

Current Affairs Revision

Environment and Ecology



PT 2022

The News

- ▶ On 2nd February World Wetland day 2022 was celebrated across the globe



World Wetland day 2022	
Objective	To raise awareness about Wetlands
Significance	This day marks the anniversary of the Ramsar convention (Convention on Wetlands).
Ramsar convention	It is an Inter - governmental treaty which provides for - 1) National action + 2) International cooperation for conservation and wise use of Wetlands and their resources.
Theme 2022	Wetland Action for People and Nature
World wetland day 2022	<ol style="list-style-type: none"> 1) National Wetland Decadal Change Atlas released by Space Application Centre. 2) Announcement of 2 New Ramsar Site took place. <ul style="list-style-type: none"> • Khijadia Wildlife Sanctuary (Gujarat) • Bakhira Wildlife Sanctuary (Uttar Pradesh)

The News

- On world Wetland day 2 New Ramsar sites in India were announced.



Site	Location	About
Bakhira sanctuary	<u>District</u> - Sant Kabir district <u>State</u> - Uttar Pradesh	<p>It is the largest natural floodplain wetland of India. Established in 1980.</p> <p>Provides safe wintering and staging grounds for large number of species of the Central Asian Highway.</p>
Khijadiya bird sanctuary	<u>District</u> - Jamnagar <u>State</u> - Gujarat	<p>Around 300 species of migratory birds have been recorded here. The sanctuary is unique for having freshwater lakes, salt and freshwater marshlands.</p>

The News

- ▶ In Union Budget 2022 Finance Minister Nirmala Sitharaman announced the issuance of '**sovereign green bonds**' as part of the government's overall market borrowings for the year.



Definition	Green bond is a debt Instrument, issued by any sovereign entity / Inter governmental group / corporation to use proceeds for environmentally sustainable projects.
Objective	Invest in projects which help lower the carbon footprint of the economy. Inception of Green bond market started in 2007
Examples of Projects which can be funded by Green bonds	Renewable energy projects like Solar energy, wind energy, biogas energy etc. Green Transportation, energy - efficient Infrastructure, waste management, Waste disposal etc.
Sovereign Green Bonds	1 st time, Sovereign Green bond has been included as part of Budget. <u>Features</u> - Rupee - denominated bonds issued for medium - to - long tenure to meet the demand for green Infrastructure projects. <u>Top 5 countries in Green Bond market</u> - USA, Germany, China, France, and the UK

