



JANUARY, 2024



****** Useful for ******

CSE, ESE, PSUs, State Services Exams, SSC and Banking Exams

Mpemba Effect

• **Context:** The Mpemba effect has recently captured the attention of scientists. After many experiments, we still don't have a clear agreement, on what causes this puzzling phenomenon.

Key Highlights:

- It is a phenomenon in which hot water freezes faster than cold water under certain conditions.
- It is named after Tanzanian student Erasto Mpemba, who observed it in the 1960s.
- One of the proposed causes is the presence of microbubbles that remain suspended in water after boiling. These microbubbles promote convection and facilitate faster heat transfer. Hence, the warm water cools down more quickly.
- Another cause is attributed to evaporation. As warmer water evaporates more, it takes away the heat more quickly. Thus, warm water cools down more quickly as compared to cold water.
- The presence of frost in cold water acts as an insulator which impedes/slows down the process of heat loss. This raises the freezing point of cold water.
- Compounds like calcium carbonate precipitate in warm/hot water, and it lowers down the freezing point of warm water. On the other hand, in cold water, calcium carbonate and other impurities remain dissolved in the cold water, which increases the freezing point of cold water.

Nuclear battery

• **Context:** Chinese startup Betavolt has developed a 'Nuclear battery' that can generate power for 50 years without needing charging or maintenance.

Key Highlights:

• It is smaller than a coin and contains 63 nuclear isotopes.

- It converts radioisotope energy into electrical energy.
- These batteries harness energy from the decay of a radioactive isotope (Like nickel-63) to produce electricity.
- It can provide 100 microwatts of power at 3V.
- It is fire-resistant, jerk-proof, and operational in temperatures from -60°C to 120°C.
- Betavolt asserts that its battery is the world's first to miniaturize atomic energy production, which challenges the conventional notions about the nonminiaturization of nuclear technology.
- It has a competitive edge compared to other batteries because of its elevated energy density.
- It envisions applications in aerospace, Al equipment, medical devices, microprocessors, sensors, drones, and micro-robots.

Parakram Diwas 2024

 Context: Prime Minister inaugurated the Parakram Diwas 2024 event at Red Fort on the evening of January 23. The celebration was continued till 31st January.

- It is a national event celebrated in India on 23rd January to mark the birth anniversary of Netaji Subhash Chandra Bose.
- It has been celebrated annually since 2021.
- The inaugural event occurred at Victoria Memorial Hall, Kolkata.
- Organized by Ministry of Culture, in collaboration with institutions like the Archaeological Survey of India, National School of Drama, Sahitya Akademi, and the National Archives of India.
- The event featured various activities exploring the rich legacy of Netaji Subhash Chandra Bose and the Azad Hind Fauj.
- The Prime Minister digitally launched 'Bharat Parv,' organized by the Ministry of Tourism, featuring Republic Day Tableaux and cultural exhibits to showcase the nation's diversity.

- The iconic Red Fort was transformed with a projection mapping show by artists from the National School of Drama.
- Special recognition was given to the veterans of the Indian National Army.
- This nine-day event showcased various citizen centric initiatives by 26 Ministries and departments.

Pradhanmantri Suryodaya Yojana

• **Context:** PM announces a solar rooftop scheme to electrify one crore households with solar electricity.

Key Highlights:

- The government will launch 'Pradhanmantri Suryodaya Yojana' with the target of installing rooftop solar on one crore houses.
- It will not only reduce the electricity bill of the poor and middle class, but will also make India selfreliant in the field of energy.
- It is estimated that there are less than 10 lakh households with rooftop solar installations in the country.
- There was a target to install 100 GW by 2022 60 GW from utility projects (mega concentrated solar parks) and 40 GW from rooftop solar.
- But, according to the Ministry of New and Renewable Energy's website, solar power installed capacity in India has reached around 73.31 GW as of December 2023, while rooftop solar installed capacity is around 11.08 GW. Notably, solar power has a major share in the country's current renewable energy capacity, which stands at around 180 GW.
- In terms of total solar capacity, Rajasthan is at the top with 18.7 GW. Gujarat is at the second position with 10.5 GW.
- When it comes to rooftop solar capacity, Gujarat tops the list with 2.8 GW, followed by Maharashtra by 1.7 GW.

