

2022

Evaluation of Boat Clinic, Dhubri district, Assam



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Executive Summary:

Assam, one among the eight states of the Northeast region of the country has a diverse topography consisting of hilly terrain, riverine and flood prone areas and huge forest and tea plantation tracts. To improve the health of these marginalised populations in Assam, the Boat Clinics were launched in November 2007. Boat Clinics started with the objective to enhance the accessibility to public healthcare services in *char/sapori* areas of the Assam. Currently state has 15 Boat Clinics in 13 districts of Assam and the services are being managed by Centre for North-eastern Studies and Policy Research (C-NES), Assam since 1st February 2008 under a MoU with the National Health Mission (NHM), Assam.

Since the Boat Clinic services are being run in the state for more than a decade, it has been desired by the NHM, Assam that as per RoP 2021-22 conditionality that the Regional Resource Centre for North-Eastern States, Ministry of Health and Family Welfare, Govt of India, Guwahati may be entrusted to conduct an assessment study of the services quality, outreach, functionality and feasibility of the Boat Clinics in the state. For the study, the district of Dhubri was selected as per the request of the State NHM, Assam. As there were two (02) units operating in the district, so both were selected for the study. The Boat Clinics were assessed with semi structured questionnaires developed for the state level staff (NHM and CNES), district level staff (NHM and CNES), Boat Clinic staff including Medical Officers, Staff Nurses, Pharmacists and Lab Technicians and beneficiaries.

The two (02) Boat Clinics of Dhubri district have all the required manpower. The Boat Clinics function in camp mode for an average of 18-20 days in a month and route plan is prepared accordingly which is shared beforehand with the Joint Director of Health Services. The gamut of services includes OPD for RMNCH+A services, Immunization, NCD services, nutritional counselling and spot diagnostic services. The Boat Clinics in the district are providing service to the pre-identified 44 *char/sapori* areas in the district and the average OPD attendance is around 70 patients/day. There is normally no deviation in the route plan but in some situations, modifications are done with prior information to the District Health Officials. During COVID-19, Boat Clinics staff were also involved in door-to door screening, sample collection, awareness activities and vaccination. The Boat Clinics upload the services data in the HMIS portal. There is acceptance of the Boat Clinic service in the community and people keep eagerly waiting for the services. Also, the Boat Clinic staff, and local community health workers believe that Boat Clinics are useful to the community as they provide services in remotest areas i.e., *char/saporis*.

In the study it was observed that although the Boat Clinics are providing the basic gamut of services as per the MoU, the quality of the services needs further improvement. Taking into consideration of the RMNCH+A services, it had been observed that only one third of the beneficiaries completed 4 ANC check-ups out of the total Pregnant Women (PWs) registered and only around 55% infants were immunized for measles. The staff are not up to date with current National and State programmes guidelines. There is need to train the Boat Clinic staff on national and state health programmes. The

role of two Nurses in one Boat Clinic is also not defined. Specific ToR is needed for enhanced service delivery.

Further Biomedical Waste management norms need to be strengthened in the Boat Clinics with segregation of waste in proper colour coded bags and following the laid down protocols for disposal. Drugs availability is an issue observed during evaluation. Drugs indenting should be demand based and based on local disease prevalence which is not present in current mode of functioning.

To further improve the services, there should be a proper linkage between the Boat Clinic staff and DPMU as they can do further follow up in non-camp days. During study, it was learnt that the last MoU was signed on 1st April 2019 between the State NHM and C-NES.

Introduction:

The islands of river Brahmaputra popularly known as *Chars* or *Sapori* are among the most backward, difficult to access areas of the state, nearly six percent of Assam's land is covered by these islands and a total of ten percent population of the state i.e., more than 30 lakhs populace reside in those islands. There are no permanent health facilities in these areas as the areas are frequently devastated by flood. As a result, the community do not have access to any health care service as and when required

On 1st February 2008 the first Memorandum of Understanding (MoU) under Public Private Partnership mode was signed between Centre for North-eastern Studies and Policy Research (C-NES), Assam and National Health Mission (NHM), Government of Assam, and included the districts of Dhemaji, Tinsukia, Morigaon, Dhubri & Dibrugarh, with NHM supporting the total operational program cost. The partnership with NHM was further up scaled in 2009 and 2010 to include 10 more Boat Clinic units (Lakhimpur, Jorhat, Sonitpur, Nalbari, Barpeta, Kamrup, Goalpara, Bongaiaon and additional units in Dhubri and Barpeta). The Boat Clinics were operating in 13 districts through 15 units under C-NES till the end of 2020 catering to a population of 2,50,482 in 421 villages. The Boat Clinic functioning was interrupted temporarily due to some technical issues in C-NES and NHM, Assam, for a period of five (05) months, however the same arrangement is being continued from May,2021 for providing the health services to the *char* area population.

Each Boat Clinic unit comprises of one to two Medical Officers, two to three ANMs, one Pharmacist, one Laboratory Technician, three Community Workers and four Boat Crews. The main thrust of the program is to provide health care services especially to the mother and the child which includes Reproductive and Child Care, Curative Care, Family Planning Services, Basic Laboratory Services, Health Education & Awareness etc. and free distribution of medicines as prescribed by the medical officer of the unit.

The focus areas for the intervention include the following services as per the MoU dated 02nd April 2019:

a) Curative and Preventive Care

- i. Referral of complicated cases – Child survival – IMNCI services
- ii. Early detection of TB, Malaria, Leprosy etc and other epidemic prone diseases including locally endemic communicable diseases and non-communicable diseases such as CVD, Hypertension, Diabetes, blood dyscrasia suspected cancer etc
- iii. Minor surgical procedure and preliminary care of injuries etc
- iv. Arranging Special camps for Deafness, Eye, Paediatrics, O&G, Elderly etc
- v. Counselling for Psychiatry and Alcohol Dependent Syndrome
- vi. Early detection of disabilities and other congenital disorders as per RBSK
- vii. Implementation of National Health programs
- viii. Geriatrics and Palliative Health Care services

b) Reproductive and Child Care

- i. Ante – natal check-up and related services e.g., injection – tetanus toxoid, iron and folic acid tablets
- ii. Referral for complicated pregnancies
- iii. Promotion of institutional deliveries
- iv. Post – natal check-up and counselling
- v. Immunization clinics for mother and child
- vi. Treatment of common childhood illness such as diarrhoea, ARI/Pneumonia etc
- vii. Treatment of RTI/ STI

c) Family Planning Services

- i. Counselling for spacing and permanent methods for sterilization
- ii. Distribution of Condoms, Oral Contraceptives, Emergency Contraceptives
- iii. IUCD insertion, laparoscopic sterilization, non-scalpel vasectomy cases facilitated at respective centres.

d) Basic Laboratory Services

HCG test for pregnancy detection, Haemoglobin, ABO & Rh grouping, HIV, VDRL, HBsAg, RBS for each ANC. All fever cases screened with PBS/RDK to detect Malaria.

e) Emergency services & care in times of disaster/epidemic/public health emergency/ accidents etc

f) Public Health awareness campaigns through IEC on health including personal hygiene, proper nutrition, water and sanitation etc, as well as multi-media presentation and screening of health documentaries and radio programs/spots for awareness building.

