

UPSC CURRENT AFFAIRS NOTES 19-09-2023

A series of transformative initiatives, aimed at revolutionizing agriculture in the country tomorrow

Ministry of Agriculture & Farmers' Welfare is launching these initiatives, focusing on agri-credit and crop insurance

Union Finance Minister, Smt. Nirmala Sitharaman and Union Minister of Agriculture & Farmers' Welfare, Shri Narendra Singh Tomar will inaugurate a series of transformative initiatives tomorrow, focusing on agri-credit (KCC & MISS) and crop insurance (PMFBY/RWBCIS), keeping the welfare of farmers at their core. Ministry of Agriculture & Farmers' Welfare is launching these initiatives for revolutionizing agriculture in India and aims to amplify financial inclusion, streamline data utilization, harness technology and enhance the livelihoods of the agricultural community. The launch event signifies the Indian government's commitment to innovation and efficient service delivery in agriculture, with a focus on improving farmers' livelihoods and fostering agricultural transformation.

1. Kisan Rin Portal (KRP)

The Kisan Rin Portal (KRP), developed in collaboration with multiple government departments, is poised to revolutionize access to credit services under the Kisan Credit Card (KCC). This digital platform offers a comprehensive view of farmer data, loan disbursement specifics, interest subvention claims, and scheme utilization progress, fostering seamless integration with banks for more focused and efficient agriculture credit.

2. Ghar-Ghar KCC Abhiyaan: Door to Door KCC Campaign

The event marks the beginning of the "Ghar Ghar KCC Abhiyaan," an ambitious campaign to extend the benefits of the Kisan Credit Card (KCC) Scheme to every farmer across India. This campaign aims to achieve universal financial inclusion, ensuring that every farmer has unhindered access to credit facilities that drive their agricultural pursuits. This campaign will play a pivotal role in reaching out to non-KCC account holder PM KISAN beneficiaries and fostering the saturation of KCC Accounts among eligible PM Kisan beneficiary farmers. Total number of operative KCC Accounts as on March 2023 are 7.35 Crores with total sanctioned limit of Rs. 8.85 lakh crores.

For KCC Ghar Ghar Abhiyaan, NABARD has been identified as the Primary Executing Organization, vested with the responsibility of overall execution and monitoring of the programme. In this regard, NABARD has taken the initiative to develop a portal to facilitate in monitoring the conduct of saturation drive camps in the field as also processing and issuance of KCCs to all eligible PM Kisan beneficiaries by the respective banks.

3. Launch of WINDS Manual

The WINDS Manual, set to be unveiled during the event, extends the impact of the Weather Information Network Data Systems (WINDS) initiative. The WINDS system, an instrumental innovation, leverages advanced weather data analytics to provide stakeholders with actionable insights on weather. This comprehensive manual also provides stakeholders with an in-depth understanding of the portal's functionalities, data interpretation, and effective utilization,



empowering farmers, policymakers, and various agricultural entities to make well-informed choices. It also caters to parametric crop insurance scheme of DA&FW in addition to non-scheme parametric insurance programmes for crop risk mitigation and disaster risk reduction and mitigation being run by the Insurance industry. It serves as a guide to understand the processes to be undertaken by the States & UTs for establishing and integrating with the WINDS platform, maintaining transparent and objective data observation and transmission and offering practical insights into leveraging weather data for improved crop management, resource allocation, and risk mitigation.

The event embodies the Government of India's commitment to innovation and efficient service delivery for agriculture, aiming to sustain and double farmers' income, through initiatives like the Kisan Rin Portal (KRP) for objective monitoring and efficient credit delivery, the Ghar Ghar KCC Abhiyaan for making institutional short-term agriculture credit available to left out farmers and the WINDS Manual for hyper-local weather data collection, management and utilization for agriculture and climatic/disaster risk reduction purposes.

The event symbolizes Government of India's dedication to farmers' prosperity and ensuring innovation, infusion of technology and objectivity in delivering the efficient services to them. These efforts and innovations will help in furthering the goal of agricultural transformation and sustainable economic growth for farming community of the country as a whole.