- India is expected to witness the largest energy demand growth of any country or region in the world over the next 30 years, according to the latest World Energy Outlook by the International Energy Agency (IEA).
- To meet this demand, the country would need a reliable source of energy and it can't be just coal plants.
- It aims to reach 500 GW of renewable energy capacity by 2030.
- The country has increased it from less than 10 MW in 2010 to 70.10 GW in 2023, as mentioned before.

Schemes for Promoting Solar Energy:

- PM-KUSUM (Kisan Urja Suraksha evam Utthaan Mahabhiyan): Aimed at ensuring energy security for farmers in India, along with honoring India's commitment to increase the share of installed capacity of electric power from non-fossil-fuel sources.
- Solar park scheme: For Development of Ultra Mega Renewable Energy Power Parks (UMREPPs) targeting 40,000 MW of solar power installed capacity by 2025-26.
- Atal Jyoti Yojana (AJAY): The AJAY scheme was launched in September 2016 for the installation of solar street lighting (SSL) systems in states with less than 50% households covered with grid power.
- National Solar Mission: The mission was launched in 2010 with the objective of establishing India as a global leader in solar energy.
- International Solar Alliance: The ISA was launched in 2015 in Paris, on the side-lines of the Conference of the Parties (COP-21), with 121 solar resource rich countries lying fully or partially between the tropic of Cancer and tropic of Capricorn as prospective members.
- One Sun, One World, One Grid (OSOWOG): It focuses on a framework for facilitating global cooperation, building a global ecosystem of interconnected renewable energy resources.

Aid Cube under Project BHISHM

 Context: Two Arogya Maitri Disaster Management Cube-BHISHM have been deployed in Ayodhya to strengthen medical preparedness during the Pran Pratishtha Ceremony.

Key Highlights:

- It is a revolutionary mobile hospital equipped with cutting-edge technology.
- These mobile hospitals are part of the larger initiative called "Project BHISHM" Bharat Health Initiative for Sahyog, Hita, and Maitri.
- Tailored to treat up to 200 casualties, the Aid Cube focuses on rapid response and comprehensive care.
- Equipped with innovative tools, it integrates Artificial Intelligence (AI) and data analytics to improve coordination, real-time monitoring, and efficient management of medical services during emergencies.

24th JANUARY, 2024

Exercise Khanjar

• **Context:** The 11th edition of India-Kyrgyzstan Joint Special Forces Exercise KHANJAR held recently in Bakloh, Himachal Pradesh.

Key Highlights:

- The Indian Army contingent comprising 20 personnel was represented by troops from The Parachute Regiment (Special Forces) and the Kyrgyzstan contingent comprising 20 personnel was represented by Scorpion Brigade.
- It is an annual event conducted alternatively in India and Kyrgyzstan.
- The exercise emphasised on developing Special Forces skills, advanced techniques of insertion and extraction.
- The exercise also provided an opportunity for both the sides to fortify defence ties while addressing

common concerns of international terrorism and extremism.

 The exercise also accorded the opportunity to showcase capabilities of cutting edge indigenous defence equipment besides achieving shared security objectives and foster bilateral relations.

Exercise Cyclone

 Context: India-Egypt Joint Special Forces Exercise Cyclone, A 25-member Indian Army contingent had arrived in Egypt for the 2nd edition of India-Egypt Joint Special Forces Exercise, CYCLONE. It was conducted at Anshas, Egypt from January 22 to February 1, 2024.

Key Highlights:

- It is a Joint Special Forces exercise between India and Egypt.
- To enhance mutual understanding of operational protocols for desert/semi-desert Special Operations under Chapter VII of the United Nations Charter.
- It will provide an opportunity to both the contingents to strengthen their bond and share best practices.
- It will serve as a platform to achieve common security goals and enhance ties between two friendly nations.

Havisure: India's first domestically developed Hepatitis A vaccine

 Context: Recently, Indian Immunological Ltd (IIL), a wholly owned subsidiary of the National Dairy Development Board (NDDB), has launched India's first domestically developed Hepatitis A vaccine, named 'Havisure.'

- Havisure is India's first indigenously developed vaccine for Hepatitis A.
- It is a two-dose vaccine. The first dose given to those above 12 months of age and the second dose is administered at least six months later.