Each Boat Clinic units comprises of the following staff, employed by the PPP partner: (Total 15)

Staffs	In Position
District Program Officer	1
Medical Officer	1 or 2
Pharmacist	1
Laboratory Technician	1
GNM / ANM	2 or 3
Community Worker	2
Boat Crew	4

Current Situation of Boat Clinic in the state:

The last renewal of Boat clinic programme run by C-NES has expired on 31st March 2020. During the financial year, 2020-21 C-NES received only the 1st Quarter fund from NHM. Most Boat Clinic units continued till October 2021 and subsequently had to discontinue camp activities as funds were not available. NHM reimbursed the pending (July to October), 2020 expenses through the respective district health societies of the state. From May 2021 state has restarted the boat clinic services with the existing staff of C-NES with active involvement of the respective district health society in coordination with C-NES. The approval for temporary arrangement for continuing Boat Clinic Services has been approved by the Department of Health & FW Govt. of Assam. Boat clinic programme is currently supervised by the concerned districts along with Joint Director of Health Services (Jt. DHS) and District Program Manager in coordination with C-NES till the finalization of ongoing bidding process.

The current MoU has already expired and the EOI for selection of prospective Service Provider has been completed. Against the EOI dated 05/01/2021, six (06) bidders have been shortlisted as technically acceptable. C-NES has been identified as potential organization to run the boat clinic in PPP mode for next cycle.

Study design and Methodology

Rational of the study:

Centre of Northeast Studies and Policy Research (C-NES) has been managing the Boat Clinic services of the State since 2008. Hence, it has been desired by the NHM, Assam that the Regional Resource Centre for North-eastern States, MoHFW, GoI, Guwahati may conduct an assessment study of the services quality, outreach, functionality and feasibility of the Boat Clinic in the Dhubri district of Assam state vis-a-vis their target population.

Objective:

The objectives of the study are as follow:

1. To assess the functioning of Boat Clinics in terms of:
 - i. The bouquet of healthcare services provided
 - ii. Beneficiaries covered
 - iii. Extent of outreach to remote and under-served *char/sapori* areas
2. To assess the gaps in terms of:
 - i. Human resources availability and their capacity enhancement
 - ii. Laboratory & diagnostics equipment availability / functionality and drugs / medicines availability
 - iii. Run time / downtime of boat clinics utilized
3. To assess the beneficiary perspective of the Boat Clinic services in term of:
 - i. Accessibility of the services by the target community
 - ii. Acceptance of the services by the target community

Study Area / Domain / Population:

For the study, the district of Dhubri has been selected by the State NHM, Assam. The intention of taking up this study in Dhubri district is to assess the quality and extent of coverage of the Boat Clinic services in context to the *char* or *sapori* regions, which the district has in abundance.

The district has two (02) functional Boat Clinics out of which 01 is operating in the South Salmara BPHC area and 01 is operating in the Dharamsala BPHC and South Salmara BPHC areas. For the study, both the Boat Clinics operating in the *char* areas of Dhubri were covered.

10 beneficiaries from each of the *char* areas of the 02 Boat Clinics (total of 20 beneficiaries) was selected randomly for personal interview based on the OPD attendance on the day of visit. The Boat Clinic staff and DPMU officials were also interviewed for the study through semi-structured questionnaire.

Study Period:

The field level data collection was done in the month of April 2022.

Methodology of the Study:

The study is cross sectional with quantitative methodology.

Major heads of evaluation were:

- i. Functional status of Boat Clinics including the status of boat, down time, drugs availability, laboratory & diagnostic equipment, and manpower
- ii. Coverage of the Boat Clinics with mechanism for selection of camp site in their catchment areas
- iii. Quality of service delivery
- iv. Beneficiary perspective of the Boat Clinics in context to acceptance and utilization of the healthcare services provided

Secondary data have been collected from HMIS, State Head Quarter, NHM officials and C-NES Head Quarter officials responsible for Boat Clinic functioning for the FYs 2019-20, 2020-21 and 2021-22 and further analysed for annual performance.

Data Collection Tools: Semi structured interview schedule was developed and used for data collection.

Tools were further subdivided into:

1. Semi structured questionnaire for state level staff
2. Semi-structured questionnaire for district level staff
3. Semi- structured questionnaire for Boat Clinic staff including MO, SN, pharmacist and Lab technician.
4. Beneficiary questionnaire

Inclusion and exclusion criteria: Beneficiaries attending the Boat Clinic were taken for interview during field visit.

Indicators used for assessment of Boat Clinic functioning:

SI	Criteria	Indicators
1	Boat Clinics sanctioned	% of Boat Clinics functional among sanctioned
2	Manpower	i. % vacant positions ii. % contractual/regular/others iii. % of trainings completed as per plan
3	Materials Drugs diagnostics	i. % Drugs stock-out ii. Availability of drugs/diagnostics as per check iii. List of diagnostics which are not functional

SI	Criteria	Indicators
4	Population covered	i. % Boat Clinic as per norms ii. % of areas where route maps of the area present iii. % link with GPS tracker
5	Service delivery	i. % of visits as per plan (by Boat Clinics)
6	Range of services provided	i. Average number of patients seen per visit/Boat Clinic ii. % services provided according to plan
7	Vehicle	i. % of Boats functional ii. % of Boats with updated log book/ monitored by MO iii. No. of days' Boat was not functional in the previous month iv. Safety guidelines followed
8	Referral linkage	i. Number and % of referrals in the last 3 months
9	Repurposed for COVID services	i. Services provided for COVID: diagnostic/referral/symptomatic assessment

Data Analysis: - Descriptive statistical analysis was done by using Microsoft Excel.

Boat Clinic services in Dhubri district:

According to the 2011 census Dhubri district has a population of 19.49 lakhs with 9,97,848 males and 9,51,410 females. Dhubri district has a total of 02 Boat Clinics and covers 44 revenue villages per month having target population of about 14,170 and 16,217 for Boat Clinic Unit I and Unit II respectively. Each Boat Clinic perform 18-20 camps in each month in designated *char/sapori*.

