



IMPLEMENTING NVBDCP– ASSESSING THE EFFECTIVENESS OF DIAGNOSIS OF MALARIA AND DENGUE: A CASE OF CHC GOVINDGARH



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National Center for Vector Borne Diseases Control

Directorate General of Health Services
Ministry of Health & Family Welfare, Government of India



- NVBDCP is the nodal agency for prevention and control of vector-borne diseases in India.
- – Under the Ministry of Health and Family Welfare, Government of India.
- – Mandated for planning, financing, policy-making, technical guidance, monitoring, and evaluation.
- – States are responsible for program implementation



Capstone Working Area

Implementing NVBDCP- Assessing the effectiveness of Diagnosis of Malaria and Dengue: A Case Of CHC Govindarh



Objectives:

1. To review the implementation of key activities listed under Malaria Strategy (2016-2030) at a Community Health Center
2. To assess the accuracy of the recorded data for malaria and dengue at the CHC
3. To assess the implementation of system of diagnosis for malaria and dengue at the CHC



Three plus signs of varying sizes are arranged vertically on the left side of the slide.

Methodology

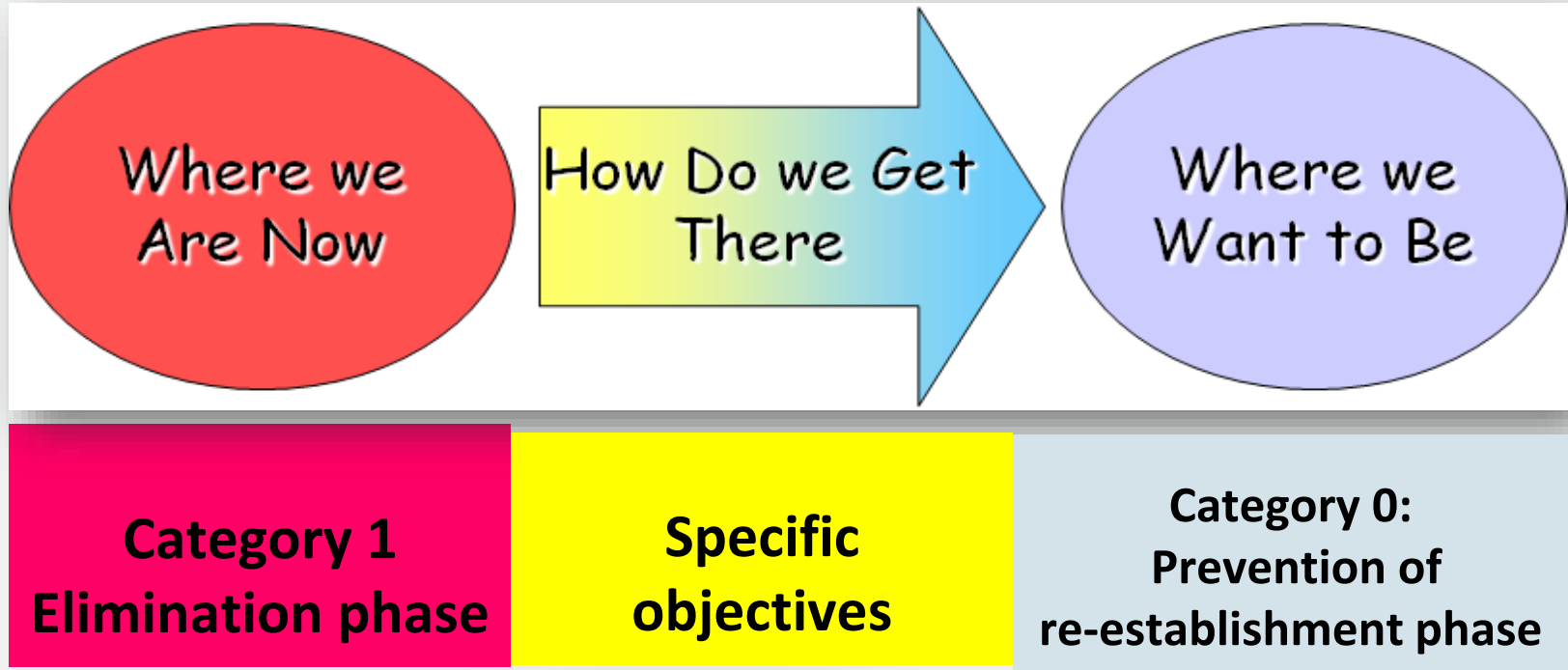
01 Literature review

02 Questionnaire
administration

03 Review of the national
malaria strategy



Malaria Strategy (2016–2030)