- The vaccine is advised for routine immunization in children and individuals at risk due to exposure or travel to regions with high hepatitis A prevalence.
- Additionally, individuals with occupational infection risks and those suffering from chronic liver diseases can also receive Hepatitis A vaccination.
- This vaccine is expected to play a significant role in preventing Hepatitis A. Hepatitis A is a highly contagious liver infection transmitted through contaminated food or water.

Jan Nayak Karpoori Thakur

 Context: Recently, the Government of India conferred 'Bharat Ratna' (India's highest civilian award) to Karpoori Thakur (posthumously) on his 100th birth anniversary.

Key Highlights:

- Karpoori Thakur was greatly influenced by Mahatma Gandhi and Satyanarayan Sinha.
- He joined the All India Students Federation (AISF), the oldest student organisation in India, during his schooling days.
- He was inspired by Indian nationalistic thought, and left his graduation studies to join the Quit India Movement, a massive mobilisation started by Mahatma Gandhi in 1942 to force the colonial British rulers to leave India.
- He initially started working as a teacher in his village.
- He returned to active politics with a victory in the Bihar Legislative Assembly election in 1952 from Tajpur constituency, and soon represented the Socialist Party.
- He became a legend because of his successful fights for the rights of the workers and thus pushed for reservations for backward classes.
- He started his fast-unto-death agitation for the cause of the labourers in Telco in the year 1970, and was arrested for leading worker strikes.
- His life revolved around the twin pillars of simplicity and social justice.

- He is known as the pioneer of OBC politics in Bihar. He implemented quotas for backward classes in the state, a move that was pivotal in setting the stage for the implementation of the Mandal Commission recommendations.
- He appointed the Mungeri Lal Commission in 1970, that identified the 128 backward' and 94 most backward' communities.
- It paved the way for 26% reservation of which OBCs got a 12% share, the economically backward classes among the OBCs got 8%, women got 3%, and the poor from the 'upper castes' got 3%.

Pradhan Mantri Awas Yojana-Urban (PMAY-U)

• **Context:** More than 3,000 flats are likely to be allotted to slum dwellers by the Delhi Development Authority (DDA) under the PMAY-U.

- The Ministry of Housing and Urban Affairs (MoHUA) launched the Pradhan Mantri Awas Yojana – Urban (PMAY-U) in 2015, as a flagship Mission of the Government of India.
- It addresses urban housing shortage among the Economically Weaker Section (EWS)/Low Income Group (LIG) category including the slum dwellers by ensuring a pucca house to eligible urban households.
- The Mission covers the entire urban area consisting of Statutory Towns, Notified Planning Areas, Development Authorities, Special Area Development Authorities, Industrial Development Authorities or any such authority under State legislation which is entrusted with the functions of urban planning & regulations.
- The scheme was earlier from 25.06.2015 to 31.03.2022. Now it has been extended up to 31.12.2024, except Credit Linked Subsidy Scheme (CLSS) vertical, to complete all the houses sanctioned under the scheme.

Zombie Virus

• **Context:** Scientists have warned that the melting Arctic 'permafrost' may start a new disease outbreak due to the release of ancient viruses.

Key Highlights:

- These viruses have been preserved in the ground for thousands of years in permafrost, live viruses demonstrating their ability to infect single-celled organisms.
- One virus sample was found to be 48,500 years old.
- The risk is heightened due to the escalating temperatures caused by global warming, leading to the thawing of previously frozen ice.
- **Concerns:** The isolated viruses posed no threat to humans but pointed out the presence of genomic traces of poxviruses and herpesviruses, which are well-known human pathogens.

India-France Relations

• **Context:** French President Emmanuel Macron was the Chief guest at the 75th Republic Day Celebration.

- After India's 1998 nuclear tests, France was the first country to initiate a Strategic Dialogue with India.
- By displaying a greater understanding of India's security compulsions as compared to other countries, France refused to impose bilateral sanctions on India.
- France was the first western country India signed a strategic partnership with.
- The year 2023 marked 25 years of India-France Strategic Partnership.