Boat Clinic clusters and Block division in Dhubri district:

SI	BOAT CLINIC (in Unit)	Block	Geographical Areas of work
1	Unit I	South Salmara	<u>Boldiaralga Brahmaputa</u>
2	Unit I	Dharmasala	Kuntir Char East Part I
3	Unit I	Dharmasala	Airanjongla Part I
4	Unit I	South Salmara	Boldiaralga N/C
5	Unit I	South Salmara	Char Bhasani Part I
6	Unit I	Dharmasala	Kayimbhasani II
7	Unit I	Dharmasala	Kalpakani II
8	Unit I	Dharmasala	Kuntir Char East Part II
9	Unit I	South Salmara	Boldiaralga North
10	Unit I	South Salmara	Boldiaralga West
11	Unit I	Dharmasala	Dhubir Char
12	Unit I	Dharmasala	Aironjagla Part I
13	Unit I	South Salmara	Muthakhowa Part I
14	Unit I	South Salmara	Boldiaralga East
14	Unit I	South Salmara	Boldiaralga South
15	Unit I	South Salmara	Majer Char Part II
16	Unit I	South Salmara	Birshing Part III
17	Unit I	South Salmara	Natinerlga Part II
18	Unit I	Dharmasala	Pach Peer Char
19	Unit I	South Salmara	Muthakhowa Part II
20	Unit II	South Salmara	River Block Part III N/C
21	Unit II	South Salmara	Tangevita Katlamari Part III
22	Unit II	South Salmara	River Block No. 4 N/C
23	Unit II	South Salmara	Gosaidubi
24	Unit II	South Salmara	Majer Char N/C

SI	BOAT CLINIC (in Unit)	Block	Geographical Areas of work
25	Unit II	South Salmara	River Block No. 10 N/C Poyesti
26	Unit II	South Salmara	River Block No. 10 N/C North, Nakbhangi
27	Unit II	South Salmara	Chalakurar Char
28	Unit II	South Salmara	Chalakurar Char Part III
29	Unit II	South Salmara	Chalakurar Char Part III North
30	Unit II	South Salmara	Chalakurar Char Part V
31	Unit II	South Salmara	Chalakurar Char Part I
32	Unit II	South Salmara	Tangevita Poyesti
33	Unit II	South Salmara	Aminer Char New
34	Unit II	South Salmara	Sialmari
35	Unit II	South Salmara	Bhakuamari
36	Unit II	South Salmara	River Block 10
37	Unit II	South Salmara	Aminer Char Old
38	Unit II	South Salmara	Majer Char Chalakurar Part I
39	Unit II	South Salmara	Majer Char Part IX
40	Unit II	South Salmara	Majer Char Chalakurar Part II
41	Unit II	Dharmsala	Kuntir Char Baganpara

Key observations:

During the evaluation Boat Clinic Unit, I and II were visited and the Evaluation Team accompanied the Medical Team for field observation during the ongoing camps. The Boat Clinics were visited with semi structured questionnaire for Boat Clinic staff including Medical Officer, Staff Nurses, Pharmacist and Lab Technician and beneficiary questionnaire.

Location of the Boat Clinics:

Boat Clinics are expected to serve in a far flung underserved riverine areas i.e., *char/sapori* with limited health services available and without reach of public health facility nearby. Both the Boat Clinics visited are anchored at Kachahri Ghat/Netai Dhubuni Ghat after the camp duty is over. The Boats are manned by one of the Boat Crew members during the night hours for safety of the boats.

Route plan/Operation plan:

The Boat Clinics work on predefined route plan made in consultation with DPMU, NHM, Dhubri and DPOs of the Boat Clinics and they function 22 days in a month on an average and the route plan is shared beforehand with the Joint Director of Health Services accordingly. There is no deviation in the route plan observed but sometimes due to special event/camps requested by the district authority, plan is diverted with prior information and that day's plan is carried out in some extra day on that same month or two chars are covered on the same day.

HR Status & Salary:

The Boat Clinic comprises of 01 District Programme Officer (DPO), 01/02 Medical officers, 02 nurses, 01 Laboratory technician, 01 pharmacist, 03 Community Worker and 04 crew members (including drivers). Currently both the Boat Clinics have all the required manpower. The present Medical Officers are BAMS graduates. The Salary of Medical Officer starts from Rs. 30,500/month as observed during interview process. The Medical Staff gets the same salary as per NHM, Assam norms but the DPO and other non-medical staff receives the salary as per C-NES norms. The increments are provided @5% per year after annual appraisal done by C-NES, Assam.

Details of Human Resource of two Boat Clinics visited in Dhubri district:**Boat Clinic – UNIT I**

SL	Manpower category	In place	Vacant position
i.	Medical Officer	1	Nil
ii.	Nurse I	1	Nil
iii.	Nurse II	1	Nil

SL	Manpower category	In place	Vacant position
iv.	Laboratory technician	1	Nil
v.	Pharmacist	1	Nil
vi.	Community Worker	3	Nil
vii.	Helper	2	Nil
viii.	Driver	2	Nil
ix.	District Program Officer	1	NIL

Source: NHM, Assam

Boat Clinic – UNIT II

SL	Manpower category	In place	Vacant position
i.	Medical Officer	1	Nil
ii.	Nurse I	1	Nil
iii.	Nurse II	1	Nil
iv.	Laboratory technician	1	Nil
v.	Pharmacist	1	Nil
vi.	Community Worker	3	Nil
vii.	Helper	2	Nil
viii.	Driver	2	Nil
ix.	District program Officer	1	NIL

Source: NHM, Assam

Training of Boat Clinic staff:

Training details:

Boat Clinic – UNIT I

SL	Manpower category	Total Tenure in Boat Clinic	Trainings received
i.	Medical Officer	06 months	Nil
ii.	Nurse I	09 years	IMNCI, IUCD, Immunization, ANC
iii.	Nurse II	09 years	Nil
iv.	Laboratory technician	14 years	HIV test, Semi-autoanalyzer, Covid-19 swab collection
v.	Pharmacist	14 years	DVDMS, Co-WIN app
vi.	Community Worker	14 years	Nil

Boat Clinic – UNIT II

SL	Manpower category	Total Tenure in Boat Clinic	Trainings received
i.	Medical Officer	06 months	Nil
ii.	Nurse I	07 years	IUCD
iii.	Nurse II	09 years	IUCD, IMNCI, NSSK
iv.	Laboratory technician	09 years	Covid-19 swab collection
v.	Pharmacist	08 years	DVDMS
vi.	Community Worker	14 years	Nil

During interview it was found that **there is lack of knowledge about the health programs amongst the staff especially programs like RMNCH+A, NTEP, IDSP, other National Health Programs as well as the expanded package of services under CPHC.** However as per clause 2.22 of the MoU 2019-20, the service provider is to train and technically support their staff for National Health programs independently as well as in collaboration with development partners like UNICEF, PFI, WHO etc. But during the interview with the officials of C-NES it was learnt that the last technical support training was conducted in the year 2018. The reasons cited by the officials for not imparting capacity building trainings were lack of dedicated fund, non-signing of the fresh MoU and restriction due to the COVID-19 pandemic. However, there is a provision of one day induction cum orientation training for new joiners which is inadequate in terms of imparting a holistic approach towards primary health care.

Moreover, it was apparent from the interview of the para-medical staff of the visited Boat Clinics that the staff were not regularly trained on the emerging health issues and one ANM of Boat Clinic Unit I has not received any training since her joining 09 years ago. As per clause 2.21 of the MoU 2019-20, its mentioned that ‘the Boat Clinics will be strengthened as Health & Wellness Centres and will be supported and supervised by the DPM, NHM as a nodal officer of respective districts in concern’, this initiative needs robust training of the Medical and Para-Medical Staff but no such initiative was noted from the DPMU during evaluation and the initiative from the service provider was also not noted as no such information was shared with the evaluation team on planned trainings or meetings on Health & Wellness Centre.