To review the implementation of key activities listed under Malaria Strategy (2016–2030) at a Community Health Center

Programme phasing :

NO	Categories of states/UTs	Definition
	Category 1: Elimination phase	States/UTs (15) including their districts reporting an API of less than 1 case per 1000 population at risk .

To review the implementation of key activities listed under Malaria Strategy (2016–2030) at a Community Health Center

Specific objectives :

- -Interrupt transmission of malaria.
- -Immediately notify each detected case.
- - Detect any possible continuation of malaria transmission.
- -Determine the underlying causes of residual transmission.
- -Forecast and prevent any unusual situations related to malaria, ensure epidemic preparedness and respond in a timely and efficient manner to outbreak situations.
- - Prevent re-establishment of local transmission of malaria.
- -Ascertain elimination of malaria.

To review the implementation of key activities listed under Malaria Strategy (2016–2030) at a Community Health Center

Gaps identified in the implementation of key activities at CHC Govindgarh include:

- - Lack of notification from the private sector regarding malaria cases.
- - Insufficient case-based surveillance and management.
- - Inadequate quality assurance of diagnostics.
- - Insufficient training for lab technicians and doctors.
- - Absence of specific measures for investigating foci and screening suspected cases.

To assess the accuracy of the recorded data for malaria and dengue at the CHC

Dengue disease statistics in CHC

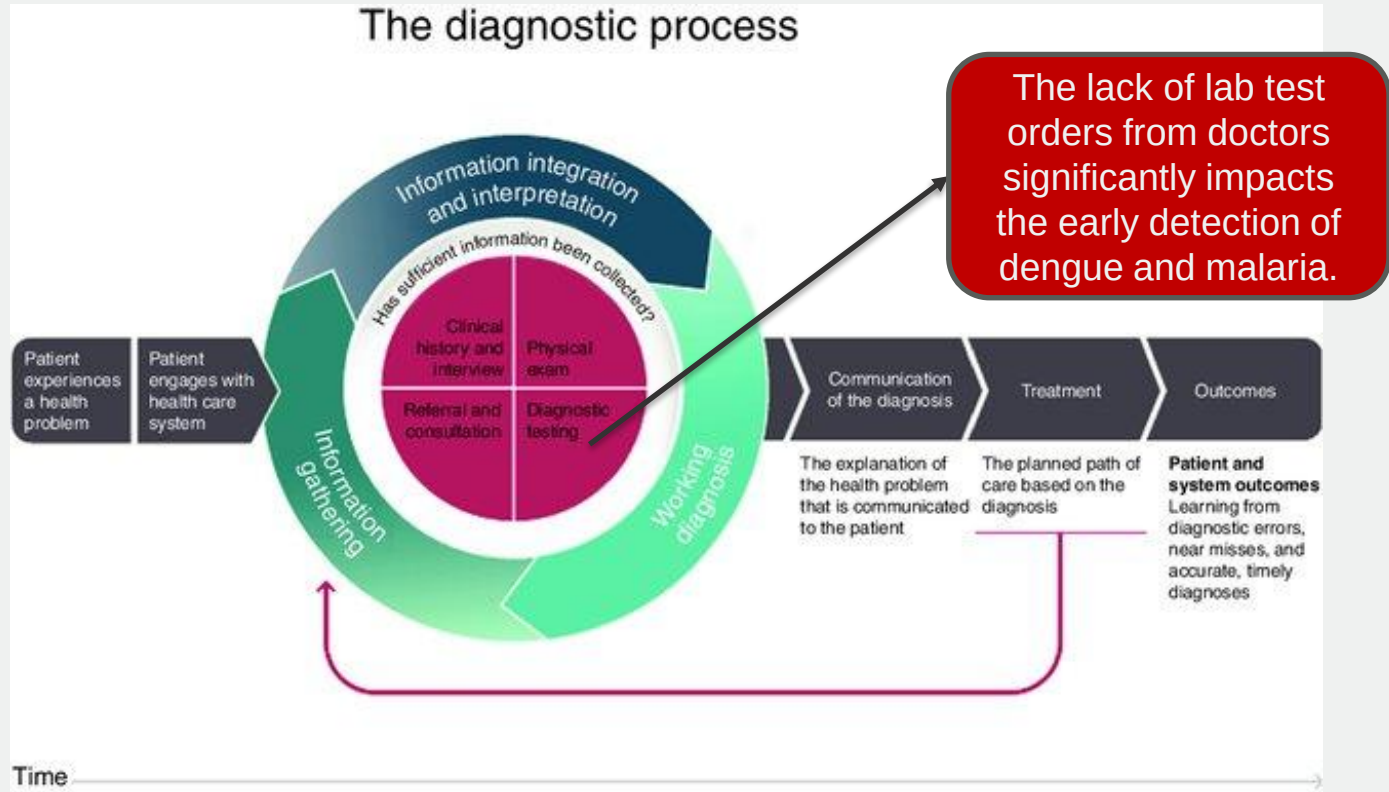
	2020	2021	2022
Total RDT	28	704	234
1. RDT Test +ve	1	684	202
3. Patients Treated for Dengue as outpatients	1	300	190
4. Patients Admitted for Dengue	1	384	22
5. Deaths due to Dengue	0	0	0