- The comprehensive Roadmap between India and France, which was adopted last year at Bastille Day, was classified under three pillars — Partnership for Security and Sovereignty; Partnership for the Planet; and Partnership for People.
- Trade relations have witnessed steady growth, with bilateral trade reaching \$13.4 Bn in 2022-23.
- France is one of the largest investors in India with FDI inflow of US\$ 659.77 million for FY 2022-23.
- For FY 2023-24, Indian exports to France totaled \$3.06 billion and imports from France totaled \$2.36 billion.
- Bilateral defence cooperation between the two sides is reviewed under Annual Defence Dialogue (Defence Minister level) and High Committee on Defence Cooperation (Secretary level).
- Joint defense exercises between the Air forces (Garuda series) and the Armies (Shakti), Navies (Varuna) are conducted regularly.
- There's a rich history of cooperation in the field of space for over 50 years between ISRO and the French Space Agency, Centre National D'Etudes Spatiales (CNES).
- France remains a major supplier of components and equipment for the Indian space programme.
- In 2023, both leaders welcomed the progress made during discussions related to the Jaitapur Nuclear Power Project (JNPP). However, the progress here has been slow, though the first pact was agreed in 2008.
- The International Solar Alliance was launched jointly by India and France.
- Both countries recognize the strategic importance of continuing to enhance this partnership for maintaining regional stability and paving the way for advancements across several sectors of importance.
- The current visit will give both countries an opportunity to discuss the Russia-Ukraine war, Israel-Hamas war, China's assertiveness in the Indo-Pacific, and defence and security cooperation.

Dynamic Wireless Charging Technology

• **Context:** Dynamic Wireless Charging Technology, The Union Ministry of Road Transport and Highways is mulling over the electrification of the Golden Quadrilateral, as part of its Vision 2030: PM Public Transport Sewa.

Key Highlights:

- Dynamic wireless charging technology refers to a system that enables electric vehicles (EVs) to charge while moving by using base pads embedded under the surface of the road.
- Dynamic wireless charging allows EVs to receive power continuously as they do not need to stop to refuel or recharge.
- This technology relies on inductive transfer of energy. The base pads installed under the road's surface generate a magnetic field, and a corresponding pad on the vehicle receives this energy, ensuring charging without physical connections.

Gyanvapi Mosque Dispute

• **Context:** The Archaeological Survey of India (ASI) handed over its report on the Gyanvapi mosque complex to the Hindu and Muslim sides.

Key Highlights:

- The Gyanvapi Mosque is located in Varanasi, Uttar Pradesh, India. It is near the Kashi Vishwanath temple.
- The dispute first reached the courts in 1991, when a petition sought the removal of the mosque from the site and the transfer of possession of the land to the Hindu community.
- The petitioners, which included the Kashi Vishwanath Mandir Trust, claimed that Maharaja Vikramaditya had built the temple more than 2,000 years ago.

- Hindu litigants have claimed that the mosque was built by Mughal ruler Aurangzeb on the site of the original Kashi Vishwanath temple after its destruction in the 17th century.
- The Vishwa Hindu Parishad contends that the Places of Worship Act is not applicable to the Gyanvapi issue, as there was no change to the religious structure since 1947, and that Hindus have always been performing puja at the site.
- The survey began on August 4, 2023, concerning the dispute around the complex.
- The ASI report concluded that it can be said there existed a Hindu temple prior to the construction of the existing structure, that is the mosque.

Kottai Ameer Communal Harmony Award, 2024

 Context: Tamil Nadu government handed over the 'Kottai Ameer Communal Harmony Award for 2024' to Mohammed Zubair (co-founder of Alt News) for peace efforts.

Key Highlights:

- It was instituted by the Tamil Nadu government in 2000 to recognize outstanding services in building harmony.
- It is presented by the Chief Minister of Tamil Nadu during the Republic Day Celebration every year.
- It is presented to a person belonging to Tamil Nadu for the outstanding services rendered to promote Communal Harmony.
- It includes a medal worth of Rs.2000/-, and a cash component of Rs 25,000, and a certificate honouring the services.

28th JANUARY, 2024

Magnetic Cooling Effect

• **Context:** Researchers have found a new alloy (specifically Ni (Co)-Mn-Ti Heusler alloy) that can act as an effective magnetic refrigerant for minimising greenhouse gas emissions.