In this context, it must be acknowledged that trainings and orientations on revised / updated guidelines and newer objectives of the National Health Programmes are very much needed for in-service health staff for the better implementation of the health programmes and thus, the Boat Clinic Staff needs rigorous re-orientation on all national and state health programmes.

Gamut of Service:

As per clause 2.27 of the MoU 2019-20, the Boat Clinics are supposed to meet certain expected targets for deliverables like,

- Health Camps – Average 18 camps per month.
- General Health Check-up – in Upper Assam: minimum 50 cases/camp and in Lower Assam: minimum 70 cases/camp on an average.
- Ante Natal Check-up (up to minimum 3 check-ups): at least 80% of quality ANC should complete in all registered ANC cases.
- Post Natal Check-up: at least 40% of all mothers within 48 hours after delivery (since camps are held once/twice a month PNC cases cannot be conducted on a regular basis, but efforts will be stressed for Institutional delivery through referral service) etc.

Availability of Services in the OPD Camps:

Gamut of services	Available (yes/ No)
Reproductive & Child Health Services	Yes
Family planning services	Yes
Adolescent health services	Yes
NCD services	Yes
Laboratory facility, please specify	Yes
IEC/BCC activities	Yes
Specialised facilities and services including COVID	Yes
Others (please specify below)	Covid-19 vaccination services and Rapid Antigen Test for Covid-19 screening

Performance on service delivery for the FY 2019-2020 (for 12 months); 2020-21 (for 07 months) and 2021-22 (for 10 months) in Dhubri district:

Boat Clinic Unit I

Services	FY 2019-20		FY 2020-21		FY 2021-22	
	Total	Monthly Average	Total	Monthly Average	Total	Monthly Average
No. Of camps	204	17	105	15	205	21
No. Of villages covered	204	17	105	15	205	21
No. Of OPD	15211	1268	5598	800	17294	1729
No. of PW registered	260	22	190	27	228	23
No. Of ANC	698	58	281	40	518	52

Services	FY 2019-20		FY 2020-21		FY 2021-22	
	Total	Monthly Average	Total	Monthly Average	Total	Monthly Average
No. of 4 ANC received	76	6	24	3	79	8
TT1	-	-	137	20	172	17
TT2/Booster	-	-	81	7	144	14
No. of PW given 180 IFA	-	-	90	13	137	14
No. Of NCD cases	-	-	34	5	35	4
No. Of referral	-	-	16	1	35	6

Performance on service delivery for the FY 2019-2020 (for 12 months); 2020-21 (for 08 months) and 2021-22 (for 10 months) in Dhubri district:

Boat Clinic II

Services	FY 2019-20		FY 2020-21		FY 2021-22	
	Total	Monthly Average	Total	Monthly Average	Total	Monthly Average
No. Of camps	198	17	115	14	206	21
No. Of villages covered	198	17	115	14	209	21
No. Of OPD	15019	1252	9209	1151	16154	1615
No. of PW registered	347	29	248	31	314	31
No. Of ANC	1432	119	789	99	1153	116
No. of 4 ANC received	254	21	150	19	242	24
TT1	-	-	211	26	273	27
TT2/Booster	-	-	155	19	259	26
No. of PW given 180 IFA	-	-	132	17	196	20
No. Of NCD cases	-	-	200	25	295	30

Services	FY 2019-20		FY 2020-21		FY 2021-22	
	Total	Monthly Average	Total	Monthly Average	Total	Monthly Average
No. Of referral	-	-	18	2	20	2

During the Year 2020-21 boat clinics were functional for about 6-7 months with around 67/camp/Boat Clinic OPDs and similarly in FY 2021-22, boat clinics were functional for about 10-11 months with around 81/camp/Boat Clinic OPDs and there was marked decrease in monthly performance observed during FY 2020-21 in terms of number of camps, number of ANCs. The reason behind the decrease in performance of Boat Clinics during this period was tagged on Covid-19 crisis and dilemma over non-extension of existing MoU between C-NES and NHM, Assam.

Further, in the FY 2019-20, in pre COVID-19 era, the monthly average OPD came out to be 1268 and 1252/month and during the Covid-19 era in the FY 2020-21, the monthly average OPD was 800 and 1151/month for Boat Clinic I and II respectively and in the FY 2021-22, the monthly average OPD is 1729 and 1615/ month.

In the cases of registration of Pregnant Women, the average registration per month in the FY 2019-20 was 22 and 29 followed by 27 and 31 in the FY 2020-21 and 23 and 31 in the FY 2021-22 for both the Boat Clinics (I and II) respectively. Noticeably, there is not much change in number of beneficiaries availing the Boat Clinic services in pre and during Covid-19 era. **Moreover, there is drastic fall in the number of pregnant women receiving 4 ANCs in comparison to the pregnant women registered. This sharp fall in the 4 ANC numbers highlight lack of follow up at the field level though both the units have community workers. Moreover, no high-risk pregnant women have been detected as no records or list of High-Risk Pregnant women have been found during the evaluation.**

Moreover, again in the category of Pregnant Women registration, in FY 2019-20, 260 and 347 beneficiaries were registered in both the boats respectively but TT1 injections and IFA administration data was not collected. In the FY 2020-21 again Pregnant Women registered were 190 and 248 in both the boats respectively but TT1 injections were administered to only 137 and 211 registered pregnant women which is way less than the registration and IFA tablets were prescribed to only 90 and 132 pregnant women which again shows that **not all registered pregnant women are served with mandatory government guidelines.** Likewise, in the FY 2021-22 again has same findings and indicates lacunae in the implementation of MoU agreed between both the parties.

The Boat Clinics being the only means to reach the *char* population, was assigned the task of door-to-door screening, sample collection, awareness activities for Covid-19 cases and later with Covid-19 vaccination for the *char* population.

However, in regard to referral cases, proper follow-up was not done, and no proper documentation was found with the Boat Clinics.

Immunization Performance:

Boat Clinic Unit I

Coverage % against estimated target							
Vaccine	2019-20	2020-21	2021-22	Vaccine	2019-20	2020-21	2021-22
BCG	65% (209)	25% (87)	52% (183)	Rota virus Vaccine	62% (201)	24% (84)	55% (194)
OPV1	71% (231)	25% (88)	61% (214)	MCV 1	54.9% (178)	38% (134)	43.2% (153)
OPV2	75% (242)	21% (74)	52% (184)	JE	70% (227)	36% (126)	37% (130)
OPV3	52% (169)	27% (94)	54% (192)	Vitamin A 1 st Dose	98% (319)	90% (319)	114% (403)
Penta1	70% (228)	24% (85)	56% (200)	MCV2	28.2% (93)	26.8% (95)	50.28% (178)
Penta2	70% (228)	21% (72)	52% (183)	JE booster	33% (108)	28% (98)	49% (175)
Penta3	56% (182)	27% (94)	54% (190)	DPT booster	43% (139)	30% (107)	46% (164)
IPV1	71% (230)	24% (85)	59% (210)	Fully Immunized	57% (185)	28% (99)	33.3% (118)
IPV 2	52% (169)	27% (93)	51% (180)	Completely immunized	43% (138)	30% (106)	46% (164)