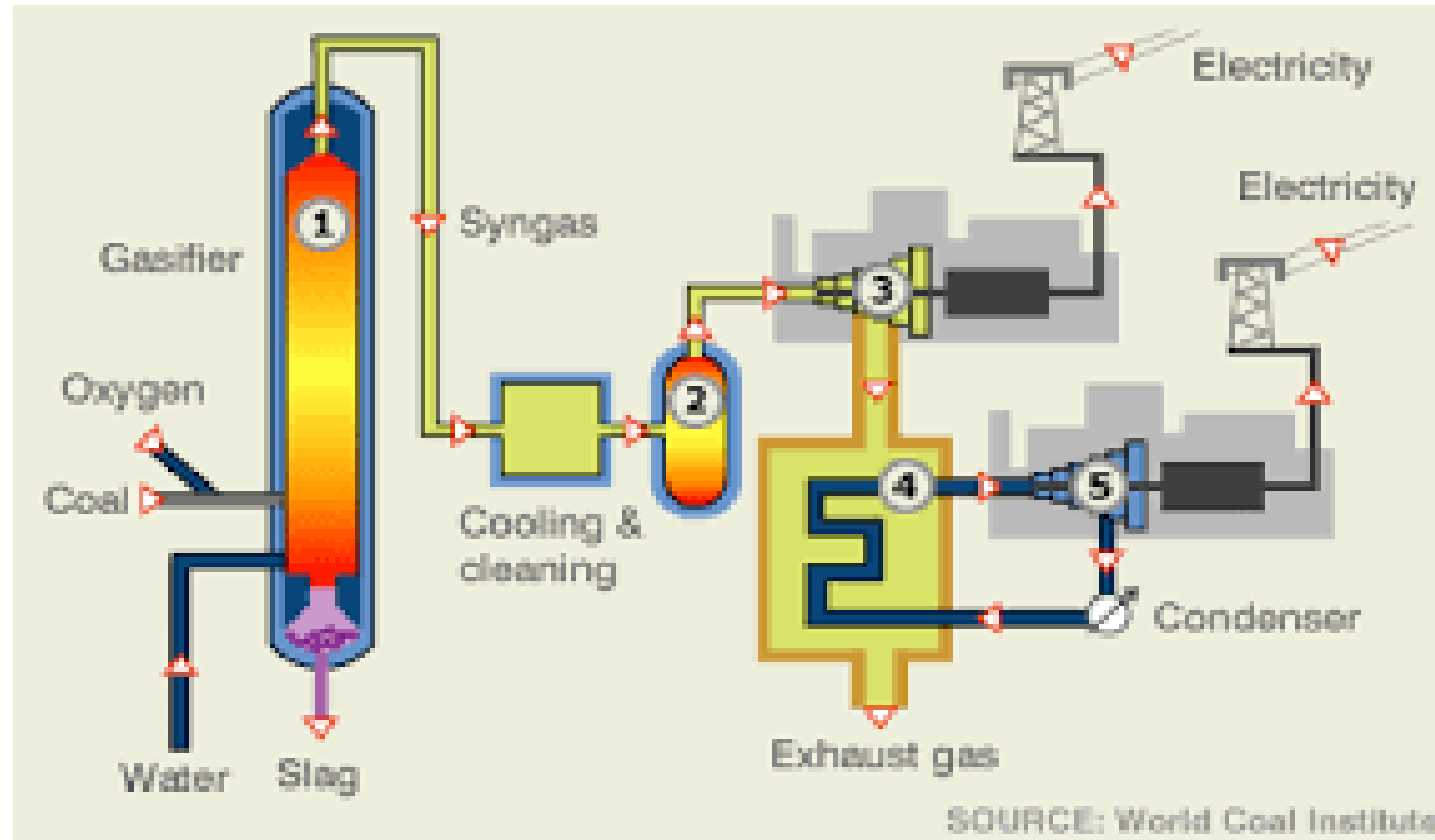
The News

- ▶ In budget 2022, it was announced that 4 pilot projects for coal gasification will be set up.



Fact for Prelims

Coal gasification	
<u>Definition</u>	<ul style="list-style-type: none">• It is a process of converting coal into synthesis gas (Syngas)• Syngas is a mixture of hydrogen (H₂), carbon monoxide, carbon dioxide (CO₂).
<u>Significance</u>	<ul style="list-style-type: none">• Process hold good potential in the future as -<ol style="list-style-type: none">1) Coal is the most abundantly available fossil fuel.2) Low grade coal can be used in the process.
<u>Benefit</u>	<ul style="list-style-type: none">• Syngas can be used for electricity production.• Can be used in energy efficient fuel technology.• Can be used as chemical “building block” for Industrial purpose• Hydrogen economy can be fuelled by extracting hydrogen.
<u>Hydrogen economy</u>	<ul style="list-style-type: none">• It is an economy which relies on Hydrogen as a commercial fuel• Hydrogen is 1) Zero - carbon fuel 2) Clean energy 3) An alternative to fuel.




The News

- ▶ Recently, Forest Survey report 2021 was released.



