

## Curriculum Vitae

**Name: Dr. Pawan Govil**

Scientist C

Telephone: +91(522)2742932 (O)

+91-9865007219 (M)

Fax: +91(522)2740485

E-mail: [pawanali@gmail.com](mailto:pawanali@gmail.com)



---

### Academic Record:

Ph.D. in Marine Sciences on entitled “**Late Quaternary paleoceanography of the northern Indian ocean**” (Goa University, India), 2004-2008.

M.Sc. Applied Geology (Aligarh Muslim University, India), 2002.

B.Sc. Geology, Chemistry, Zoology (Aligarh Muslim University, India), 2000.

---

### Career record:

2012 to till date, Scientist C in Birbal Sahni Institute of Palaeobotany.

2011 to 2012, Scientist B in Birbal Sahni Institute of Palaeobotany.

2006 to 2011, Research Scientist B in “Limnological investigation Antarctic Lakes: Paleoclimatic Implications” project, at National Centre for Antarctic and Ocean Research, Goa.

2002-2006, Project Assistant in “**BENFAN**” paleoclimate project, at National Institute of Oceanography, Goa.

---

### Research Interests:

Application of biogeochemical proxies from Antarctica’s sediment core to understand Antarctic climate variability in Holocene. Data generations and publications for Paleoclimatic reconstructions from the Antarctic lake sediment cores by using the micropaleontological and geochemical proxies. Uses of different geo chronological proxies such as Radiocarbon ( $^{14}\text{C}$ ), TL/OSL and  $^{10}\text{Be}$ .

Application of planktonic foraminifera stable isotopes and biogeochemical elemental ratios (Mg/Ca and Sr/Ca) to understand glacial/interglacial and evaporation-precipitation budget in climatic variation.

---

### **Prizes/Medals/Honors:**

**DAAD fellowship** from June to December 2005, at MARUM Bremen University Germany.

**First poster presentation award** for the paper entitled “Quantification of paleo sea surface temperature and sea surface salinity in the Bay of Bengal: Response of monsoon fluctuations” in National Conference in Goa during October 22-23, 2009.

**Selected as a Micropaleontologist in Integrated Ocean Drilling Program (IODP) CHIKYU Expedition 322** from 1<sup>st</sup> September to 10<sup>th</sup> of October, 2009 in Nankai Trough Subduction Zone area in north western Pacific Ocean.

---

### **Professional attributes (Scientific Cruise Participation):**

Participated as a member of summer **32<sup>nd</sup> Indian Scientific Expedition to Antarctica (ISEA)** to Antarctic Indian station Bharati (Larsemann Hills) and Maitri (Schirmacher Oasis) Hills from November 2012 to February, 2013.

Participated in **Integrated Ocean Drilling Program (IODP) CHIKYU Expedition 322** from 1<sup>st</sup> September to 10<sup>th</sup> of October, 2009 in Nankai Trough Subduction Zone area in north western Pacific Ocean (Near Japan).

Participated as a member of summer **26<sup>th</sup> Indian Scientific Expedition to Antarctica (ISEA)** to Antarctic Indian station Maitri and Larsemann Hills from January to April, 2007.

Participated in **cruise SK-187** in the Arabian Sea and Bay of Bengal from 23<sup>rd</sup> January to 17<sup>th</sup> February 2003. *Was personally involved in the assembly and operation of the Piston Corer, throughout the 24-day expedition.*

Collected Surface Water Sample from Andaman Sea during 7<sup>th</sup> May to 22<sup>nd</sup> May, 2004.

---

### **Professional Scientific Memberships:**

Indian Science Congress Association  
Paleontological Society of India

---

### **Training Experience:**

Training course in GEO-INDIA 2011 for Depositional Systems and Facies Analysis: Utility in Petroleum System Analysis, in New Delhi, January, 2011. Training for 2 months in Physical Research Laboratory, Ahamdabad for TL/OSL dating from the sediment core samples from Antarctica, from June, 2010 to July, 2010.

Participate as a MICROPALAEONTOLOGIST in Integrated Ocean Drilling Program (IODP) CHIKYU Expedition 322 from 1<sup>st</sup> September to 10<sup>th</sup> of October, 2009 in Nankai Trough Subduction Zone area in north western Pacific Ocean (Near Japan).

Using and learning process of the Mg/Ca Elemental ratios from Planktonic Foraminifera as a proxy for the reconstruction of past sea surface temperature from northern Indian Ocean under the DAAD fellowship program during June to November, 2005 in Bremen University, Germany.