**** Note:**

- A. FY 2019-20 Population in 0-1 age group: 324
 FY 2020-21 Population in 0-1 age group: 354
 FY 2021-22 Population in 0-1 age group: 354
- B. FY 2019-20 Population in 1-5 year age group: 2025
 FY 2020-21 Population in 1-5 year age group: 1374
 FY 2021-22 Population in 1-5 year age group: 1374

Boat Clinic Unit II

Coverage % against estimated target							
Vaccine	2019-20	2020-21	2021-22	Vaccine	2019-20	2020-21	2021-22
BCG	89.3% (351)	54.5% (174)	75.9% (293)	Rota virus Vaccine	59% (232)	48.5% (155)	70.9% (274)
OPV1	84.9% (334)	55.7% (178)	72.8% (281)	MCV 1	91.3% (359)	47.6% (152)	76.4% (295)

Coverage % against estimated target							
OPV2	91% (358)	50.4% (161)	64.5% (249)	JE	101% (398)	51.7% (165)	77% (298)
OPV3	70.9% (279)	40% (129)	55.5% (214)	Vitamin A 1 st Dose	86.7% (874)	79% (751)	56.6% (578)
Penta 1	88.8% (349)	44% (143)	61.8% (262)	MCV2	47.0% (185)	24.7% (79)	39.3% (152)
Penta 2	88% (346)	38% (124)	60% (233)	JE booster	69.7% (274)	18.8% (60)	36.2% (140)
Penta 3	83.7% (329)	32% (103)	52% (201)	DPT booster	30.2% (119)	21.9% (70)	43.2% (167)
IPV1	67.4% (265)	55.8% (178)	71.7% (277)	Fully Immunized	91.3% (359)	47.6% (152)	76.4% (295)
IPV 2	60.3% (237)	40.4% (129)	54.6% (211)	Completely immunized	30.2% (119)	21.9% (70)	43.2% (167)

**** Note:**

FY 2019-20 Population in 0-1 age group: 393

FY 2020-21 Population in 0-1 age group: 319

FY 2021-22 Population in 0-1 age group: 386

FY 2019-20 Population in 1-5 year age group: 1008

FY 2020-21 Population in 1-5 year age group: 949

FY 2021-22 Population in 1-5 year age group: 1020

Immunization is one of the key services delivered by Boat Clinics in hard-to-reach areas. ANMs of the Boat Clinic do the outreach immunization for the beneficiaries. But the process of immunization and subsequent tracking of dropouts requires further handholding as dropouts and left outs were observed on field.

During the visit, it was also noted that in Boat Clinic Unit I, lost to follow-up cases were more in comparison to Boat Clinic Unit II. Overall, the vaccination was not found in symmetry in both the Boat Clinics for e.g., in every vaccine category there is mismatch in number of beneficiaries from which it could be ascertained that either the IEC before the camp day is not proper or the percolation of the benefits from vaccination is still not clear to the population. In both the cases, the Boat Clinic performance is not up to the MoU as agreed by both the parties. **During the evaluation it was found that the Boat Clinic Unit I has not achieved target of 75% in Full Immunization category as per the MoU in last three (03) years. Moreover, strikingly the drop out is almost 50% from MCV1 to MCV2 and JE1 to JE Booster in Boat Clinic Unit II. This is also one indicator that the immunization related IEC is not happening properly and needs attention.**

Also, though the ANMs are providing immunization services, **MCP card filling up is not followed universally and regular update of the cards were not practiced in field. Knowledge regarding immunization schedule is adequate among ANMs** but documentation of the immunization services needs further handholding. In the field visit, the evaluation team found that many children were immunized but their MCP cards were not filled up. The ANMs were also not sure about few new borne in the area. The lack of coordination was apparent among ANMs, ASHAs and the Community Worker.

Family Planning Services:

Methods	2019-20		2020-21		2021-22	
	Boat Clinic Unit I	Boat Clinic Unit II	Boat Clinic Unit I	Boat Clinic Unit II	Boat Clinic Unit I	Boat Clinic Unit II
OCP	1899	1386	1898	1437	3079	2032
Condoms	1870	1374	589	1042	1698	787
IUD	0	0	0	0	0	0
LTO	3	0	0	0	0	0
NSV	0	0	0	0	0	0
Newer Methods	0	0	0	0	0	0

Boat clinic is providing family planning services in the form of counselling the beneficiaries regarding basket of choices and distribution of OCPs and condoms. However, knowledge regarding newer contraceptives among the ANMs is minimal and newer contraceptives were not available in the boat clinic. Though the ANMs were trained in IUCD insertion, it is not practised in field due to the lack of infrastructure issues in the boats and less acceptability in the region.

During the evaluation, it was also found from the MCH registers that still multi gravida pregnant women gets registered for ANC who are already having 6-7 kids and usually the age in first pregnancy is 16-17 years in *char* area. **This shows that the IEC and BCC activities in Family Planning services need extra effort, and some innovative mechanism should be tried by the Boat Clinics to strengthen the Family Planning services for the *char* population.**

Functioning status of Boat Clinics:

Currently, in Dhubri rented small vessels are being used as Boat Clinic boats and they ply 18 – 20 days in a month. The district used to have big vessels few years back and the teams used to go for night stays as per the information provided to the evaluation team. Now, the big vessels are under repair and maintenance and hopefully will be used in near future. **The small, rented vessels were found not big enough to accommodate all the staff along with the medicines and laboratory equipment comfortably. The vessel of Unit II was found to be so small that even the Boat Clinic Staff cannot stand inside the vessel and there is always an apprehension of head injury.** Now, due to the small

boats the Boat Clinics do not go for night duties. **Both the vessels visited have provision of life jackets, but the jackets are less in numbers in proportion to the people on-board.**

In view of the areas to be covered, there is an urgent need to get the bigger and original vessels on duty as it is hampering the actual duty schedule of the Boat Clinics. As per the clause Article 4: Roles of Partner of the MoU FY 2019-20, the service provider is responsible for necessary renovations, repair and maintenance as and when required, so, the service provider and NHM, Assam should device a mechanism under which regular maintenance of the Boat Clinics may be ensured and in case of lengthy downsizing of the original vessels the rent for the temporarily arranged boat of adequate capacity should be deducted from the total cost. The practices of long pending maintenance services of the vessels may not be encouraged from NHM, Assam because it hampers the due services to the *char* area community.