Facts for Prelims

Change in Forest & Tree Cover between 2019 and 2021 Assessments



Class	2019 Assessment		2021 Assessment		Net Change Area (in sq km)
	Area (in sq km)	% of GA	Area (in sq km)	% of GA	
Forest Cover	7,12,249	21.67	7,13,789	21.71	+ 1,540
Tree Cover	95,027	2.89	95,748	2.91	+721
Total of Forest & Tree Cover	8,07,276	24.56	8,09,537	24.62	2,261

- There is an increase of **2,261 sq km (0.28 %)** of total forest and tree cover in the country as compared to the previous assessment 2019.

State having the “largest forest cover area - wise in the country “	Madhya Pradesh
“Top 5 states” with the largest forest cover in India	<ol style="list-style-type: none"> 1) Madhya Pradesh 2) Arunachal Pradesh 3) Chattisgarh 4) Odisha 5) Maharastra
“Top 5 States” by % of State Geographical area under forest cover	<ol style="list-style-type: none"> 1) Mizoram (84.53%) 2) Arunachal Pradesh 3) Meghalaya 4) Manipur 5) Nagaland

Composition of forest cover in India

Table 2.2 Forest Cover classified in terms of canopy density classes

Class	Description
Very Dense Forest	All lands with tree canopy density of 70 percent and above.
Moderately Dense Forest	All lands with tree canopy density of 40 percent and more but less than 70 percent.
Open Forest	All lands with tree canopy density of 10 percent and more but less than 40 percent.
Scrub	Forest lands with canopy density less than 10 percent.
Non-forest	Lands not included in any of the above classes. (includes water)



Very Dense Forest



Moderately Dense Forest



Open Forest



Scrub

Composition of forest cover in India

- Total forest cover
- Very Dense forest cover
- Moderately dense forest cover
- Open Forest
- Scrub (not included in forest cover)

All categories observed an increase except Moderately dense forest (MDF) which experienced a **decrease**. Largest increase - **“Open forest”**

Total number of States having above 33% area under Forest cover

17 States / Union Territories

Top 3 states showing highest Increase in forest Cover

- 1) Andhra Pradesh
- 2) Telangana
- 3) Odisha

Total tree cover	95,748 sq km (2.91% of the geographical area)
State with maximum tree cover	Maharashtra
Trend	Increase of 721 square km
Total mangrove cover in the country	4992 sq km
Mangrove cover compared to previous assessment in 2019	Increased by 17 sq km
Top States and Union Territories with Forest cover	<ol style="list-style-type: none"> 1) West Bengal 2) Gujarat 3) A&N Islands 4) Andhra Pradesh 5) Maharashtra
Top 3 States showing Mangrove cover increase	<ol style="list-style-type: none"> 1) Odisha 2) Maharashtra 3) Karnataka

Content	Facts
Total area (Trends)	Decrease in total area
Top State in terms of Bamboo bearing area	Madhya Pradesh
State with highest increase in bamboo bearing areas	Mizoram
State with highest decrease in bamboo bearing areas	Madhya Pradesh

Tiger reserve with Highest forest cover	Nagarjunasagar Srisailem Tiger Reserve, Andhra Pradesh
Top Tiger reserve in terms of forest cover as % of the area of Tiger reserve	Pakke Tiger reserve
Fact	Forest cover decreased in Tiger reserve but increased in Tiger corridor