Key Highlights:

- Magnetic Cooling Effect is defined as the reversible temperature change of a magnetic material when it is subjected to an external applied magnetic field.
- In the magnetic refrigeration cycle, a magnetic field is applied on the magnetic material under an adiabatic process (no exchange of heat with the surrounding).
- Initially randomly oriented magnetic moments get aligned along the external magnetic field, resulting in the heating of the magnetic material.
- When the magnetic field is removed during adiabatic demagnetization, the magnetic moments of the material become randomised, resulting in a decrease in temperature below the ambient temperature. It causes the material to absorb heat from the surrounding heat-transfer medium.

About Magnetic Refrigeration:

 It offers an energy-efficient and environmentfriendly cooling technology. It needs to fabricate for household, industrial, and technological applications. It acts as an alternative to the vapourcycle refrigeration technology.

Project 75 and Project 75I

 Context: Germany has presented a government to government proposal for the sale of six advanced conventional submarines to India for the Navy's P-75I procurement program.

Key Highlights:

- Project-75 (India), also known as P-75(I), is a military acquisition initiative by the Ministry of Defence (MoD).
- The initiative aims to procure diesel-electric attack submarines with fuel cells and Air-Independent Propulsion System (AIP) for the Indian Navy to build

India's naval strength and develop indigenous submarine-building capabilities.

- Project 75I is a follow-up to Project 75 and improves upon the design and technology of its predecessor.
- The conventional diesel-electric submarines such as the Scorpene, under Project 75, come with improved stealth features however, as electrical batteries power them, they need to surface every 48 hours to be recharged.
- The AIP technology will improve on this in Project 75I building six submarines that can stay submerged for up to two weeks.
- These submarines may even be larger in size compared to the ones under Project 75.
- While Project 75 came to just Rs 23,000 crore, Project 75I is beginning at almost double the budget at Rs 43,000 crore.

Purple Revolution

• **Context:** Recently, the Purple Revolution was highlighted through Lavender Cultivation in Jammu & Kashmir in the Tableau of Republic Day (2024). It highlights the Lab-to-Market success story of CSIR under the Viksit Bharat theme.

- It refers to the significant growth of lavender cultivation in Jammu & Kashmir, India.
- This initiative is part of the Aroma Mission launched by the Union Ministry of Science & Technology.
- It aims to promote the indigenous aromatic cropbased agro economy.
- It aims to increase the income of the farmers and promote lavender cultivation on a commercial scale.
- It offers attractive startup avenues and contributes to overall growth in the region.
- The Purple Revolution has been made possible through scientific interventions by the CSIR.
- It provides free saplings and end-to-end agrotechnologies to farmers.

PKC-ERCP Link Project

 Context: Rajasthan and Madhya Pradesh (MP) signed an MoU with Ministry of Jal Shakti for implementation of the 'Modified PKC-ERCP' which is the second-largest project under the national perspective plan of interlinking.

Key Highlights:

- The project envisages integration of the long-pending PKC river link project with the Eastern Rajasthan Canal Project, under the national perspective plan of interlinking of rivers (ILR) programme.
- **PKC:** The Parbati-Kalisindh-Chambal (PKC) link project is one of the 30 links included in the National Perspectives Plan.
- ECRP: The Eastern Rajasthan Canal Project (ERCP) is aimed at intra-basin transfer of water within the Chambal basin, by utilising surplus monsoon water.
- Its aim is to divert surplus water available during rainy season in rivers in Southern Rajasthan such as Chambal and its tributaries, including Kunnu, Parvati, Kalisindh, to districts where there is scarcity of water for drinking and irrigation.
- To provide drinking water to 13 districts of Rajasthan and provide irrigation water for 2.8 lakh hectares of land through 26 different large and medium projects.
- To meet drinking and industrial water needs of the southern and south eastern Rajasthan, for humans and livestock till the year 2051.
- According to the state Water Resources Department, Rajasthan has only 1.16% of India's surface water and 1.72% of groundwater.
- Among the state's water bodies, only the Chambal river basin has surplus water. Thus, the ERCP aims to create a network of water channels which will cover 23.67 % area of Rajasthan along with 41.13 % population of the state.

WHO's initiatives to prepare for future pandemic

• **Context:** The World Health Organization (WHO) is urging its member nations to sign a pandemic treaty to strengthen global preparedness for future health crises.