97% , 86%

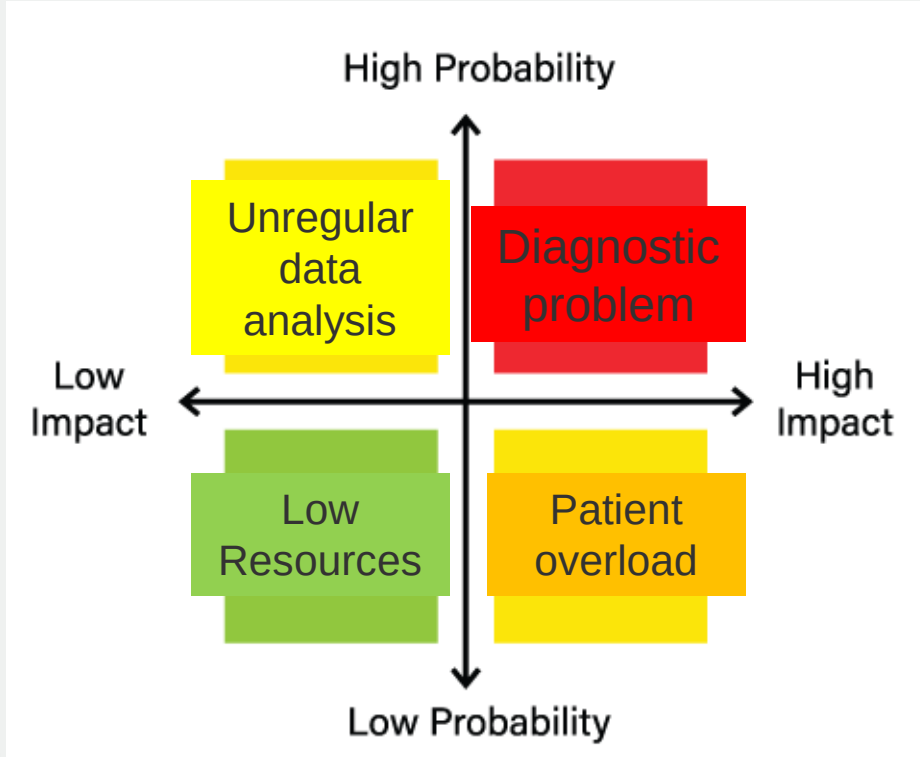
100% , 56% , 10,8%

Studies conducted in Thailand and Brazil found lower admission rates (26.7% and 30.4% respectively), indicating a potential problem with data collection.