Shipboard training in Geological sampling, geophysical surveying instruments including, *assembling and operation of Piston Corer* and Multi sensor core logger, Echosounder, Global Positioning System and Spade Corer. Many sediment cores have been collected from the northern Indian Ocean during this scientific cruise. Participated in **cruise SK-187** in the Arabian Sea and Bay of Bengal in 2003.

### **Student Guidance:**

1. Emmanuel Barreto (2010). Study of core sediment samples from Antarctica Lake. B.Sc., Fergusson College, Pune.
  2. Shalini Sharma (2009). Study of diatoms and quartz grains from fresh water lake core sediments, Larsemann Hill, Antarctica, and their paleoclimatic implications. M.Sc. (Tech.), Banaras Hindu University, Banaras.
  3. Sandeep Kumar (2009). Paleoclimatic studies of two lake sediment cores from Larsemann Hill, Antarctic based on geochemical proxies. M.Sc. (Tech.), Banaras Hindu University, Banaras.
  4. P.S. Vijay Kumar (2008). Sedimentary analysis of glacial samples near Maitri station, Schirmacher Oasis, Antarctica. Int. M.Sc., Indian Institute of Technology, Kharagpur.
  5. S.V. Nagendra Bharadwaz (2008). Sedimentary analysis of Antarctic lake core sediments, Larsemann Hills. Int. M.Sc., Indian Institute of Technology, Kharagpur.
-

## **Publications:**

### **Papers (International):**

1. Mazumder, A., **Govil, P.**, Ghosh, A.K. & Ravindra, R. (2012). Significant research on diatom in Antarctica lake during last decade. *Journal of Algal Biomass Utilization*, vol. 3, no. 4, pp.74-79.
2. **Govil, P.**, Naidu, P.D. and Kuhnert, H. (2011). Variations of Indian monsoon precipitation during the last 32 kyr reflected in the surface hydrography of the western Bay of Bengal. ***Quaternary Science Reviews***, 30, 3871-3879.
3. Khare, N., **Govil, P.**, Kumar, P., Mazumder, A., Chopra, S., Pattanaik, J.K., Balakrishnan, S. and Roonwal, G.S. (2011). <sup>10</sup>Be as paleoclimatic tracer: initial results from south western Indian Ocean sediments. ***J. Radioanaly. Nucl. Chem.***, doi: 10.1007/s10967-011-1218-4.
4. **Govil, P.** and P. D. Naidu (2010). Evaporation-precipitation changes in the eastern Arabian Sea for the last 68 ka: Implications on monsoon variability. ***Paleoceanography***, 25, PA1210, doi:10.1029/2008PA001687.
5. Naidu, P.D., and **Govil, P.** (2010). A new Evidence on sequence of deglacial warming in the tropical Indian Ocean. ***J. of Quaternary Science***. doi: 10.1002/jqs.1392.
6. Naik, S.S., Naidu, P.D., **Govil, P.** and Godad, S. (2010) Relationship between Weights of Planktonic Foraminifer Shell and Surface Water CO<sub>3</sub>: Concentration during the Holocene and Last Glacial Period. ***Marine Geology***, doi:10.1016/j.margeo.2010.05.004.
7. Khare, N., **Govil, P.**, and Mazumder, A. (2009). An assessment of the latitudinal changes in morphological characteristics of planktic species *Neogloboquadrina Pachyderma* (Ehrenberg) along North-South transect in South Western Indian Ocean. ***Geo-Marine Lett.***, 29 (1), 61-69.
8. Mazumder, A., Khare, N., **Govil, P.**, (2009). Cosmopolitanism of the planktic foraminiferal species *Globigerinita glutinata*- A testimony by Q-mode cluster analysis. ***Int. J. of Geology***, vol 3 (1), 1-7.
9. **Govil, P.**, and Naidu, P.D. (2008). Late Quaternary changes in depositional processes along the western margin of the Indus Fan. ***Geo-Marine Lett.***, 28, 1-6. (IF: 1.186)

### **Papers (National):**

10. **Govil, P.**, Asthana, R., Mazumder, A. & Ravindra, R. (2012). Grain size distribution and its influence on biological productivity during Holocene in a fresh water lake in Larsemann Hills, Antarctica. *National Academy Science Letters*, vol.35, no.2, pp.115-119.
11. **Govil, P.**, Mazumder, A., Tiwari, A.K., Kumar, S., (2011). Holocene climate variability from the lake sediment core in Larsemann Hills, Antarctica. *Journal of Geological Society of India*. Vol. 78. Pp. 30-35.
12. Prakash Babu, C., Pattan, J. N., Dutta, J.N.K., Basavaiah, N., Ravi Prasad, G. V., Ray, D.K., **Govil, P.** (2010). Shift in detrital sedimentation in the eastern