INDIAN NAVY'S NAVAL INNOVATION AND INDIGENISATION SEMINAR (SWAVLAMBAN-2023)

The 2nd Edition of the Indian Navy's Naval Innovation and Indigenisation (NIIO) Seminar – 'Swavlamban 2023' is scheduled to be conducted on 04 – 05 Oct 2023. In the maiden edition of the seminar, held in July 2022, the Hon'ble Prime Minister launched the 75 challenges for the start-ups/ MSMEs as a part of the 'SPRINT' initiative. The 'SPRINT Challenges', are aimed at giving a boost to the usage of indigenous technology in the Indian Navy, and the Navy is committed to developing at least 75 technologies/ products as part of the 'Azadi ka Amrit Mahotsav'.

SPRINT is a collaborative initiative being undertaken in conjunction with the Defence Innovation Organisation (DIO) and stands for Supporting Pole-Vaulting in R&D through Innovations for Defence Excellence (iDEX), NIIO and Technology Development Acceleration Cell (TDAC). This initiative has received an overwhelming response with 1106 proposals.

After a detailed examination, 113 winners under the DISC 7 SPRINT category (with grants up to 1.5 cr) and 5 winners in the DISC 7 SPRINT-PRIME category (grants up to 10 cr) were declared, and the development of prototypes is being progressed by all the winners. Conclusion of over 100



developmental agreements between iDEX and industry was achieved, with active engagement of the Indian Navy, iDEX and start-ups/ MSMEs.

Niche technologies are being progressed across the spectrum, including blue-green lasers for underwater applications; Autonomous weaponised swarms and Underwater swarm drones; multiple firefighting aids; introduction of Artificial Intelligence (AI) for various uses and the development of an ultra-endurance small drone for maritime missions.

It is proposed to showcase these 75 prototypes, including a live demo of a few promising technologies, during "Swavlamban-2023", scheduled on 04-05 Oct 23 in New Delhi.

A US delegation interacts with iDEX team at IIT Delhi; iDEX winners & defence innovation start-ups showcase cutting-edge dual-use technologies

iDEX has revolutionised defence innovation ecosystem in India; Procurement of advanced technologies be given due consideration under INDUS-X, says Under Secretary (Research & Engineering), US Department of Defence

The US delegation, led by Under Secretary (Research & Engineering), Department of Defence Ms Heidi Shyu, met a team of Innovations for Defence Excellence-Defence Innovation Organisation (iDEX-DIO) under Ministry of Defence at IIT Delhi on September 18, 2023. Joint Secretary (Defence Industries Production) & Additional CEO of DIO Shri Anurag Bajpai presented an overview on iDEX to the US delegation, explaining how the initiative is revolutionising the defence innovation ecosystem in India. He highlighted how iDEX is fostering innovation, in critical domains like Artificial Intelligence (AI), unmanned solutions, domain awareness, communications, space, cybersecurity etc. He brought out how technologies developed by iDEX winners are acting as force multipliers for the Services and the innovators are beginning to make their mark globally with their dual-use solutions.

The Joint Secretary brought out that the India-U.S. Defence Acceleration Ecosystem (INDUS-X) initiative will further deepen the strategic technology partnership and defence industrial cooperation between the two sides. He appreciated the momentum in INDUS-X activities and



informed that iDEX and Defence Innovation Unit (DIU) teams have finalised two challenges to kick start joint challenges, to be launched soon.

A showcase of select iDEX winners and defence innovation start-ups with cutting-edge dual-use technologies was organised. Deep-tech innovations including on information security & cyber security, AI/Machine Learning-based imaging, maritime technologies, wireless communication, space technologies and advanced sensors were showcased.

Ms Heidi Shyu was highly appreciative of the start-up showcase, and the way the iDEX scheme and stakeholders have revolutionised the defence innovation ecosystem in India. She noted the rapid developments under the collaboration agenda of INDUS-X and suggested that procurement of advanced technologies be given due consideration under INDUS-X.

About INDUS-X

iDEX, in partnership with US Department of Defence, conducted the India-US Defence Acceleration Ecosystem (INDUS-X) event in Washington DC on June 20-21, 2023. The initiative will expand the strategic technology partnership and defence industrial cooperation between the start-up ecosystems, businesses and academic institutions. The first-ever joint technology showcasing by the Indian and US start-ups generated great interest during the INDUS-X Event. The collaboration agenda under the Defence Innovation Bridge includes launch of Joint Challenges, Innovation Partnership Program, Academia partnership, Joint Innovation Fund, establishing of Testing & Certification facilities in India etc. The INDUS-X event found mention in the Joint Statement of the two leaders during the recent bilateral meetings.

