

# National Centre for Polar & Ocean Research (Ministry of Earth Sciences, Govt. of India) Headland Sada, Vasco-da-Gama, Goa - 403 804.



#### Invites Nominations from Scientists/Researchers for forthcoming IODP expedition

IODP-India invites nominations in a prescribed format along with detailed bio-data and research experience, from geoscientists/researchers working in established national institutions/organizations and universities, to participate in the forthcoming International Ocean Discovery Program (IODP) expedition 387: (Amazon Margin Expedition). NCPOR will provide the requisite financial support to the selected candidates towards their participation in the said expedition. However, it will be the responsibility of the candidates to obtain the necessary Visas / permissions from the countries of embarkation and disembarkation on their own. A scientific plan is mandatory for a successful nomination.

Further details and format can be obtained at www.ncaor.gov.in or by email to iodp.india@ncaor.gov.in

Last date by which IODP- India/ NCPOR receives nominations for expedition 387: 15th February, 2019.

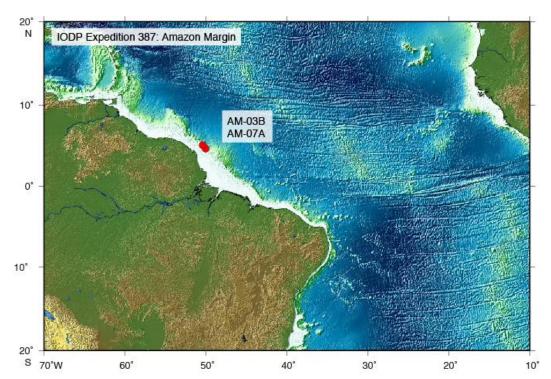
For and on behalf of NCPOR Group Director (IODP-India)

Complete nominations may kindly be emailed to <a href="mailto:iodp.india@ncaor.gov.in">iodp.india@ncaor.gov.in</a>

Information on forthcoming IODP Expedition:

#### Exp. 387: Amazon Margin Expedition: 26 April to 26 June 2020

Based on IODP Proposals 859-Full2 & 859-PRL, Expedition 387 will drill the upper portion of the Foz do Amazonas basin of the equatorial margin of Brazil to recover a complete, high-resolution sedimentary sequence spanning nearly the entire Cenozoic. This expedition is the marine complement to the Trans-Amazon Drilling Project transect of continental drill sites, and will address fundamental questions about the Cenozoic climatic evolution of the Amazon region, the origins and evolution of the neotropical rain forest and its incomparable biodiversity, the paleoceanographic history of the western equatorial Atlantic, and the origins of the transcontinental Amazon River. Core and log data from sites on the uppermost continental slope will be used to: (1) generate a continuous record of climate and biodiversity in Cenozoic South America at unprecedented resolution; (2) reconstruct the oceanographic conditions of the western tropical Atlantic; (3) provide critical marine biostratigraphic control for correlation with the Trans-Amazon Drilling Project; (4) determine the onset and history of trans-continental drainage of the proto-Amazon River into the Atlantic; and (5) test major hypotheses about the originations and extinctions of tropical South American biota.



### Important Notes:

- 1. 1. For more information on IODP Expedition 387 please visit <a href="www.iodp.org">www.iodp.org</a> and use the link iodp.tamu.edu/scienceops/
- 2. Applications in prescribed format (available on the website <a href="www.ncaor.gov.in">www.ncaor.gov.in</a> shall be considered.
- 3. Last date by which IODP- India/ NCPOR receives nominations for expedition 387: 15<sup>th</sup> February, 2019.
- 4. A scientific plan is mandatory for a successful nomination. Once nominated candidates will have to submit a detailed science plan along with sample data request which may also form a basis for collaborative research programs between their host organization and NCPOR.



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Last date by which IODP- India/ NCPOR receives nominations for expedition 388: 15<sup>th</sup> March, 2019.

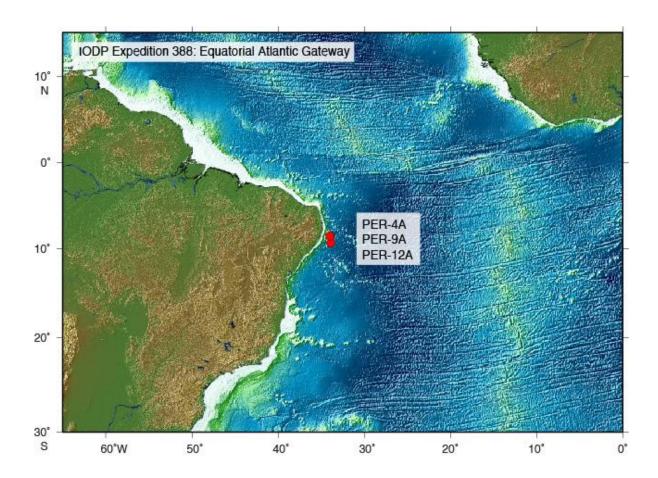
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Information on forthcoming IODP Expedition:

#### Exp. 388: Equatorial Atlantic Gateway Expedition: 26 June to 26 August 2020

Based on IODP proposals 864-Full2 & 864-Add, Expedition 388 will study the tectonic, climatic, and biotic evolution of the Equatorial Atlantic Gateway (EAG) at three sites on and near the Pernambuco Plateau (northeastern Brazilian continental shelf). These will target Late Cretaceous-Recent sediments and oceanic crust and are strategically located both near the continental margin and at paleo-water depths that are shallow enough (< 2000 m) to provide well-preserved organic biomarkers and calcareous microfossils for proxy reconstructions of greenhouse climates. Core and log data will address four key themes: (1) the early rift history of the Equatorial Atlantic; (2) the biogeochemistry of the restricted Equatorial Atlantic; (3) the long-term paleoceanography of the EAG; and, (4) the limits of tropical climates and ecosystems under conditions of extreme warmth. This expedition will constrain the long-term interactions between tectonics, oceanography, ocean biogeochemistry and climate, and the functioning of tropical ecosystems and climate during intervals of extreme warmth.