Diagnostic services:

List of Diagnostic services:

SL	Test Name	Boat Clinic Unit I (Yes/No)	Boat Clinic Unit II (Yes/No)
1	Routine Blood Examination	Yes	Yes
2	Routine Urine Examination	No	No
3	Urine for Albumin/Sugar	Yes	Yes
4	Blood Grouping	Yes	Yes
5	Random Blood Sugar	Yes	Yes
6	Rapid Tests for Malaria	Yes	Yes
7	Blood Smear Examination for Malaria Parasite	No	No
8	Rapid Test for Pregnancy	Yes	Yes
9	RPR tests for Syphilis/VDRL	Yes	Yes
10	Rapid Tests for HIV	Yes	Yes
11	Others (Typhoid/RAT)	Yes	Yes

Laboratory services:

Boat Clinic Unit I

Test	2019-20	2020-21	2021-22
Hb%	1298	282	499
RBS	785	273	516
Urine Sugar	704	268	497
Urine Albumin	704	268	497
PBS for MP	0	0	0
Total Positive	0	0	0
RDK for MP	151	10	89

Test	2019-20	2020-21	2021-22
Total Positive	0	0	0
HCG kit test	257	289	114
Rapid test HIV/VDRL	263	182	222
Others	-	-	-

Boat Clinic Unit II

Test	2019-20	2020-21	2021-22
Hb%	820	313	626
RBS	563	254	688
Urine Sugar	406	216	331
Urine Albumin	406	216	331
PBS for MP	0	0	0
Total Positive	0	0	0
RDK for MP	40	25	7
Total Positive	0	0	0
HCG kit test	729	249	613
Rapid test HIV/VDRL	545	282	577
Others (RAT)	0	0	1645

Diagnostic services provided are quite appropriate to the field scenario. A total of 10-11 spot diagnostic tests can be done in Boat Clinics and reports are given on the same day within 1 hour approximately. Mostly tests are restricted to Haemoglobin estimation, RBS, Blood grouping, Urine examination and few rapid tests for Malaria and pregnancy.

Further as per the MoU clause no 2.21 subclause (d): 'Basic laboratory services-HCG test for pregnancy detection, haemoglobin, ABO and Rh grouping, HIV/VDRL, HbsAg, RBS for ANC', are certain mandatory tests for ante-natal care but it was observed in the field that **not all ante-natal care patients are going through all mandatory tests**, for example out of 518 number of ANC cases attended in Boat Clinic Unit I, only 222 went through VDRL/HIV test. The remaining 296 ANC cases were somehow deprived of the services and utmost importance to be given for providing essential health care services.

Again, in the FY 2019-20, the Boat Clinic Unit I and II registered 260 and 347 pregnant women but the VDRL test was conducted for 263 and 545 persons, in the FY 2020-21, 190 and 248 pregnant women were registered respectively in both the clinics and the VDRL test was done for 182 and 282 patients. Likewise, for the FY 2021-22, 228 and 314 pregnant women were registered but the VDRL was conducted for 222 and 577 patients. There is apparent inappropriateness in the tests conducted and without the ICTC centre the Boat Clinics should have certain criteria for these types of tests. Both the parties should come up with certain guidelines for these types of situations.

Drugs availability:

The drugs to the Boat Clinic were supplied through Boat Clinic drug kits from the District Drug store. The mechanisms of indent of the drug were done monthly or according to the requirement. But there is no fixed mechanism/rationale followed in indenting the drugs considering the buffer stock. Ideally indenting should be done based on disease profile or utilisation of drugs in field. **Knowledge of the staff regarding buffer stock is also not adequate.** During the month of March 2022, till the data collection as per the records, **it was observed that the total of 110 numbers of drug was available at Boat Clinics Unit I and 119 numbers of drug was found in Boat Clinics Unit II.** There is shortage of drugs observed especially paediatric antibiotics, antifungal systemic drugs, salbutamol, antihypertensive, anti-diabetics & suspensions for children. **It was also observed that the Boat Clinics are indenting less than the required optimal quantity.**

Stock Position of some regularly used drugs in Boat Clinics:

SL	Name of the drugs	Drugs available for Boat Clinic Unit I (Till 14 th March 2022)	Drugs available for Boat Clinic Unit II (Till 14 th March 2022)
1	Tab. Paracetamol 500 mg	2800 tablets	2000
2	Syp. Paracetamol 125mg/5ml	252 syrups	50
3	Tab. IFA (L)	18750 tablets	14900
4	Tab. Antacid	5000 tablets	6340
5	Tab. Ranitidine/Omeprazole	0	1910+5600
6	Tab. Nifedipine 5mg	0	0
7	Cough syrup	358	246
8	Tab. Salbutamol 2/4 mg	0	630
9	Tab. Vitamin B Complex	17000	5000
10	Vitamin A solution	10	19
11	ORS	9	495
12	Tab. Zinc Sulphate 10mg	2100	2025
13	Cap Ampicillin / Amoxycillin 500mg	0	500
14	Syp. Ampicillin / Amoxycillin 250mg/5ml	373	127
15	Tab. Trimethoprim + sulfamethoxazole (20+100) Ped	0	0

SL	Name of the drugs	Drugs available for Boat Clinic Unit I (Till 14 th March 2022)	Drugs available for Boat Clinic Unit II (Till 14 th March 2022)
16	Tab. Trimethoprim + sulfamethoxazole (80+400)	0	280
17	Intravenous antibiotics	0	128
18	Anti-hypertensive drugs (Amlodipine /Telmisartan/Atenolol)	70	240
19	Anti-diabetic drugs (Metformin/Glimepride)	40	2720
20	Gloves	50	400

Biomedical Waste Management:

Colour coding of Waste bin/bags were found as per BMW guidelines. The boat clinics were collecting waste in respective colour coded bags and the waste were disposed in their respective PHCs.

Linkage with government health Facility:

Boat Clinics are providing almost all gamut of OPD based general services as per the MoU but it was found that the boat clinic Medical Officers are not kept under the regular reporting process of IDSP and they are not part of regular block PHC monthly meetings. The Medical officers of the boat clinic were also not part of the regular training programs of the district for example-NCD training under CPHC whereas the MoU says the Boat Clinics are to be strengthened up to the level of Health and Wellness Centre. This certainly is a matter of concern, and both the parties need to work on the same and all Medical Officers should be incorporated in the Districts Training Plan, so that the Medical Officers are kept well trained for emerging medical advances for the better service implementation in the *char* areas and cross learning from their counterparts of mainland. It was noted during the evaluation that the ASHAs are actively involved with Boat Clinics for Ante Natal check-ups. The community workers appointed in the boat clinic though work in liaison with the respective ASHAs, but more concerted efforts is required at the field level so that the loss to follow-up as being observed in antenatal cases and immunization of the children can be minimized.

Community prospective:

Parameters	Numbers	Percentage%
Patient Registered		
Male	8	36%
Female	14	64%

How did beneficiary come to know about the camp		
ASHA	21	95%
Service provider	8	36%
From nearest PHC/SC	0	0%
Services received in Boat clinic		
OPD	20	91%
Diagnostic	5	23%
Family planning	3	14%
Immunization	1	5%
Availability of prescribed medicine		
Yes	22	100%
No	0	0%
Regularity of Boat clinic		
Monthly	22	100%
Alternative month	0	0%
Quarterly	0	0%
Waiting time in minutes		
Less than 30 minutes	6	27%
30 minutes to 1 hour	6	27%
More than 1 hour	10	46%
Level of satisfaction		
Fully satisfied	20	91%
Partially satisfied	2	9%
Not satisfied	0	0%

Boat Clinics are providing service to *char* areas in the district and having OPD in the range of 70-75 patients/day which shows that there is acceptance of the Boat Clinic services in the community and people eagerly wait for the service. A total of 22 beneficiaries were interacted during the evaluation and 91% of the beneficiaries were fully satisfied with the services. Range of tests done is generally Haemoglobin estimation and blood grouping. Drugs are dispensed for duration of 30 days on an average for like IFA tablets and vitamins etc. but otherwise full dose is provided to the patient. As per beneficiary for *char* areas, Boat Clinic visits once in a month, every month and ASHAs are the main source of information about the Boat Clinic visit. However, Community Workers also play a vital role in awareness generation as 36% beneficiaries mentioned their role in field activities.