Gross Direct Tax collections for Financial Year 2023-24 (as on 16.09.2023) register a growth of 18.29%

Net Direct Tax collections for the FY2023-24 (as on 16.09.2023) grow at over 23.51%

Advance Tax collections for FY2023-24 (as on 16.09.2023) stand at Rs. 3,55,481 crore with a growth of 20.73%. Refunds aggregating to Rs. 1,21,944 crore issued upto 16.09.2023.

The provisional figures of Direct Tax collections for the Financial Year 2023-24 (as on 16.09.2023) show that net collections are at Rs. 8,65,117 crore, compared to Rs. 7,00,416 crore in the corresponding period of the preceding Financial Year (i.e. FY 2022-23), representing an increase of 23.51%.

The Net Direct Tax collections of Rs. 8,65,117 crore (as on 16.09.2023) include Corporation Tax (CIT) at Rs. 4,16,217 crore (net of refund) and Personal Income Tax (PIT) including Securities Transaction Tax (STT) at Rs. 4,47,291 crore (net of refund).

The provisional figures of Gross collection of Direct Taxes (before adjusting for refunds) for the Financial Year 2023-24 stands at Rs. 9,87,061 crore compared to Rs. 8,34,469 crore in the corresponding period of the preceding financial year, showing a growth of 18.29%.



The Gross collection of Rs. 9,87,061 crore includes Corporation Tax (CIT) at Rs. 4,71,692 crore and Personal Income Tax (PIT) including Securities Transaction Tax (STT) at Rs. 5,13,724 crore. Minor head wise collection comprises Advance Tax of Rs. 3,55,481 crore; Tax Deducted at Source of Rs. 5,19,696 crore; Self-Assessment Tax of Rs. 82,460 crore; Regular Assessment Tax of Rs. 21,175 crore; and Tax under other minor heads of Rs. 8,248 crore.

Provisional figures of Advance Tax collections for Financial Year 2023-24 (as on 16.09.2023) stand at Rs. 3,55,481 crore, against Advance Tax collections of Rs. 2,94,433 crore for the corresponding period of the immediately preceding Financial Year i.e. 2022-23, showing a growth of 20.73%. The Advance Tax collection of Rs. 3,55,481 crore as on 16.09.2023 comprises Corporation Tax (CIT) at Rs. 2,80,620 crore and Personal Income Tax (PIT) at Rs. 74,858 crore.

Refunds amounting to Rs. 1,21,944 crore have also been issued in the FY 2023-24 till 16.09.2023.

NHAI Inks Agreement to Develop Multi Modal Logistics Park at Bengaluru

MMLP Poised to Become First and Largest MMLP Implemented in the Country Under the PM Gati Shakti National Master Plan

National Highways Logistics Management Ltd (NHLML), a 100% owned company of NHAI signed an agreement for the development of Multi Modal Logistics Park (MMLP) at Bengaluru proposed to be developed under the Public Private Partnership (DBFOT) model at an estimated cost of Rs 1,770 crore, the agreement has been signed between Government SPV, Bengaluru MMLP Pvt. Ltd. & Concessionaire SPV M/s. PATH Bengaluru Logistics Park Pvt. Ltd.

The MMLP is being developed in an area of 400 acre at Muddelinganahalli in Bengaluru rural district in Karnataka. The project is poised to become the first and largest MMLP ever implemented in the country under the PM Gati Shakti National Master Plan.

To facilitate seamless logistics movement, the site is strategically located adjacent to the upcoming KIADB industrial area on East side, abutting the NH 648, Dabbaspet to Hosur as well as Satellite Town Ring Road on North side and Bengaluru – Hubli – Mumbai rail line on South side. Bengaluru MMLP is located at a distance of 58 km from Bengaluru Airport and 48 km from Bengaluru city railway station.

The MMLP will be developed in three phases. The first phase is expected to be completed in two years. MMLP will cater to about 30 million metric tonnes (MMT) cargo by the end of concession period of 45 years and will give huge boost to the industrial zones in the catchment region such as Bengaluru and Tumkur.