# Important Notes:

- 1. For more information on IODP Expedition 388 please visit <a href="www.iodp.org">www.iodp.org</a> and use the link iodp.tamu.edu/scienceops/
- 2. Applications in prescribed format (available on the website <a href="www.ncaor.gov.in">www.ncaor.gov.in</a> shall be considered.
- 3. <u>Last date by which IODP- India/ NCPOR receives nominations for expedition 388: 15<sup>th</sup> March, 2019.</u>
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IODP- India invites nominations in a prescribed format along with detailed bio-data and research experience, from geoscientists/researchers working in established national institutions/organizations and universities, to participate in the forthcoming International Ocean Discovery Program (IODP) expedition 389: (Hawaiian Drowned Reefs). NCPOR will provide the requisite financial support to the selected candidates towards their participation in the said expedition. However, it will be the responsibility of the candidates to obtain the necessary Visas / permissions from the countries of embarkation and disembarkation on their own. A scientific plan is mandatory for a successful nomination.

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Last date by which IODP- India/ NCPOR receives nominations for expedition 389 : 15<sup>th</sup> December, 2018.

For and on behalf of NCPOR Group Director (IODP-India)

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Information on forthcoming IODP Expedition:

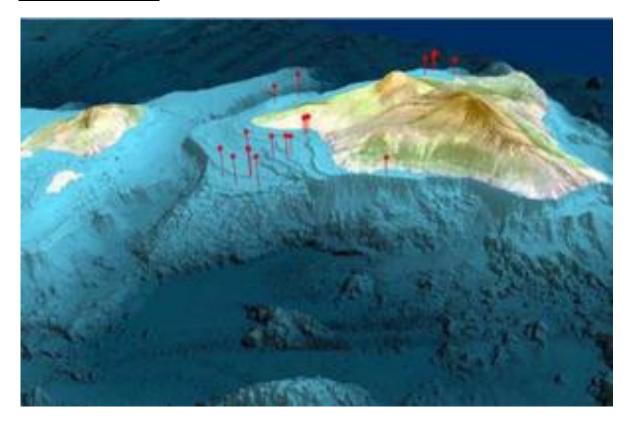
#### Exp. 389: Hawaiian Drowned Reefs: Sept-Oct 2019 (offshore) - Onshore Science Party: tbc

Based on IODP proposals #716, Expedition 389 overall goal of the drilling campaign is to sample a unique succession of drowned coral reefs around Hawaii now at -134 to -1155 m below sea level. As a direct result of Hawaii's rapid (2.5- 2.6/kyr) but nearly constant subsidence, a thick (100-200 m) expanded sequence of shallow coral reef dominated facies is preserved within the reefs. These reefs span important periods in Earth climate history, either not available or highly condensed on stable (Great Barrier Reef, Tahiti) and uplifted margins (Papua New Guinea, Barbados) due to a lack of accommodation space and/or unfavourable shelf morphology. Specifically, these data show that the reefs grew (for ~90-100 kyrs, albeit episodically) into, during and out of the majority of the last five to six glacial cycles. Therefore, scientific drilling through these reefs will generate a new record of sea-level and associated climate variability during several controversial and poorly understood periods over the last 500 kyr.

The project has four major objectives: 1) To define the nature of sea level-change in the central Pacific over the last 500 kyr, we will construct a new, more complete sea level curve from the drowned Hawaiian reefs that will allow: a) more detailed testing of Milankovitch climate theory predictions and; b) improved constraints on millennial-scale sea-level changes over the last 500 kyr. 2) To identify critical processes that determine paleoclimate variability of the central Pacific over the last 500 kyr, we will: (a) reconstruct the mean and seasonal/interannual climate variability from massive coral samples; and (b) use these records to investigate how high latitude climate (e.g., ice sheet volume), pCO2, and seasonal solar radiation impact subtropical Pacific climate. This approach can be used to test theoretical predictions of climate response and sensitivity to changes in boundary conditions and climate forcing. 3) To establish the geologic and biologic response of coral reef systems to abrupt sea-level and climate changes, we will: (a) establish the detailed stratigraphic and geomorphic evolution of the reefs in response to these changes; (b) test ecologic theories about coral reef resilience and vulnerability to extreme, repeated environmental stress over interglacial/glacial to millennial time scales; and (c) establish the nature of living and ancient microbial communities in the reefs and their role in reef building. 4) To elucidate the subsidence and volcanic history of Hawaii, we will: (a) refine the variation through space and time of the subsidence of Hawaii, and; (b) improve the understanding of the volcanic evolution of the island.

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# **Expedition Map and Logo**



# Important Notes:

- 1. For more information on IODP Expedition 389 please visit : <a href="www.ecord.org">www.ecord.org</a> and use the link <a href="www.ecord.org">www.ecord.org</a> and use the link <a href="www.ecord.org">www.ecord.org</a> and use the link
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