- Bay of Bengal during the late Quaternary. **J. Earth Syst. Sci.** **119**, No. 3, 285–295.
13. Khare, N., Mazumder, A., **Govil, P. (2010)**. Abundance and coiling direction in planktic species *Neogloboquadrina pachyderma* (Ehrenberg) as indicators of hydrological conditions: Evidence from N-S transect of Indian Ocean. **Current Science**, 98 (8), 1108-1112.
  14. Khare, N., Mazumder, A., **Govil, P.**, and Singh, V.P. (2009). Trend in Chamber Accretion of *Neogloboquadrina Pachyderma* (Ehrenberg) along N-S transect in Indian Ocean Sector of southern Ocean. **J. of Geological Society of India** **73**, 379-385.
  15. Khare, N., Mazumder, A., and **Govil, P. (2007)**. Climate Change – Role of proxies for paleoclimatology. **Proc. A. P. Akademi of Sciences, Hyderabad**, vol.11, no.4, pp.291-304.
  16. **Govil, P.**, Naidu, P.D., and Radhika. T.K. (2004). Major Turbidity Flows in the Western Indus Fan between 290 and 360 kyr. **Current Science**, 87 (11), 1597-1600.
  17. **Govil, P.**, Mazumder, A., Chaturvedi, S.K., Khare, N., Srivastava, R., Raina, R., Wanganeo, A., Ravindra, R., and Saraswat, R., 2007. “Antarctica ki Jheelon ka Bhoo-Bhoutikiya sarvekshan” In: *Antarctica Abhiyan Razat Ja* . (Eds.) Manjula Mehta. Publis. Vigyan Mantralaya. pp. 3-70.
  18. Khare, N., **Govil, P.**, Mazumder, A. and Saraswat, R. (2009). “Dakshini Mahasagar main Soochm Jiwasmi anveshan: Bhartiya Yogdaan” In: *Jalwayu Parivartan* (Eds.) Manjula Mehta. Publis. Vigyaan Mantra. pp. 83-91.

#### **Conference/Seminar/Workshops/presentations:**

1. **Govil, P.**, Asthana, R., Mazumder, A. and Ravindra, R. (2011). “Holocene climate variability from the lake sediment core in Schirmacher Oasis region, East Antarctica” in 11th International Symposium on Antarctic Earth Sciences from 10<sup>th</sup> to 15<sup>th</sup> July, 2011, in University of Edinburgh, Scotland.
2. **Govil, P.**, Naidu, P.D., (2010) “Evaporation-Precipitation Changes in the Eastern Arabian Sea for the last 68 ka: Implications on Monsoon Variability” in 2010 Ocean Sciences Meeting, 22-26 February, in Portland, Oregon. (Poster Presentation).
3. **Govil, P.**, Mazumder, A., Ravindra, R., and Khare, N., (2009). “Reconstruction of Holocene paleoproductivity from the Larsemann Hills lake sediment core in Antarctica” XXII Indian Colloquium on Micropaleontology and Stratigraphy, held on 16 – 18 Dec., at National College, Tiruchirapalli.
4. Raza, M.A., Saraswat, R., Khare, N., **Govil, P.**, Mazumder, A., Naik, D.K, (2009). “Micropaleontological study of the Antarctic Lake Sediments: Paleocological inferences” at National Conference in Goa during October 22-23, 2009, pp.68.
5. **Govil, P.**, Naidu, P. D., (2009). “Quantification of paleo sea surface temperature and sea surface salinity in the Bay of Bengal: Response of