A Government SPV is incorporated between National Highways Logistics Management Ltd. (NHLML), Rail Vikas Nigam Limited (RVNL) and Karnataka Industrial Area Development Board (KIADB).

Development of MMLP is a key initiative of the Government of India to improve the country's freight logistics sector by enabling efficient inter-modal freight movement to lower overall freight costs and time, provide efficient warehousing, improve tracking and traceability of consignments thereby enhancing the efficiency of the Indian logistics sector.

SHREYAS scheme empowers thousands: over 2300 crore rupees allocated for education of SC and OBC students since 2014

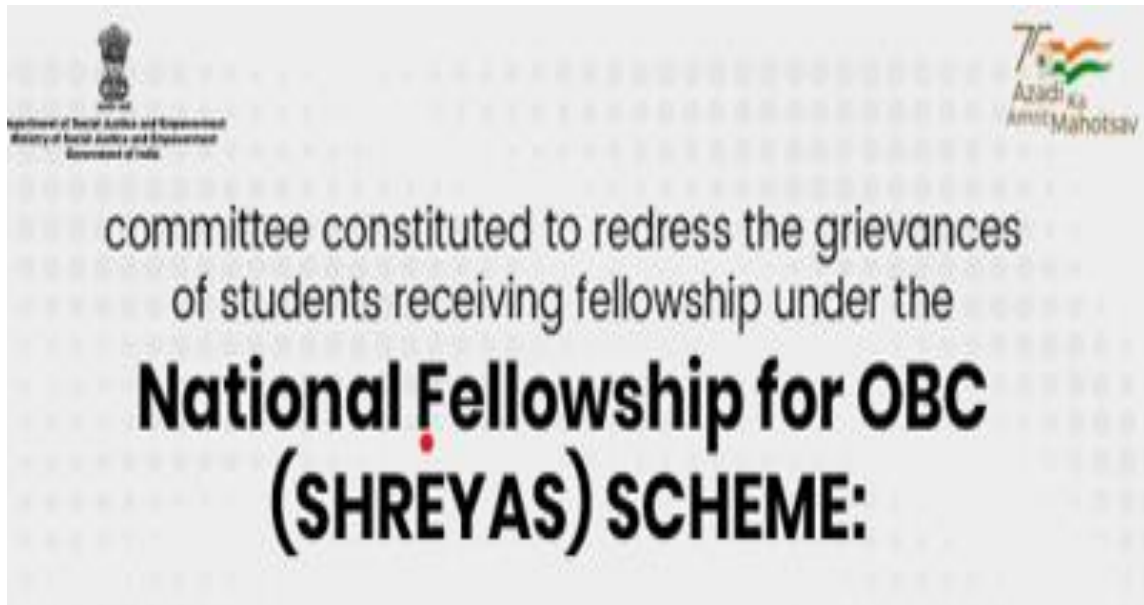
SHREYAS National Fellowship Scheme benefits more than 21,000 SC students for Higher Education

The umbrella scheme of "SHREYAS" which comprises 4 central sector sub-schemes namely "Top Class Education for SCs", "Free Coaching Scheme for SCs and OBCs", "National Overseas Scheme for SCs" and "National Fellowship for SCs". Since all these sub-schemes are central sector schemes, state-wise data is not maintained for these schemes. The brief of the sub-schemes under SHREYAS along with the allocated budget, expenditure details and number of beneficiaries for the last 9 years i.e since 2014-15 is as under:

Free Coaching Scheme for SCs and OBCs:

The objective of the Scheme is to provide coaching of good quality for economically disadvantaged Scheduled Castes (SCs) and Other Backward Classes (OBCs) candidates to enable them appear in competitive and entrance examinations for obtaining appropriate jobs in Public/Private Sector as well as for securing admission in reputed technical and professional higher education institutions. The ceiling of the total family income under the scheme is 8 lakhs per annum. 3500 slots are allotted per annum. The ratio of SC: OBC students is 70:30 and 30% slots are reserved for females in each category. In case of non-availability of the adequate number of candidates in SC category the Ministry can relax this ratio. However, in no case, a less than 50% SC students shall be permitted.

From 2014-15 till 2022-23 a total of 109.77 crore rupees have been released to benefit 19,995 beneficiaries.



