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USCIRF Annual Report

- The U.S. Commission on International Religious Freedom (USCIRF) has released its annual report recently.
- The report, released by the federal government commission that functions as an advisory body, placed India alongside countries, including China, North Korea, Saudi Arabia and Pakistan.
- It has downgraded India to the lowest ranking, "countries of particular concern" (CPC) in its 2020 report.
- India was categorized as a "Tier 2 country" in last year's listing, this is the first time since 2004 that India has been placed in this category.
- "India took a sharp downward turn in 2019," the commission noted in its report, which included specific concerns about the Citizenship Amendment Act, the proposed National Register for Citizens, anti-conversion laws and the situation in Jammu and Kashmir.
- The commission also recommended that the U.S. government take stringent action against India under the "International Religious Freedom Act" (IRFA).
- It called on the administration to "impose targeted sanctions on Indian government agencies and officials responsible for severe violations of religious freedom by freezing those individuals' assets and/or barring their entry into the United States under human rights-related financial and visa authorities, citing specific religious freedom violations".

Remittance Prices Worldwide

- Remittance Prices Worldwide is a resource report sponsored by the World Bank Group.
- It provides data on the cost of sending remittances from 48 remittance sending countries and 105 receiving countries.
- Information provided includes exchange rate and transfer fees, as well as the speed of transfer.
- Globally, sending remittances costs an average of 6.79 percent of the amount sent.
- This figure is used to monitor the progress of the global effort for

reduction of remittance prices.

- According to recent report global remittances are projected to decline sharply by about 20 percent in 2020 due to the economic crisis induced by the COVID-19 pandemic and shutdown.
- The projected fall, which would be the sharpest decline in recent history, is largely due to a fall in the wages and employment of migrant workers, who tend to be more vulnerable to loss of employment and wages during an economic crisis in a host country.

Migration and Development Brief

- Migration and Development Briefs are prepared by the Migration and Remittances Unit, Development Economics (DEC), World Bank.
- The brief aims to provide an update on key developments in the area of migration and remittance flows and related policies over the past six months.
- India, the country that received the most remittances in the world, $79 billion in 2018, according to the World Bank's Migration and Development Brief.

Migration Policy Institute

- The Migration Policy Institute (MPI) is a non-partisan think tank established in 2001.
- MPI has been described as supportive of liberal immigration policies.
- MPI publishes an online journal, the Migration Information Source, which provides information, thoughts, and analyses of international migration and refugee trends.
- MPI organizes an annual Immigration Law and Policy Conference in New York.
- Migration Policy Institute has found that remittance flows between 2008 and 2009 declined by 5.5 per cent globally.

Global Terrorism Index (GTI)

- Global Terrorism Index is released by Australian Think Tank Institute for Economics and peace.
- The GTI report issued by the IEP is based primarily on the Global Terrorism Database (GTD) collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, besides other sources.

- India has moved to the seventh position from the previous year's eighth in the annual Global Terrorism Index (GTI) 2019.
- The countries ahead of it are Afghanistan, Iraq, Nigeria, Syria, Pakistan and Somalia.
- GTI scores are directly used in the Global Peace Index, the Global Slavery Report published by the Walk Free Foundation, and indirectly used in computing country scores in the World Economic Forum's Travel and Tourism Competitiveness and Global Competitiveness Indices and compilation of Safe Cities Index by the Economist Intelligence Unit.

CARES Programme

- The Government of India and the Asian Development Bank (ADB) today signed a $1.5 billion loan that will support the government's response to the novel coronavirus disease (COVID-19) pandemic.
- The loan agreement for the ADB's COVID-19 Active Response and Expenditure Support Programme (CARES Programme) will provide budget support to the government to counter and mitigate the adverse health and socio-economic impact of the pandemic.
- The CARES Programme is provided as the first support to meet the immediate requirements of the government.
- Building on the CARES Programme, ADB is also in dialogue with the government for further possible support for stimulating the economy, support strong growth recovery, and to build resilience to future shocks.
- This includes the support for the affected industries and entrepreneurs particularly micro, small, and medium-sized enterprises (MSMEs) by facilitating their access to finance through credit guarantee schemes, MSME integration into global and national value chains through enterprise development centers, and a credit enhancement facility for infrastructure projects.

Asian Development Bank

- The Asian Development Bank (ADB) is a regional development bank established on 19 December 1966, headquartered in Philippines.
- The company also maintains 31 field offices around the world to promote social and economic development in Asia.
- The bank admits the members of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, formerly the Economic Commission for Asia and the Far East or ECAFE) and non-regional developed countries.

- From 31 members at its establishment, ADB now has 68 members.
- The ADB was modeled closely on the World Bank, and has a similar weighted voting system where votes are distributed in proportion with members' capital subscriptions.
- ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty.
- India is a member of Asian Development Bank and second highest borrower from the institution followed by China.

Nano-Microbial Disinfectant

- INST scientists find low-cost metal-free nanomaterial towards disinfection of garments under visible light exposure
- It can be an alternative to silver and other metal-based materials.
- A research team from the institute have tested carbon nitride quantum dots (g-CNQDs) for visible-light-driven antibacterial activity and found it to be efficient, apart from being biocompatible with mammalian cells, thus making it cost-effective.
- Scientists have explained that aerosol droplets generated during sneezing have enough moisture that might help in reactive oxygen species (ROS) mediated disinfection of any infectious agents in the droplet, once it comes into contact with the nanomaterial sewn fabric under sunlight or ambient white light exposure.
- According to the INST team, these nanomaterials possess enhanced biocidal activity attributed to larger surface area of g-CNQDs having more reactive sites and optical absorption both in the ultraviolet and visible region.
- The g-CNQDs have the ability to generate reactive oxygen species (ROS).
- The ROS rapidly interact and damage the immediately available biological macromolecules such as lipids present on the cell membrane or envelope and proteins present on the cellular surface, towards inactivation of the microorganism.
- The mechanism of inactivation is non-specific to a particular pathogen, as lipid and protein are major components of the inhabitants of the microbial world.
- The scientists are exploring ways of incorporating doped and undoped carbon nitride-based materials into cloth fabrics that can continuously produce reactive oxygen species (ROS) under optimal humidity and temperature for the antimicrobial activity.

Quantum Dots

- Quantum dots (QDs) are man-made nanoscale crystals that that can transport electrons.
- When UV light hits these semiconducting nanoparticles, they can emit light of various colors.
- These artificial semiconductor nanoparticles that have found applications in composites, solar cells and fluorescent biological labels.
- Electrons orbit the center of a single quantum dot similar to the way they orbit atoms, the charged particles can only occupy specific permitted energy levels.
- At each energy level, an electron can occupy a range of possible positions in the dot, tracing out an orbit whose shape is determined by the rules of quantum theory.
- A pair of coupled quantum dots can share an electron between them, forming a qubit.
- Researchers at the National Institute of Standards and Technology (NIST) have for the first time created and imaged a novel pair of quantum dots.
- These are tiny islands of confined electric charge that act like interacting artificial atoms.
- Such "coupled" quantum dots could serve as a robust quantum bit, or qubit, the fundamental unit of information for a quantum computer.
- Moreover, the patterns of electric charge in the island can't be fully explained by current models of quantum physics, offering an opportunity to investigate rich new physical phenomena in materials.
- They could perform much larger, more complex operations than classical bits and have the potential to revolutionize computing.

Source: The Hindu, Down to Earth, PIB, India Today, Science Daily

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