablecoins
 - Volatility and sudden collapses (e.g., TerraUST crash in 2022)
- Ensure transparency, financial stability, and sovereign monetary control
 - Avoid systemic risks to fiat currencies and global finance
 - Address growing market: Over \$250 billion worth of stablecoins are in circulation

Global Moves Towards Regulation:

- US GENIUS Act: Signed in July 2025 mandates:
 - 100% reserve in liquid assets
 - Monthly public reserve disclosures
 - Strict marketing regulations
- Other regulators include:
 - Japan, Singapore
- China bans crypto but supports Hong Kong's experimentation

Stablecoins Can Still Be Risky:

- Can de-peg (e.g., **USDT** fell to \$0.92)
- Collapse examples: LUNA & UST (2022) billions lost, trust eroded
- Unverified reserves and opaque backing can destabilise the system



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Way Forward

- Global Regulatory Harmonisation:
 - Coordinate rules across countries for stablecoins to prevent regulatory arbitrage.
- Mandatory Reserve Auditing:
 - Ensure independent audits and monthly disclosures of reserve assets.
- Controlled Licensing Approach:
 - Like Hong Kong, adopt a **limited and phased** licensing strategy to test reliability and compliance.
- Robust Consumer Awareness:
 - Public campaigns and fintech education to help investors distinguish between regulated and unregulated stablecoins.
- Risk Assessment Frameworks:
 - Central banks and financial regulators must create **contingency measures** for stablecoin collapse or de-pegging scenarios.