Top Class Education for SCs:

The Scheme aims at recognizing and promoting quality education amongst students belonging to SCs, by providing full financial support. The Scheme will cover SC students for pursuing



studies beyond 12th class. The scholarship, once awarded, will continue till the completion of the course, subject to satisfactory performance of the student. The ceiling of the total family income under the scheme is 8 lakhs per annum. Presently, 266 higher education institutes which includes Government institutes and private institutes such as all the IIMs, IITs, NITs, IIITs, AIIMS, NIFTs, NIDs, NLUs, IHMs, CUs and institutes of national importance, NAAC A++ accredited institutes and top 100 National Institutional ranking Framework (NIRF) ranking institutes.

The overall number of scholarship would be capped at. 21,500 for the period of 2021-22 to 2025-26 (4100 for 2021-22, 4200 for 2022-23, 4300 for 2023-24, 4400 for 2024-25 and 4500 for 2025-26).

Under the scheme, (i) full tuition fee and non-refundable charges (there will be a ceiling of Rs. 2.00 lakh per annum per student for private sector institutions (ii) Academic allowance of Rs. 86,000 in the first year of study and Rs. 41,000 in every subsequent year, to take care of living and other expenses is provided.

From 2014-15 till 2022-23 a total of 398.43 crore rupees have been released to benefit 21,988 beneficiaries

(iii) National Overseas Scheme for SCs:

Under this scheme financial assistance is provided to the selected students from SCs (115 slots); De-notified, Nomadic and Semi-Nomadic Tribes (6 slots); landless agricultural labourers and traditional artisan categories (4 slots), for pursuing masters and Ph.D. level courses abroad. Presently, 125 slots are allotted under the scheme.

Such students can benefit under the scheme whose total family income including the candidate is less than Rs. 8 lakhs per annum, who have more than 60% marks in the qualifying examination, below 35 years of age and secured admission in top 500 QS ranking foreign Institutes/ Universities. Under the scheme, total tuition fee, maintenance and contingency allowance, visa fee, to and fro air passage etc. are provided to the awardees.

From 2014-15 till 2022-23 a total of 197.14 crore rupees have been released to benefit 950 beneficiaries

(iv) National Fellowship for SC Students:

Under the scheme fellowship is provided to Scheduled Castes students for pursuing higher education leading to M.Phil/ Ph.D degrees in Sciences, Humanities and Social Sciences in Indian Universities/Institutions/ Colleges recognized by University Grants Commission (UGC).

The scheme provides for 2000 new slots per year (500 for science stream and 1500 for Humanities and Social Sciences) who have qualified the National Eligibility Test- Junior Research Fellowship (NET-JRF) of UGC and Junior Research Fellows for Science stream qualifying UGC-Council of Scientific and Industrial Research (UGC-CSIR) Joint Test.

Lithium production through String Technology

Researchers at the University of Princeton have developed a technique that can drastically reduce the amount of land and time needed for the production of Lithium.



About the String Technology:

A set of porous fibres twisted into strings and engineered to have a water-loving (hydrophilic) core and water-repelling surface.

When one end is dipped in a salt-water solution, the water travels up the string because of capillary action.

Then, the water evaporates quickly from the string's surface. This leaves behind salt ions such as sodium and lithium.

The water will continue to evaporate like this as the salts become increasingly concentrated, eventually forming sodium chloride and lithium chloride crystals.

The strings don't just concentrate on the salts. Since lithium and sodium have different physical properties, they crystallise at different locations on the strings.

Sodium, with its low solubility, crystallises on the lower part, while the highly soluble lithium salts crystallise near the top.

The current method of production

A large majority of the lithium produced in the world is extracted from "brine reservoirs" located in salt flats.

Conventional methods of extraction rely on a series of massive evaporation ponds that concentrate lithium from saltwater reservoirs and salt flats of underground aquifers.

This method of production can require hundreds of square kilometres, and it often takes months or even years to produce lithium that can be used in batteries.

It is commercially viable in a few locations around the world.

Key facts about Lithium

It is a soft, silvery-white metal that belongs to the alkali metals group of the periodic table of the elements.

Features

It has the lowest density of all metals.

It is the lightest of the solid elements.

It reacts vigorously with

Occurrence:

It does not occur as a metal in nature but is found combined in small amounts in igneous rocks.