The News

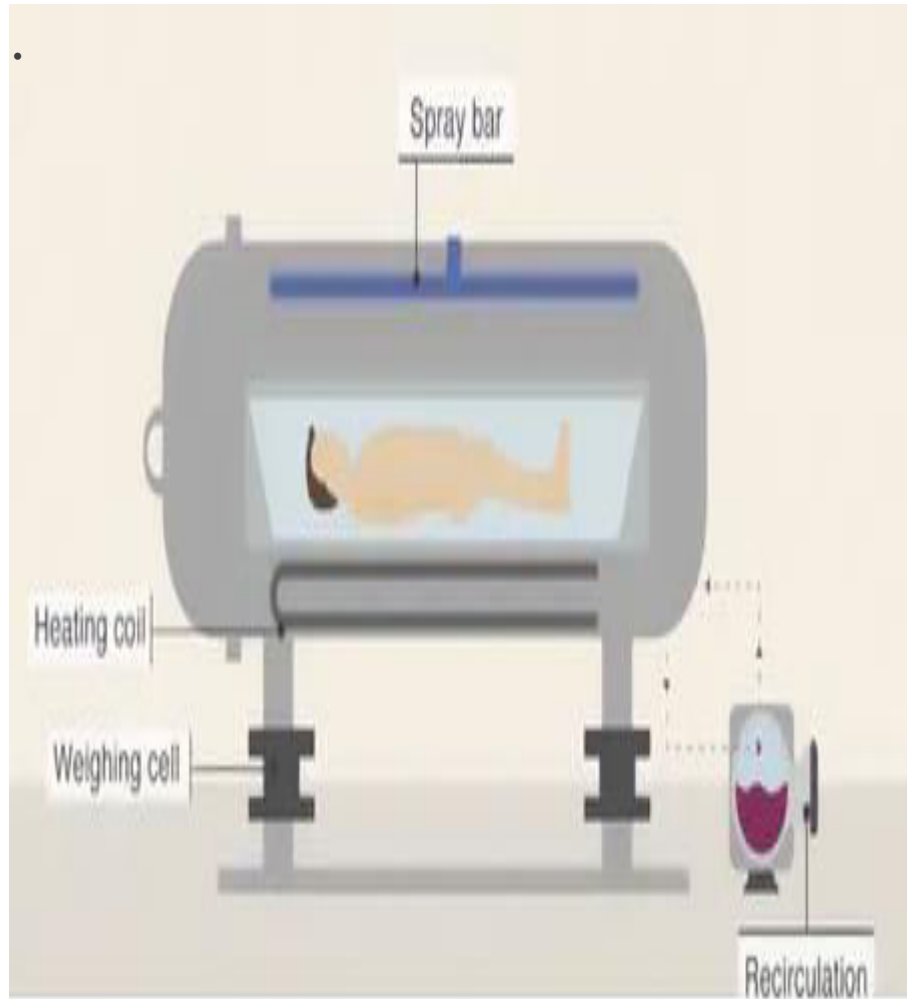
- ▶ Recently, the body of Nobel Peace Prize winning Anglican archbishop and anti-apartheid campaigner Desmond Tutu underwent aquamation.



Fact for Prelims

Definition

Aquamation is a green alternative to the traditional cremation methods. Process uses Alkaline Hydrolysis to dispose human or animal remains. It is also referred as “Water cremation”, “Green cremation”, “Chemical cremation”, Flameless cremation.

