a private christening

Britain's Prince Harry and wife Meghan Markle, the Duke and Duchess of Sussex, held a private ceremony at Windsor Castle on Saturday for the christening of their two-month-old son. Archie Harrison Mountbatten-Windsor, born on May 6, was baptised in front of close family and friends in a private chapel at the Castle. PTI



AI-powered tool to help identify galaxy clusters

Researchers have developed an Artificial Intelligencepowered tool that has been trained to "look" at colour images and identify galaxy clusters quickly. The "Deep-CEE" model is based on neural networks, which are designed to mimic the way a human brain learns to recognise objects by activating specific neurons when visualising distinctive natterns and colours



Scotland Yard questions Spacey over abuse claims

A British police team is in the U.S. to interview Kevin Spacey about sexual assault allegations. The Metropolitan Police is investigating six allegations against the former House of Cards star, who ran London's Old Vic Theatre between 2004 and 2015. AF

Jaipur makes it to UNESCO World Heritage Site list

Pink City among other sites worldwide chosen for the honour

SPECIAL CORRESPONDENT

Jaipur, celebrated for its grid plan-based architecture and buildings of pink façades, on Saturday entered the list of the UNESCO World Heritage Sites. It was among the seven sites worldwide to have made it to the list.

The decision was taken by the World Heritage Committee at the UNESCO's 43rd session under way at Baku, Azerbaijan. The committee, comprising representatives of 21 State Parties to the World Heritage Convention, examined the Walled City's nomination.

The International Council on Monuments and Sites had inspected the city in 2018. It took into account the architecture of streets with colonnades, which intersect the centre, creating large public squares called *chaupar*. The uniform façades of markets, residences and temples in the main streets had also impressed the council.

Rajasthan Chief Minister Ashok Gehlot congratulated the residents on the capital getting the World Heritage status and said it would add to the glory of the city. "It will boost tourism, benefit the local economy and help to improve the infrastructure," he said.

The fortified city was founded in 1727 by the Kachwaha Rajput ruler of Amber, Sawai Jai Singh II. The city was established on the plains and built according to a grid plan interpreted in the light of Vedic architecture.

The city's urban planning shows an intermingling of ideas from ancient Hindu, modern Mughal and western

The six other cultural sites added to the list are the Dil-







Artistic trove: (Clockwise from top) A view of Jaipur's Hawa Mahal, which was built in 1799 by Maharaja Sawai Pratap Singh; the ancient city of Babylon near Hilla, Iraq; and the Ananda Buddhist temple in Bagan, Myanmar. • R.V. MOORTHY/AFP/REUTERS

mun burial mounds (Bahrain); the Budj Bim cultural landscape (Australia); the archaeological ruins of Liangzhu (China); the Ombilin coal mining site of Sawahlunto (Indonesia); the Mozu-Furuichi Kofun group of ancient mounded tombs (Japan); and the Plains of Jars containing the megalithic jar sites in Xiengkhouang (Lao People's Democratic

The committee also voted to add Iran's Hyrcanian forests and Migratory Bird Sanctuaries along the Coast of Yellow Sea-Bohai, Gulf of

Republic).

China, to its World Heritage List, praising the regions for biodiversity.

Buddhist city of Bagan Myanmar's ancient capital of

Bagan, nearly a quarter of a century after the complex of Buddhist temples was first nominated for listing, has been included in the list.

The latest recognition for Myanmar site, which includes more than 3,500 stupas, temples, monasteries and other structures built between the 11th and 13th centuries, is expected to boost

the country's tourism sector. The German city of Augs-

burg was also granted World Heritage status for its over 800-year-old water management system boasting an aquaduct, water towers, ornate fountains, canals and hundreds of bridges.

On Friday, the sprawling Mesopotamian metropolis of Babylon made it to the list after three decades of lobbying efforts by Iraq. Iceland's Vatnajokull National Park, Europe's largest with a landscape of "fire and ice," also found a place in the list.

(With inputs from AFP)

Southeast coast of India prone to heat waves: study

IITM-Pune model can forecast extreme events in real time

Researchers at Pune's Indian Institute of Tropical Meteorology (IITM) have found that the southeast coast and the northwest region of India have become more vulnerable to heat wave conditions, which lasts for about eight days, in recent years.

The observations came during the development of an extended range prediction model by the researchers which can now predict heat waves two to three weeks in advance of an extreme event.

'70% accuracy'

The system can predict heat waves with 70% accuracy, a considerable improvement as no real time prediction was possible earlier. The model has been successfully transferred to the India Me-Department teorological (IMD), which has been using it since 2017 and was used to predict heat waves this year.