Implementation diagnostic gap we found



Decision making matrix



To assess the implementation of system of diagnosis for malaria and dengue at the CHC

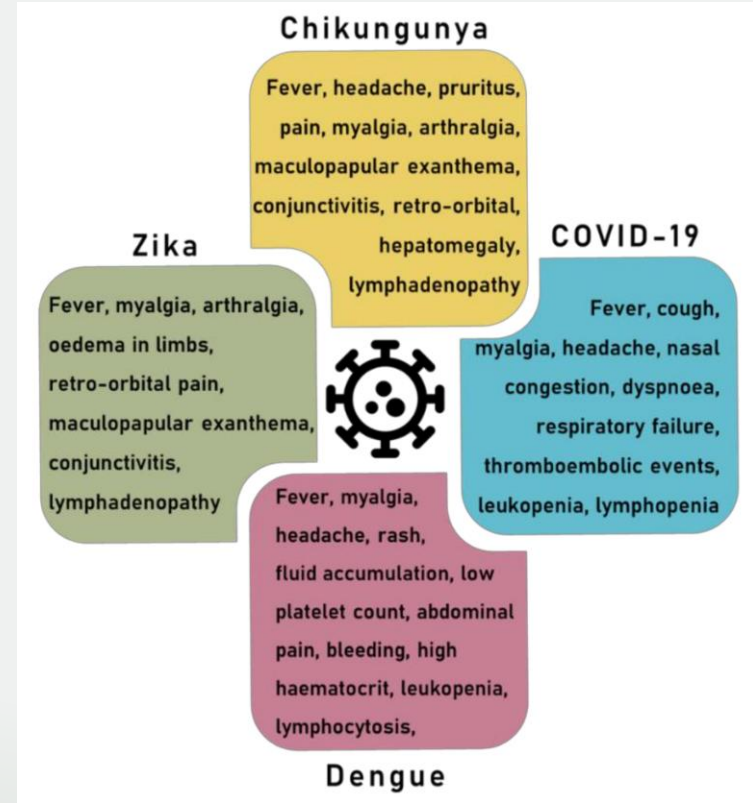
Overlapping
Symptoms

Diagnostic
Difficulties

Co-Infections and
Complications



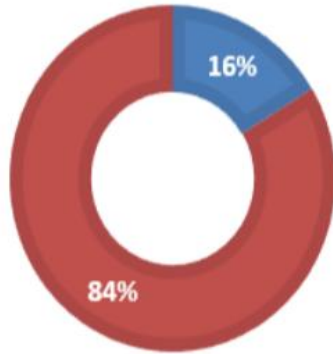
Overlapping Symptoms



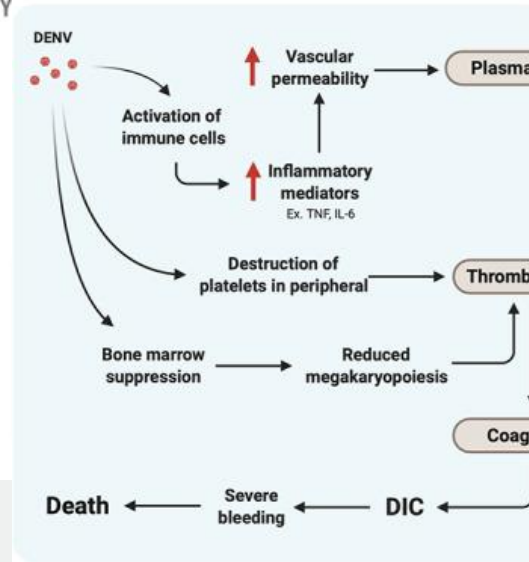
- Costa, J., Ferreira, E. C., & Santos, C. (2021). COVID-19, Chikungunya, Dengue and Zika Diseases: An Analytical Platform Based on MALDI-TOF MS, IR Spectroscopy and RT-qPCR for Accurate Diagnosis and Accelerate Epidemics Control. *Microorganisms*, 9(4), Article 4. <https://doi.org/10.3390/microorganisms9040708>