IEC activities in Boat Clinics:

IEC	2019-20		2020-21		2021-22	
	Boat Clinic Unit I	Boat Clinic Unit II	Boat Clinic Unit I	Boat Clinic Unit II	Boat Clinic Unit I	Boat Clinic Unit II
Planned	216	188	216	174	216	240
Conducted	204	188	105*	115	186	206

**Due to covid-19 less camps were conducted, so less IEC activities*

IEC activities are present in the form of counselling given by Nurses and Community Workers and distribution of leaflets. IEC is one of the important components of Boat Clinic services and the study revealed that in most of the IEC activities stress was given only to the ANC and PNC cases and on few health programs like National Deworming Day, Diarrhoea control program and COVID-19. But knowledge of health programs is not adequate amongst the health staff of the Boat Clinics and regular refresher training is needed.

Equipment availability:

Equipment	Available		Functional	
	Boat I	Boat II	Boat I	Boat II
Weighing scale	Yes	Yes	Yes	Yes
Delivery Tray	Yes	Yes	Yes	Yes
Nebulizer	Yes	Yes	No since 2018	Yes
Generator	Yes	Yes	Yes	Yes
Microscope	Yes	Yes	No	Yes
Sterilizer	Yes	No	Yes	No
BP machine	Yes	Yes	Yes	Yes
Glucometer	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes
TV/Laptop	No	Yes	No	Yes
Projector	No	No	No	No
Life Jackets	Yes (14 Life Jackets are available)	Yes (14 Life Jackets are available)	Yes (10 Life Jackets are in good condition)	Yes (14 Life Jackets are in good condition)
Oxygen Concentrator	No	Yes	No	Yes

Essential equipment is available in both the units visited. However, few essential equipment like nebuliser, sterilizer and microscope though available were non-functional. Also, Life jackets available in the boats are not on 1:1 ratio for all crew and staff of the units of the boat.

Fund status:

Funding details for Boat Clinic (Unit I & II) in Dhubri district:

SL	Year	Fund received from NHM (Rs. in Lakhs)		Fund expended (Rs. in Lakhs)		Any Penalty imposed/ Mention amount
		Boat I	Boat II	Boat I	Boat II	
1	2019-20	7.70	6.35	No data	6.70	Nil
2	2020-21	3.60	7.29	2.45	5.60	Nil
3	2021-22 (Till Feb 2022)	8.62	9.63	9.41	10.88	Nil

The Boat Clinic services are being managed by Centre for Northeast Studies and Policy Research (C-NES) since February 2008 under a MoU with the National Health Mission (NHM), Assam. As per RoP 2021-22 Rs 4.68 lakh per unit per month is approved. Since March 2021, boat clinic has been operating through District health society and C-NES is getting the money through district health society as per actual expenditure. Salary of the staff is being disbursed directly from NHM headquarters every month. Before March 2021 funds were directly given to C-NES on submission of bills to NHM, Assam. Due to COVID-19 pandemic, in the year 2020-21 boat clinic was functional for 7 months and 10 months in FY 2021-22.

Expenditure 2021-22(Till Feb 2022):

Dhubri district	Manpower cost (Rs.in lakh)	Boat/logistic cost (Rs. in lakh)	Total (Rs. in lakh)	OPD cases	Cost per patient (in Rs)
Unit I	23.24	8.62	31.86	17294	184.00
Unit II	22.09	9.63	31.75	16017	198.00

Expenditure 2020-21:

Dhubri district	Manpower cost (Rs. in lakh)	Boat/logistic cost (Rs. in lakh)	Total (Rs. in lakh)	OPD cases	Cost per patient (in Rs)
Unit I	16.26	3.60	19.86	5598	355.00
Unit II	15.46	7.29	22.75	9182	248.00

It was observed that cost per patient for boat clinics in Dhubri district ranges from Rs 184/- to 198/- in FY 2021-22. In FY 2020-21, average cost ranges from Rs 248/- to 355/- during COVID-19 pandemic.

An earlier study conducted by RRC-NE in the year 2011-12 highlights the unit cost per patient was Rs 316/- when the boat clinic was operational through C-NES.

Services provided for COVID-19:

During COVID -19, staff of the Boat Clinics were involved in door-to-door screening and sample collection. The staff of Boat Clinics are also involved in activities of COVID-19 vaccination as observed during field visit.

Beneficiary Feedback:

While interviewing the beneficiaries the Team found that almost all the patients sought that the frequency of Boat Clinic visits should be twice in a month as 30 days gap is too much for them as they do not have other options for seeking health services.

The other most important aspect the patients spoke was about non-availability of any referral services ('108' Boat Ambulance) for them. They informed that during 2015-16 or somewhat later they had the 108 Boat Ambulance services but after the '108' services have become defunct and in case of emergency they have to hire private boats which costs in and around Rs.2000/- to 5000/- for ferrying the patient one way.

Another, demand which was widely raised by the patients was that as the *char* is now stable for 25 to 30 years, a permanent Sub Health Centre could be provided in the *char* which in turn will help the population in seeking day to day health care and thus reduce the burden of Boat Clinics.

Recommendations:

1. The Boat Clinic services are vital for the *Char/Sapori* area dwellers in the state of Assam, and it will be instrumental in true sense in further reducing MMR and IMR.
2. As per the MoU, the MCH component is one of the key services in the Boat Clinics. As observed, there is drastic drop out in ANC cases from registration to 4 ANC. The follow-up of ANC cases through community workers and ASHAs needs to be streamlined to minimize the drop out.
3. The diagnostics pertaining to the Ante Natal Cases are well defined i.e., 100% of the ANCs need to go through the marked mandatory Haematological Tests but during observation it was found that not all are being tested due to various reasons like non availability of reagents and kits. So, this issue should be seen for consideration from both the parties.
4. There is a need to train the Boat Clinic staff on health programs as the knowledge of the staff on National Health Programs was found inadequate. The staffs should also be trained on CPHC including NCD screening and expanded package of services under CPHC.
5. Reporting of data by Boat Clinics currently is in total numbers like total ANC, PNC etc. Reporting should be further strengthened by proper recording in the prescribed registers, cards and portals etc., as in the field it was observed that many MCP cards were incompletely filled, which is a training issue and registers were erroneously maintained. The State/District HMIS cell needs to guide the Boat Clinics on proper reporting mechanism.
6. During the visit, it was observed that due list for immunization was not up to the mark leading to dropouts and left out children and in some cases, it was noted that the once a child is out of the *char*, his/her immunization got hampered as no one ever counted the drop out child again whereas the *Mission Indradhanush* like mop up immunization rounds were going on in the *char* areas by the department.
Thus, the efforts are to be taken to motivate the beneficiaries and the staff to wholly aware the community and themselves too regarding the aftermath of irregular immunization of a section of society in future. And the monitoring for proper immunization along with rigorous tracking of the dropouts should be enhanced by both the parties.
7. The knowledge of family planning services and newer contraceptives is not up to the mark. The service is still limited to the OCP, and Condom distribution and counselling and no newer methods of contraception have been introduced to them and thus, they are not well informed to disseminate the same to the community, which further needs consideration.
8. The role of two Nurses in one Boat Clinic is also not defined. Specific ToR is needed for enhanced service delivery.
9. To enhance and upgrade the OPD services of the Boat Clinics, e-Sanjeevani OPD Tele-consultation platform may be incorporated so that patients can have medical and specialist services when Boat Clinics are away in between their regular monthly visits. The platform could also be streamlined through IEC initially by Boat Clinics Staff as they already have required laptop and internet data-card for the same.
10. Boat clinics upload the service delivery report as well as infrastructure report in HMIS as PHC under Dhubri Urban Block under the head of PPP. The boat clinics are mobile in nature, so

