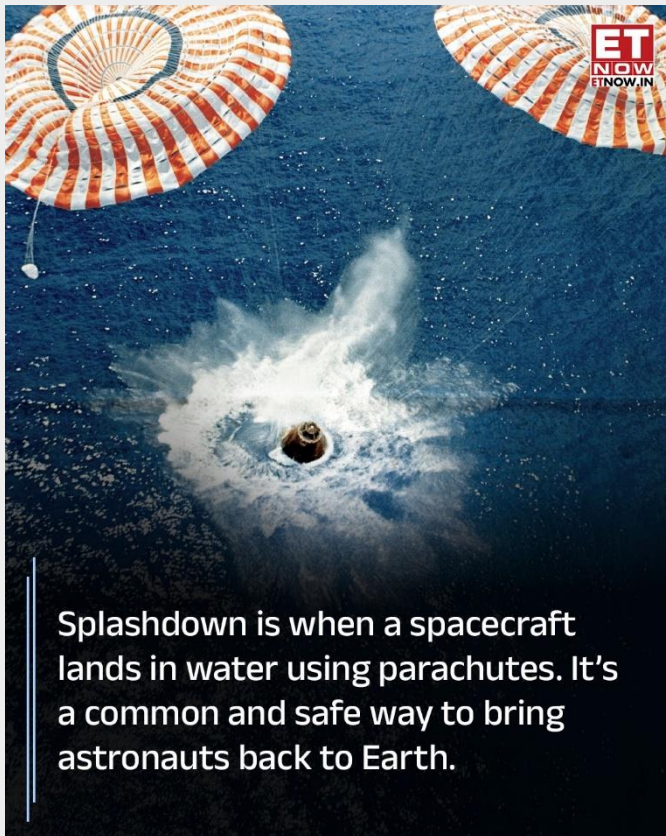


1. Splashdown of Spacecraft

Why Now?

NASA astronauts Butch Wilmore and Sunita Williams returned to Earth on March 18 after a nine-month-long stay at the International Space Station (ISS). The SpaceX Dragon capsule sent to bring them back to Earth splashed down off the Florida coast, also carrying NASA astronaut Nick Hague and Russian cosmonaut Aleksandr Gorbunov.



So what is a Splashdown?

It is the method favoured by American spacecraft – such as NASA's Mercury, Gemini, and Apollo – to re-enter Earth.

In a splashdown, the Space vehicle parachutes into an ocean or a large water body upon re-entering Earth. The low density and viscosity of water cushions the spacecraft against the impact of re-entry.

But Why Splash Down?

One is the high speed at which the spacecraft is travelling. Landing in water results in a gentler impact compared to a terrestrial landing.

Secondly, due to the friction experienced upon re-entry, the spacecraft may experience up to 3,500° F of extreme heat.

There is also the matter of convenience. Landing in a large water body removes the need to identify a suitable area and eliminates the risk of landing in a populated region. Many American launch sites are located along the coastline, with Space launches made close to water bodies as well.

In comparison, Russian cosmonauts do not splash down but descend on land, since their launch sites, such as the Baikonur Cosmodrome, are located inland.

Simplifying Spacecraft Design

Water landings also reduce the complexity of spacecraft design.

The Russian Soyuz capsule, designed for terrestrial landings, deploys a heat shield to prevent the spacecraft from burning up on re-entry. Braking parachutes, which help decelerate aircraft speeds, and other systems are also required.

On Tuesday, the Dragon enabled its heat shield to prevent the craft from burning up. It deployed two sets of parachutes, called drogue chutes or drag chutes, to slow it down further after re-entry. These were deployed at about 18,000 feet as the vehicle travelled at about 350 miles per hour (563 kmph).

To stick the landing, the Dragon deployed its four main parachutes at about 6,000 feet while slowing down to 15 miles per hour (about 24 kmph) before splashing down.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

2. Significance of Donald Trump's funding cuts to Voice of America & Radio Free Asia

Introduction

US President Donald Trump announced significant spending cuts for several government agencies in an executive order recently, under his stated goal of making the bureaucracy more efficient. The resulting gutting of two publicly funded media organisations, Voice of America (VOA) and Radio Free Asia (RFA), marks a notable break from decades of US policy, with ramifications for its relationship with the rest of the world.

It has also drawn a positive response in China, a country which both organisations extensively covered.



Voice of America and Radio Free Asia

VOA and RFA have historically played important roles in keeping the world abreast of US policies and perspectives, as well as providing news in countries lacking a free press, respectively.

VOA was set up in 1942 to broadcast American views and counter Nazi propaganda during World War 2 (1939-45). It is now the largest US international broadcaster, providing news in nearly 50 languages to an estimated weekly audience of more than 354 million people.

Meanwhile, Radio Free Asia went on air for the first time in 1996, broadcasting into China in Mandarin. RFA has today expanded to languages such as Tibetan, Korean, Burmese, Vietnamese, Khmer, Lao, Cantonese and Uyghur. In many countries with autocratic regimes and a restricted media landscape, RFA broadcasts are seen as important sources of local news.

It has an audience of around 60 million, with many listeners bypassing restrictions imposed by governments to access it.

VOA and RFA are part of the US Agency for Global Media (USAGM), the government agency that oversees all non-military, US international broadcasting. Funded by the US Congress, it was mentioned in Trump's order alongside some other agencies. According to its website, VOA and RFA have annual budgets of \$267.5 million and \$63 million respectively.

What is the significance of Trump's move?

Across the world, the two organisations have helped the US broaden the reach of its policies and ideals through the means of soft power. Simultaneously, the global presence of reporters and bureaus provided the US direct information about the state of the world and prevailing politics.

For example, RFA has an extensive Chinese-language service and frequently reports on human rights issues, including the detention of activists and repression of ethnic groups in Xinjiang and Tibet. VOA also has a Chinese-language website that often publishes stories not covered by Chinese media. Backed by the Communist Party, Chinese media does not critically report on its government.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

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