- monsoon fluctuations” at National Conference in Goa during October 22-23, 2009, pp. 27.
6. Saraswat, R., Khare, N., **Govil, P., (2008)**. “Inferring the relationship between  $d^{13}C$  and abundance of Globigerina bulloides, and primary productivity, for the southwestern Indian Ocean” in open science conference to SCAR/IASC/IPY, at St. Petersburg, during 8-11 July. (Poster presentation).
  7. Naidu, P.D., **Govil, P.,** Kuhnert, H., **(2008)**. Indian Monsoon Leads the Dansgaard – Oeschger Events of Greenland: New Evidence from Bay of Bengal. American Geophysical Union Fall Meeting, Sanfransisco, pp. 41A – 1420.
  8. **Govil, P.,** Naidu, P.D., Mulitza, S., Kuhnert, H. **(2008)**. “Sea surface temperature and sea water  $d^{18}O$  variations of the east Arabian Sea over last 68,000 years: Implications on Evaporation-Precipitation budget” to 45th Annual Convention and Meeting of Indian Geophysical Union at Banaras Hindu University during 5-7, November, 2008 (Poster Presentation).
  9. **Govil, P.,** Naidu, P.D., **(2008)**. “Centennial monsoon changes and its effect on global climate” to 96th Indian Science Congress Association, young Scientist Award Programme: Section 5: Earth System Sciences in Shillong at North-Eastern Hill University during 16th – 17th October, 2008 (Oral).
  10. **Govil, P.,** Naidu, P.D., **(2008)**. “Early Deglacial Warming in the Arabian Sea and Bay of Bengal”. In International Conference on Terrestrial Planets Evolution through Time, at Physical Research Laboratory, Ahmedabad, during 22nd – 25th January, 2008.
  11. Khare, N., Saraswat, R., Chaturvedi, S.K., **Govil P.,** Ravindra, R. **(2007)**. “Foraminiferal characteristics of the recent marine sediments from the South Western Indian Ocean” 44th Indian Geophysical Union held on 21-23 November, at Department of Geophysics, Kurukshetra University, Kurukshetra.
  12. Mazumder, A., **Govil, P.,** Singh, V.P., Khare, N. **(2007)**. “Physico-Chemical Control on Number of Chamber and Average Test Size of Neoglobobulimina papyrifera (Ehrenberg) in Southern Indian Ocean” XXI Indian Colloquium on Micropalaeontology and Stratigraphy, held on 16 – 17 Nov., at BSIP, Lucknow.
  13. Khare, N., Saraswat, R., Chaturvedi, S.K., **Govil, P.,** Mazumder, A. **(2007)**. “Latitudinal changes in the planktic foraminiferal species distribution along a north-south transect in the southwestern Indian Ocean” XXI Indian Colloquium on Micropalaeontology and Stratigraphy, held on 16 – 17 Nov., at BSIP, Lucknow.
  14. **Govil, P.,** Mazumder, A., Khare, N. **(2007)**. “Coiling Direction: A Tool for Deciphering the Paleoclimate in the Southern Ocean Region” XXI Indian Colloquium on Micropalaeontology and Stratigraphy, held on 16 – 17 Nov., at BSIP, Lucknow.
  15. Khare, N., **Govil, P.,** Mazumder, A., Saraswat, R., Chopra, S., Balakrishnan, S., Baghel, P., Ravindra, R. **(2007)**. Study of  $^{10}Be$

- concentration in southern high latitudes (Lake and Ocean): A new approach to Paleoclimatology Abstract book of workshop on Accelerator Mass Spectrometry on October 5, 2007 at IUAC, New Delhi Page 7.
16. Naidu, P. D., **Govil, P.**, Mulitza, S., Kuhnert, H. (2007). "Monsoon could trigger the global abrupt climate changes: New evidence from the Bay of Bengal" International workshop on Geosphere-Biosphere at Cochin on 20-21 July.
  17. **Govil, P.**, Naidu, P.D., Mulitza, S. and Kuhnert, H. (2006). "Paleo Sea Surface Salinity and Paleo Sea Surface Temperature changes in Bay of Bengal: Implications on Global Climate Changes." 2006 U Fall Meeting (American Geophysical Union) San Francisco, 13th December.
  18. **Govil, P.**, Naidu, P.D. and Mulitza S. (2006). "Synchronous  $\delta^{18}\text{O}$  changes in Bay of Bengal sediment core and Greenland Ice Core" at the 3rd Annual Convention of the Asia Oceania Geosciences Society at Singapore, 10th to 14th July 2006.
  19. Radhika, T.K., **Govil, P.**, Naidu, P.D. (2004). "A gradual decline of Sea Surface Salinity during Late Quaternary period in the Bay of Bengal: Evidence from Planktonic Foraminifera". 41st Annual Convention and National Symposium of the Indian Geophysical Union in December 2004 held at N.G.R.I. Hyderabad.
  20. **Govil, P.**, Radhika, T. K. (2004). "Late Quaternary Variations in Planktonic Foraminifera Faunas at the ODP Site 720 in the Arabian Sea". 41st Annual Convention and National Symposium of the Indian Geophysical Union in December 2004 held at N.G.R.I. Hyderabad.
  21. **Govil, P.**, Naidu, P. D. (2003). "Variability of Terrigenous Sediment Supply to the Indus Fan during last 360 kyr" of the 40th Annual Convention and National Symposium of the Indian Geophysical Union in December 2003.
-