Based on observation data available from 1981 to 2017 and model-run data available from 2003, researchers found that places in northwest India and southeast coastal regions are prone to heat wave conditions. Places in these two regions experience heat waves for more than eight days during sum-

Rajasthan, Punjab, Haryana, Chandigarh, Delhi, west Madhya Pradesh, west and east Uttar Pradesh, Chhattisgarh, Orissa and Vidarbha, parts of Gangetic West Bengal in central India and coastal Andhra Pradesh and Telangana experience heat waves for more than six days

"The extended range forecast can predict heat wave



predict heat waves with 70% accuracy. • SUSHIL KUMAR VERMA

conditions two weeks in advance with 70% probability. The short-range forecast two-three days before the onset of heat wave condition can provide more reliable information about the time and location of the heat wave condition," said Dr. Susmitha Joseph from IITM and co-author of a paper published in the journal Scien-

"The heat wave forecast starts from March 1 till the monsoon covers the whole country," Dr. Joseph said.

Specific conditions

A heat wave day is identified when the maximum temperature is above 44° Celsius (C) or when the three following conditions are observed when the region is facing unusually hot temperature, when the temperature is more than 36° C and when the departure from the normal temperature is more than 3.5° C.

"While the IMD considers 45° C the maximum temperature to classify it as a heat wave, we used 44° C because we were using gridded data," said Dr. A.K. Sahai from IITM, Pune and corresponding author of the paper.

Based on the new criteria.

between 1981 and 2018, the researchers identified 22 heat wave events in the northwest region, and 14 in the southeast coastal region. In addition, the researchers found nine events in a new region called northwestsoutheast – when heat wave spells in northeast and southeast regions have at least one day overlap.

The researchers verified the model using three select events in all the three heat wave regions. The model verified the onset, duration and end phase of heat wave events by the first three and last three consecutive days and the total length of the

> For northwest region, the heat wave event of June 2-11, 2014 which caused more than 1,500 deaths was used. The model was able to capture the onset even a week in advance but not the intensi-

It was able to correctly predict the duration and end of the heat wave event but not the precise location about three weeks in advance.

For the southeast region the heat wave even of May 15-22, 2008 was taken for

Soon, contraceptives for animals

Project aims to control population of elephant, wild boar, monkey and blue bull

SHIV SAHAY SINGH

The Ministry of Environment, Forest and Climate Change (MOEFCC) has launched a project for undertaking 'immunocontraceptive measures' for population management of four species of wild animals - elephant, wild boar, monkey and blue bull (Nilgai).

"We have launched the project and the Finance Ministry has given approval for it. We are trying to utilise the best in the country, the Wildlife Institute of India (WII) and National the Institute of Immunology (NII), for developing a protocol of immunocontraception," Soumitra Dasgupta, Inspector General of Forest, Wildlife, MOEFCC, told *The Hindu*. The pilot project will begin in Uttarakhand and then implemented in rest of the country, the official said

"Only hitch for using (im-



The project will begin in Uttarakhand and then be extended to other States.

munocontraception) on elephants is that there is a court injunction. The Ministry is trying to vacate the order," said Mr. Dasgupta, who was in the city to participate in a conference on 'Human Wildlife Conflict Mitigation in

Human-animal conflict Human-animal conflict has emerged as a major challenge in managing wildlife in

the country and human-ele-

phant conflict causes the

maximum number of causalities every year. According to reply tabled in Parliament on June 28, 2019, nearly 494 persons were killed by elephants last year alone. Between 2014 and March 2019, 2,398 people died in elephant attack in the country, with West Bengal accounting for maximum number of such deaths.

Raman Sukumar, a wellknown elephant expert and ecologist, said immunocontraception is a technology that uses a female animal's immune system to build a protein around the egg that prevents it from fertilising.

Not a simple task Professor Sukumar said the birth-control method has been tried in Africa in areas like the Kruger National Park but added that the implementation of such a project in India will not be a simple task. It will involve multi-disciplinary effort over a long period of time, he said.

"It depends on the goal, whether one wants to completely seize reproduction in a population or you want to delay reproduction so that the population growth rate comes down. So that instead of an elephant producing a calf every three or four years you want the elephant to produce a calf in seven or eight years. That requires mathematical modelling and knowing the adult female population in the group that has to be delivered the vaccine," he said.