Major Reserves: Its reserves are majorly concentrated in the lithium triangle in South America – Argentina, Bolivia & Chile, with 50% of the deposits concentrated in these regions.

SACRED ENSEMBLES OF HOYSALAS

The magnificent Sacred Ensembles of the Hoysalas have been inscribed on the UNESCO World Heritage List. Hoysala dynasty, which ruled over parts of present-day Karnataka, India, from the 10th to the 14th centuries, left behind a rich legacy of art, architecture, and culture. Among their notable contributions are the exquisite temple complexes known as "sacred ensembles."

These ensembles are characterized by their intricate sculptures, unique architectural features, and religious significance.



Historical Background

The Hoysala dynasty, founded by King Nripa Kama II, rose to prominence in the 10th century in the southern Deccan region of India.

They ruled from their capital, Dwarasamudra (modern-day Halebidu), and later shifted it to Belur.

The Hoysalas were devout followers of Vaishnavism and Shaivism, two major sects of Hinduism, and their patronage of temples and art reflected their religious fervor.

Architecture of Hoysala Sacred Ensembles

The Hoysala sacred ensembles are renowned for their unique architectural style, which combines elements of North Indian Nagara and South Indian Dravidian styles with distinctive Hoysala features. Here are key architectural aspects:

Star-Shaped Temples:

Hoysala temples typically have a star-shaped ground plan, called "stellate," which is characterized by multiple protruding points. The most famous examples of this design can be seen in the Chennakesava Temple in Belur and the Hoysaleswara Temple in Halebidu.

Intricate Sculptures: One of the most striking features of Hoysala temples is their intricate and detailed sculptures. These sculptures adorn the outer walls and depict various scenes from Hindu mythology, daily life, and the court of the Hoysala kings. The level of craftsmanship is remarkable, with delicate filigree work and lifelike expressions.

Lathe-Turned Pillars: Hoysala temples are known for their lathe-turned pillars, which are highly polished and display a variety of designs. Each pillar is unique and contributes to the overall aesthetic of the temple's interior.

Deity Depictions: The main sanctum of Hoysala temples often houses a deity, and the vimana (tower) above it is intricately carved with depictions of the presiding deity or related mythological scenes. These vimanas are pyramid-like in shape and have miniature shrines on their surfaces.

Ornate Doorways: The entranceways of Hoysala temples feature elaborately decorated door frames, with intricate carvings of deities, celestial beings, and floral motifs. These doorways are considered masterpieces of Hoysala art.

Notable Hoysala Sacred Ensembles

Chennakesava Temple, Belur: This temple, dedicated to Lord Vishnu, is a prime example of Hoysala architecture. It is known for its stunning sculptures, particularly the bracket figures, which depict various dance poses.

Hoysaleswara Temple, Halebidu: Dedicated to Lord Shiva, this temple is famous for its wall panel sculptures, which narrate stories from the epics, Puranas, and mythology.

Kesava Temple, Somanathapura: Located near Mysore, this temple is another gem of Hoysala architecture, known for its exquisitely detailed and symmetrically arranged sculptures.

Kedareshwara Temple, Halebidu: This temple features a unique style called "Vesara," which is a blend of Nagara and Dravidian styles. It's known for its twin sanctums and finely detailed carvings.

About the dynasty

Historical Overview

The Hoysala dynasty's history can be divided into the following key periods:

Early Origins: The Hoysala dynasty is believed to have been founded by Nripa Kama I in the 10th century. They initially ruled as feudatories of the Western Ganga dynasty.

Rise to Prominence: The Hoysalas gained prominence under King Vishnuvardhana (c. 1110–1152 CE), who established Hoysala as an independent kingdom. He shifted the capital from Belur to Halebidu (Dwarasamudra), marking a period of prosperity and cultural growth.

Cultural Peak: The Hoysalas reached their cultural zenith during the reign of King Ballala II (c. 1173–1220 CE). This era saw the construction of some of the most exquisite temples and monuments in South India.



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Decline: In the late 13th century, the Hoysala dynasty faced invasions by the Delhi Sultanate and other regional powers, leading to their gradual decline. By the early 14th century, the dynasty had lost much of its power.

No 18, B.B.M.P Building
Kanakapura road ,
Tata Silk Farm, Jayanagar,
Bengaluru, Karnataka-560028

080 - 26765004

rvta@rvei.edu.in

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