Key Highlights:

- In March 2021, a group of world leaders announced an initiative for a new treaty on pandemic preparedness and response.
- This initiative was taken to the World Health Organization (WHO) and will be negotiated, drafted, and debated by a newly-established Intergovernmental Negotiation Body.
- Its objective is to foster an all government and all society approach, strengthening national, regional and global capacities and resilience to future pandemics.
- To enhance international co-operation in datasharing, research and local, regional and global production and distribution of medical and public health counter-measures such as vaccines, medicines, diagnostics and personal protective equipment.
- The deadline for this agreement is set for the 77th World Health Assembly in May 2024.

30th JANUARY, 2024

"Alpenglow" Phenomenon

 Context: NASA astronaut Loral O'Hara of the International Space Station recently shared some amazing photos of "alpenglow" phenomenon observed near Hindu Kush mountain range

Key Highlights:

 Alpenglow is an optical phenomenon that appears as a horizontal reddish glow near the horizon opposite to the Sun. This happens when the solar disk is just below the horizon.

Current Affairs Week-4 22nd January - 31st January

- It can occur during the twilight hours before sunrise or after sunset.
- Colour range Between red, pink and orange.
- Alpenglow occurs when direct sunlight around sunrise or sunset is reflected off airborne precipitation, ice crystals or particulates in the lower atmosphere, as the sunlight has no direct path to reach a mountain.

Exercise Sada Tanseeq

• **Context:** Recently, 'Sada Tanseeq', a First Joint Military Exercise between India and Saudi Arabia held at Mahajan in Bikaner, Rajasthan.

Key Highlights:

- The exercise involved the Establishment of Mobile Vehicle Check Post, Cordon & Search Operation, House Intervention Drill, Reflex Shooting, Slithering and Sniper Firing.
- The Indian Army contingent was represented by a Battalion from the Brigade of the Guards (Mechanised Infantry).
- The Saudi Arabian contingent was represented by the Royal Saudi Land Forces.
- Its objectives were to train troops of both sides for joint operations in semi-desert terrain under Chapter VII of the United Nations Charter.
- It aimed to act as a platform to achieve shared security objectives, enhance the level of defence cooperation, and foster bilateral relations between the two friendly nations.

India at Davos 2024

 Context: At the World Economic Forum's annual meeting at Davos, 2024, India participated in the spirit of "Vasudhaiva Kutumbakam", ready to shape a common future marked by global cooperation, aligning with the overarching WEF theme for the year, 'Rebuilding Trust'.

Key Highlights:

 At Davos (WEF) 2024, India showcased its economic growth, technological advancements, and strategies for energy and climate change. It also emphasizes India's goal to become a developed nation by 2047, underscoring its significant impact on the global economy

- India has used technology, especially AI, to develop and deliver mass-scale governance solutions. Their digital leadership is recognized in smartly leveraging AI for business value.
- Indian women's significant economic role was emphasized, with 90 million self-employed women managing grassroots businesses worth \$37 billion annually. Their financial prudence is evident with NPAs below 2.5%.
- The discussions included India's approach to energy challenges, considering availability, affordability, and sustainability. India's exploration of green hydrogen as a new energy source while transitioning from fossil fuels was noted.
- India's growth has been highlighted as equitable, focusing on infrastructure build-up across the country, gender inclusivity, and social security measures for disadvantaged sections with digital support.

31st JANUARY, 2024

Ratle Hydro Electric Project

 Context: The government has announced diversion of Chenab River water through diversion tunnels to expedite the 850-MW Ratle Hydro Electric Project in Jammu & Kashmir.

- Ratle Hydroelectric Project (850 MW), is a Run of River Scheme located on River Chenab at village Drabshalla, district Kishtwar, Union Territory of Jammu and Kashmir.
- It is developed by Ratle Hydroelectric Power Corporation (RHPCL), which is a joint venture between Jammu & Kashmir State Power Development Corporation (JKSPDC) and India's state-owned National Hydroelectric Power Corporation (NHPC).

- It includes a 133 m tall gravity dam and two power stations adjacent to one another. The installed capacity of both power stations will be 850 MW.
- The project is scheduled to be commissioned by 2026.

Corruption Perceptions Index (CPI) 2023

• Context: Recently, the Corruption Perceptions Index (CPI) 2023 was released by Transparency International.