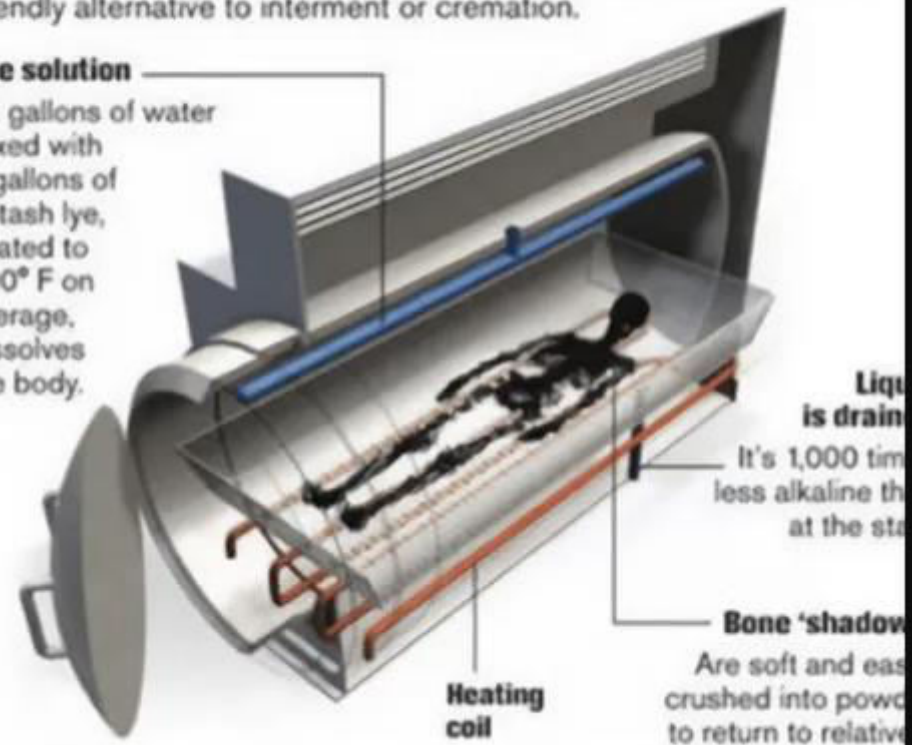


A green return to dust

A three-hour procedure known as alkaline hydrolysis mimics a faster natural decomposition process, promising a more environmentally friendly alternative to interment or cremation.

The solution

92 gallons of water mixed with 4 gallons of potash lye, heated to 300° F on average, dissolves the body.



Source: Resomation Ltd.

Associated P

The News

- ▶ Recently, Mr. Nitin Gadkari announced that Auto companies will start making Flex fuel vehicle within 6 months.

Auto companies to start making flex-fuel vehicles within six months: Gadkari

Flex-fuel or flexible fuel comes as an alternative fuel that combines both petrol and methanol or ethanol.

Gadkari asks auto industry to roll-out 'Flex-Fuel Vehicles'

IANIS | Updated: Dec 28, 2021, 16:56 IST



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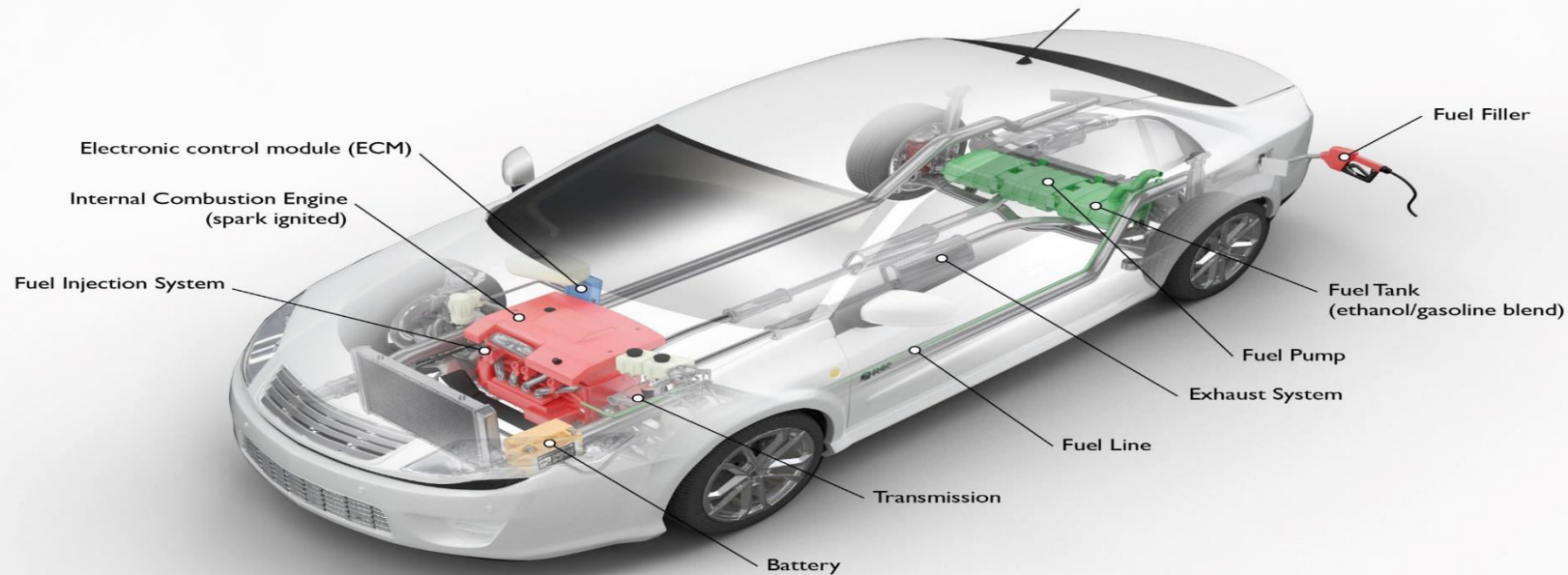
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NEW DELHI: Union Road
Transport & Highways Minister