Co-Infections and Complications

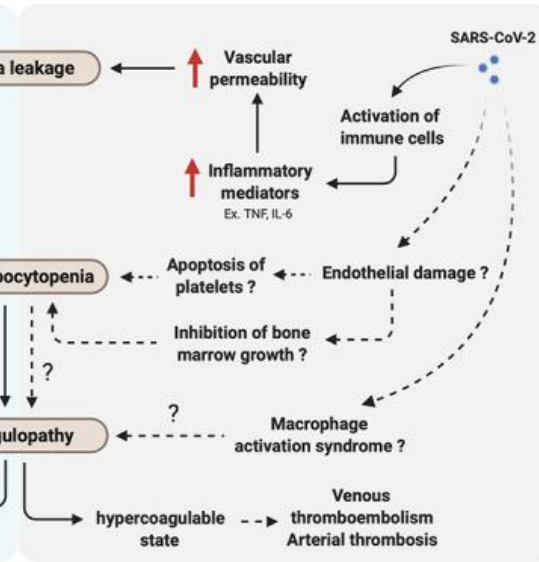
DENGUE OVERLAP ■ COVID CASES WITH NEGATIVE DENGUE SEROLOGY



Dengue Hemorrhagic Fever (DHF)



COVID-19



Patil, S. V., Bhadake, M., & Acharya, A. (2022). 'Dengue-COVID-19 overlap': Is it an 'antigenic mimicry' or coexistent two different viral genotypic diseases?

Prospective, observational study in tertiary

care setting in India. *Electronic Journal of*

General Medicine, 19(6), em400.

<https://doi.org/10.29333/ejgm/12279>

Harapan, H., Ryan, M., Johan, B., Abidin, R. S., Nainu, F., Rakib, A., Jahan, I., Emran, T. B., Ullah, I., Panta, K., Dhama, K., & Sasmono, R. T. (2021). Covid-19 and dengue: Double punches for dengue-endemic countries in Asia. *Reviews in Medical Virology*, 31(2), e2161. <https://doi.org/10.1002/rmv.2161>

Diagnostic Difficulties

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Field visit **finding** & challenges

1. The laboratory at CHC Govinda pur is well-equipped with necessary tools for diagnosing malaria, including RDT and rapid malaria tests. Quality control measures, such as monthly random sampling of blood film slides, were in place, yielding good results.
2. The ASHA workers at Sub Centre Donlblai were actively involved in community awareness programs to educate people about vector-borne diseases. Surprisingly, they had not encountered any patients with malaria or dengue in the past two years.

Field visit finding & challenges

Challenges for Field Visit

Before

Insufficient orientation regarding capstone works for both students and advisors.

Lack of specificity in the field visit timeline, resulting in inadequate preparation.

During

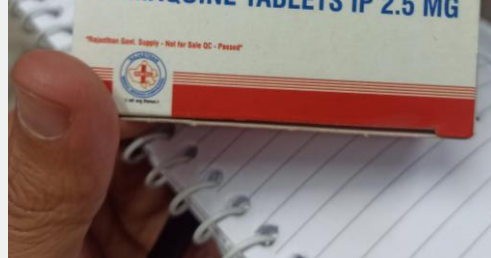
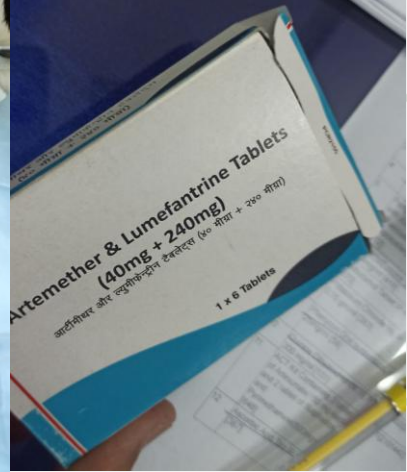
Language barrier impeding effective communication.