Professor Sukumar said that after developing the technology, the test will be to deliver the contraceptive and the logistics around it. In Africa the system has worked in private reserves with a relatively small elephant population, where every individual can be easily identified, he added.

Elephant kingdom



A herd of Asiatic elephants grazing near the National Highway 37 in Jagiroad in Morigaon district of Assam on Saturday. • RITU RAJ KONWAR

Stranded sea cow named 'Jamil'

Second one to wash ashore in a month

AGENCE FRANCE-PRESSE

A second orphan baby dugong, also known as a sea cow, found stranded on a southern Thai beach has been named 'Jamil', meaning a "handsome sea prince" by one of the country's princesses, officials said on Saturday.

Southern Thailand's waters are home to about 250 mammals classified as vulnerable. A baby dugong dubbed 'Mariam' washed ashore on its beaches last month and her antics went viral on social media, stoking interest for ocean conservation in the country's plastic-choked waters.

The newly named dugong was found on Monday with scratches on its back and is now rehabilitating in a pool at the Phuket Marine Biological Centre.



are home to about 250 vulnerable mammals. • AFP

The name, given by Princess Sirivannavari "is from the Yawi language, and it means 'handsome prince of the sea', said the Department of Marine and Coastal Resources.

The princess has also set up "working teams for the conservation of Thailand's sea and corals and marine animals," the DMCR said.

The DMCR is now setting up a livestream of her in captivity.

Game of Thrones saga unfolds on a tapestry

A museum in Belfast is showcasing a 90-metre-long exhibit, depicting all the seasons of the popular show

AGENCE FRANCE-PRESSE

In a Belfast museum, seamstresses are at work depicting gory battles and warring kings in shimmering threads of red and gold -- an epic homage to the TV phenomenon Game of

Thrones. The team of volunteers at the Ulster Museum are putting the final touches to a 90-metre long tapestry depicting all eight seasons of the fantasy saga, which reached its dramatic

conclusion in May. "Game of Thrones", which first hit screens in 2011, was produced and chiefly filmed in studios in Belfast and in the Northern Irish countryside.

"A tapestry is, more than anything else, a great storytelling device. The length of the tapestry allows the story to unfold, so in many ways it's the perfect medium for telling the story of the 'Game of Thrones' project." explained Valerie Wilson, costume and textiles curator at National Museums Northern Ireland.

Styled in the manner of the treasured Bayeux Tapestry -- which depicts the 11th-century Norman conquest of England -- the completed piece will be transported to France to hang near its predecessor in

September. "This tapestry references the Bayeux Tapestry in that it has a series of repeated



icons through it," explained Mr. Wilson.

The panels of the piece are woven by machine before the finishing touches are put on by hand.

For two years, a team of 30 has been at work on and

off stitching embellishments on the icons -- "blood red weddings", "emerald green wildfire" and "cold-blue White Walkers" which prove pivotal in the HBO drama

The museum display also

comes with a warning for underage visitors owing to its graphic content.

The group has been working on stitching depicting the eighth and final series. Participants -like actors in the show -were also sworn to silence, forced to sign nondisclosure agreements to maintain the shroud of secrecy.

"It was very crucial when the project launched that it had that new, fresh, almost surprise element," Mr.Wilson said.

After the embellishments are put on, the final panels are being added to the display of series one to seven which are already on show for the visitors.

A life-size statue for Melania

Her Slovenian hometown has become a magnet for tourists

AGENCE FRANCE-PRESSE

After Melania cake, Melania honey, and even Melania slippers, the Slovenian hometown of Melania Trump, the U.S. First Lady, will now boast a statue of its most famous daughter. The life-size statue on the outskirts of Sevnica was inaugurated on Friday and is the brainchild of 39-year-old American ar-

tist Brad Downey. The sculpture was carved into a tree using a chainsaw and depicts Ms. Melania in a blue dress raising her left hand in a waving gesture, emulating a pose she struck at her husband's 2017 inaug-

"I can understand why people might think that this falls short as a description of

uration.



Sevnica, the hometown of U.S. First Lady Melania Trump. • AFP

her physical appearance," Mr. Downey said, but insisted that the final result was "beautiful".

Since U.S. President Donald Trump took office in 2017, Sevnica has become a popular spot for tourists and journalists. Local entrepreneurs have also launched an array of Melania-branded food and merchandise as well as a tour to the key sites of her early years. However, the statue has

received mixed reactions from the locals. Nika, a local 24-year-old architecture student, said, "We in Sevnica can only laugh and, at the same time, hold our heads in our hands over their (the Trumps') catastrophic reputation."