Definition

- Flex fuel vehicles” have engines which run on flexible fuel - a combination of Petrol + Ethanol.
- “Flex fuel Vehicles” are capable of running both on 100 % petrol or 100 % Ethanol or a combination of both.
- If implemented it will be the 1st of its kind 100% dual fuel vehicle functioning in India.

Flexible Fuel Vehicle



<u>Ethanol - blending Programme</u>	
<u>Launched</u>	2003
<u>Definition</u>	It is the process of adding ethanol to Petrol.
<u>Objective</u>	<ol style="list-style-type: none"> 1) Promote the use of Environment friendly fuels 2) Reduce Import dependency for energy requirement.
<u>Nomenclature for Ethanol fuels</u>	<p>EX</p> <p>E10 means fuel that contains 10% by volume of ethanol.</p> <p>Presently, all vehicles manufactured in India are tuned for E10</p>
<u>Benefits</u>	<ol style="list-style-type: none"> 1. It can potentially reduce the auto fuel import bill. 2. It can provide farmers with alternative income. 3. Ethanol is less polluting than other fuels (More cleaner and greener) 4. Lower cost than Petrol

The News

- ▶ Recently, bill seeking amendments to Biological diversity act 2002 was introduced in the Lok Sabha.
- ▶ The bill has been referred to a **Joint Parliamentary committee**.

THE BIOLOGICAL DIVERSITY (AMENDMENT) BILL, 2021

A
BILL

further to amend the Biological Diversity Act, 2002.

BE it enacted by Parliament in the Seventy-second Year of the Republic of India as follows:—

1. (1) This Act may be called the Biological Diversity (Amendment) Act, 2021.

Short title and
commencement.

(2) It shall come into force on such date as the Central Government may, by notification
5 in the Official Gazette, appoint.

18 of 2003.

2. In the Biological Diversity Act, 2002 (hereinafter referred to as the principal Act), in
the preamble,—

Amendment of
preamble.

(a) for the word “party”, the word “Party” shall be substituted;

Biological Diversity (Amendment) Act

Proposed amendments under the act -

- ❑ Simplifies access to biological resources and Intellectual property rights.
- ❑ NBA approval before grant of IPR instead of applying for IPR
- ❑ Changes in role of State biodiversity board
- ❑ Provision related to BMC (Biodiversity Management committees)
- ❑ Threatened species
- ❑ Penal provisions.

Great Indian Bustard

From 1,260 to 150 — why power transmission lines are 'biggest threat' to Great Indian Bustard



About	Among the heaviest flying birds in India State bird of Rajasthan
Areas in which it is found	Dry grasslands and Scrub
Habitat and Extent	Confined to Rajasthan, Gujarat In small pockets of Karnataka, Maharashtra and Andhra Pradesh.
Status	Critically endangered under IUCN CITES - Appendix 1
Threats	Hunting Habitat loss Alteration due to agricultural expansion Collision/electrocution with power transmission lines etc.