Limited public health interest observed in the CHC.

Misalignment between some of the provided structure sheets and the epidemiological state of the CHC.

Recommendations

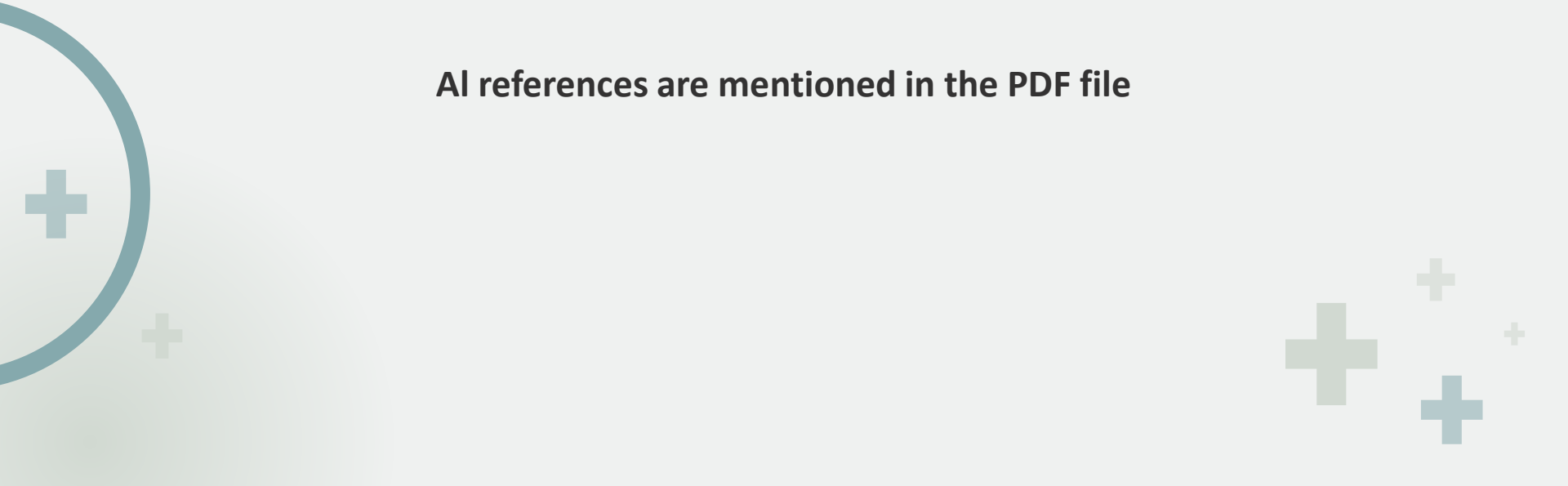
- 1.Strengthen collaboration and communication with the private sector to ensure comprehensive reporting and notification of malaria cases.
- 2.Enhance case-based surveillance and management systems to improve early detection and effective treatment of malaria cases.
- 3.Provide regular and updated training for lab technicians and doctors on malaria diagnosis, treatment, and surveillance.
- 4.Develop clear and updated treatment guidelines for dengue and malaria that account for overlapping symptoms with COVID-19.
- 5.Promote interdisciplinary collaboration and coordination between malaria, dengue, and COVID-19 control programs to address co-infections and associated complications effectively





References

AI references are mentioned in the PDF file



Acknowledgments



- **Prof. Neetu Purohit, my advisor**, for her unwavering support and guidance throughout this journey.
- **My friends in the NVBDCP team**, whose collaboration and valuable insights greatly contributed to the project's accomplishment.
- **The dedicated health workers in CHC Govindgarh**, whose exceptional work and commitment to the community were truly inspiring.
- **The S.D. Gupta School of Public Health** for providing me with the opportunity and support to undertake this valuable field visit.





Thank you

Do you have any questions?

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