Key Highlights:

- Transparency International is the global civil society organisation founded in 1993 and is based in Berlin, Germany.
- It ranks 180 countries and territories around the globe by their perceived levels of public sector corruption.
- The index uses a scale of 0 to 100, where 0 is highly corrupt and 100 is very clean.
- Denmark is at the top, followed by Finland, New Zealand and Norway.
- The bottom of the index included Myanmar (162), Afghanistan (162) and North Korea (172). At rank 180 was Somalia with the lowest score of 11.
- At rank 93, India has tied up with Maldives, Kazakhstan, and Lesotho.

SCORE	COUNTRY/TERRITORY

SCOR	E COUNTRY/TERRITORY	68	United Arab	52	Fiji	42	Moldova	36	Ukraine	29	Bolivia	22	Congo
90	Denmark		Emirates	52	Saudi Arabia	42	North Macedonia	35	Bosnia and	29	Pakistan	22	Guinea-Bissau
87	Finland	67	Taiwan	51	Malta	42	Trinidad and		Herzegovina	29	Papua New	21	Eritrea
85	New Zealand	66	Chile	51	Mauritius		Tobago	35	Dominican		Guinea	20	Afghanistan
84	Norway	64	Bahamas	50	Croatia	41	Burkina Faso		Republic	28	Gabon	20	Burundi
83	Singapore	64	Cabo Verde	50	Malaysia	41	Kosovo	35	Egypt	28	Laos	20	Chad
82	Sweden	63	Korea, South	49	Greece	41	South Africa	35	Nepal	28	Mali	20	Comoros
82	Switzerland	62	Israel	49	Namibia	41	Vietnam	35	Panama	28	Paraguay	20	Democratic
79	Netherlands	61	Lithuania	48	Vanuatu	40	Colombia	35	Sierra Leone	27	Cameroon	20	Republic of
78	Germany	61	Portugal	40	Armenia	40	Côte d'Ivoire	35	Thailand	26	Guinea		the Congo
78	Luxembourg	60	Latvia	46	lordan	40	Guyana	34	Ecuador	26	Kyrgyzstan	20	Myanmar
77	Ireland	60	Saint Vincent and	46	Kuwait	40	Suriname	34	Indonesia	26	Russia	20	Sudan
76	Canada		the Grenadines	46	Montenegro	40	Tanzania	34	Malawi	26	Uganda	20	Tajikistan
76	Estonia	60	Spain	46	Romania	40	Tunisia	34	Philippines	25	Liberia	18	Libya
75	Australia	59	Botswana	40	Bulgaria	39	India	34	Sri Lanka	25	Madagascar	18	Turkmenistan
75	Hong Kong	58	Qatar	45	Sao Tome and	39	Kazakhstan	34	Turkey	25	Mozambique	17	Equatorial Guinea
73	Belgium	57	Czechia	45	Principe	39	Lesotho	33	Angola	25	Nigeria	17	Haiti
73	Japan	56	Dominica	44	Jamaica	39	Maldives	33	Mongolia	24	Bangladesh	17	Korea, North
73	Uruguay	56	Italy	43	Benin	38	Morocco	33	Peru	24	Central African	17	Nicaragua
72	Iceland	56	Slovenia	43	Ghana	37	Argentina	33	Uzbekistan		Republic	16	Yemen
71	Austria	55	Costa Rica	43	Oman	37	Albania	32	Niger	24	Iran	13	South Sudan
71	France	55	Saint Lucia	43	Senegal	37	Belarus	31	El Salvador	24	Lebanon	13	Syria
71	Seychelles	54	Poland	43	Solomon Islands	37	Ethiopia	31	Kenya	24	Zimbabwe	13	Venezuela
71	United Kingdom	54	Slovakia	43	Timor-Leste	37	Gambia	31	Mexico	23	Azerbaijan	11	Somalia
69	Barbados	53	Cyprus	42	Bahrain	37	Zambia	31	Togo	23	Guatemala		
69	United States	53	Georgia	42	China	36	Algeria	30	Djibouti	23	Honduras		
68	Bhutan	53	Grenada	42	Cuba	36	Brazil	30	Eswatini	23	Iraq		
-00	Diratan	53	Rwanda	42	Hungary	36	Serbia	30	Mauritania	22	Cambodia		

SCORE 10-19 20-29 30-39 40-49 50-59 60-69 70-79 80-89

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