boat clinic does not have the NIN number. Therefore, these boat clinics are reported on HMIS as PPP, Boat Clinic Category. But the linkages with immediate Block PHC and DPMU was not found present which should be strengthened for better coordination and services to the community.

11. The C-NES has claimed that they have own Big Vessels in Dhubri districts in the MoU as well as during evaluation but on the contrary the DPOs informed that they were paying rents for their current smaller vessels and the same were found to be too small to accommodate even the Boat Clinic fleet and storage of the drugs. In one vessel the crew cannot even stand properly inside the boat as the roof is very low. On further query, the evaluating Team learnt that the original vessels are under maintenance since some time and that is why smaller boats are makeshift arrangement and thus the rents are paid.

This matter again needs discussion that if the original vessels are down and extra rents are paid by any of the parties there should be some capping on it and instead of going for one-time major repairing of the vessels incurring huge cost the parties should go for regular minor repairs on monthly basis as the vessels travel only 18-20 days in a month. The off-duty period should be considered for the monthly servicing.

12. Drugs availability is an issue as observed during evaluation. Drugs indenting should be demand based and based on local disease prevalence. Also, buffer stock concept should be oriented to the pharmacists of Boat Clinics.
13. The Boat Clinic staff, and local community health workers believe that Boat Clinics are useful to the community as they provided services in remote areas. But currently they are functioning as a separate unit and no proper linkage with the nearby Sub Centre or Primary health Centre. Few visits like supportive supervision by Block PHCs, DPMU might mitigate this gap.
14. IEC activities need to be further strengthened for better visibility in field.
15. Sometimes due to emergency unforeseen activity of the district, regular camps are cancelled, and Boat Clinics are diverted to emergency camps. It is suggested that normal 22 camp days should not hamper and if any extra camp needed, it should be done beyond 22 days.
16. It was observed in personal interview with the staff that before the FY 21-22 there was always delay in disbursement of salary to the staff. So, both the parties should look into the matter to reduce the delay and to have a better contented human resource.
17. On evaluation of the implementation aspect of the Boat Clinic Programme as a whole, the team noted that the current model of funding i.e., the Boat Clinic funds being routed through District Health Society not through C-NES, is better. In this model, the salaries are received on timely basis, the government orders are shared directly with Boat Clinic DPOs and diligent coordination was observed between the DPMU and Boat Clinic Staff leading to less hurdles in the implementation of the services which is ultimately the objective of the Boat Clinic Initiative.
So, it is opined that the similar model should be practiced in coming years by both the parties, if agreed.
18. Biomedical Waste management norms are needed to be strengthened in the Boat Clinics with proper colour coded bags and specific training for the same may be planned.

Annexures: Tools**QUESTIONNAIRE FOR ASSEMENT OF MOBILE MEDICAL UNIT (BOAT CLINIC) FOR STATE NODAL AGENCY**

1. Total No. of Districts covered by Boat Clinic:
2. Total No. of Units Functional in the State:
3. Total population covered by all boat clinic:
4. Number of villages covered by all boat clinic:
5. Year of inception of Boat Clinics:
6. Time periods Boat Clinic was operational in PPP mode:

Year	No. of Boat Clinics Operational
2019-20	
2020-21	
2021-22(Till Jan 22)	

7. Fund received from NRHM and Other Sources for Boat Clinic (District wise breakup)

Year	Fund received from NRHM (Rs. in lakhs)	Fund expended (Rs. in lakhs) (audited figure)	Fund received from other sources (Rs. in lakhs)
2019-20			
2020-21			
2021-22(Till Jan 22)			

8. Manpower at State/district with salary structure since inception for Boat Clinic

Year	Manpower (State)	Nos.	Salary (pm)	Manpower (District)	Nos.	Salary (pm)
2019-20	Project Director			District Program officer		
	Program Manager			MO I		
	Associate PM			MO II		
	Assistant PM			SN		
	Account Manager			ANM		
	Account assistant			Pharmacist		
	Data Analyst			LT		
	Communication officer			Community workers		
	Office assistant			Boat crew		
2020-21	Project Director			District Program officer		
	Program Manager			MO I		
	Associate PM			MO II		
	Assistant PM			SN		
	Account Manager			ANM		
	Account assistant			Pharmacist		
	Data Analyst			LT		

Year	Manpower (State)	Nos.	Salary (pm)	Manpower (District)	Nos.	Salary (pm)
	Communication officer			Community workers		
	Office assistant			Boat crew		
2021-22	Project Director			District Program officer		
	Program Manager			MO I		
	Associate PM			MO II		
	Assistant PM			SN		
	Account Manager			ANM		
	Account assistant			Pharmacist		
	Data Analyst			LT		
	Communication officer			Community workers		
	Office assistant			Boat crew		

9. Other areas of expenditure from NRHM Funding

Year	Construction / Maintenance of Boat	Equipment	POL / Lubricants	Food Expense	Incentive for Boat Clinic Staff	Incentive for ASHA	Awareness camp	Vehicle hiring	Others
2019-20									
2020-21									
2021-22									

10. Availability of drugs in the Boat Clinic: What are the drugs available provided to the patient during the camp? Please provide the list.

SI	Name of the drugs	Drugs available for Boat Clinics (February 2022)
1	Tab. Paracetamol 500 mg	
2	Syp. Paracetamol 125mg/5ml	
3	Tab. IFA (L)	
4	Tab. Anacid	
5	Tab. Ranitidine/Omeprazole	
6	Tab. Nifedipine 5mg	
7	Cough syrup	
8	Tab. Salbutamol 2/4 mg	
9	Tab. Vitamin B Complex	
10	Vitamin A solution	
11	ORS	
12	Tab. Zinc Sulphate 10mg	
13	Cap Ampicillin / Amoxicillin 500mg	
14	Syp. Ampicillin / Amoxicillin 250mg/5ml	
15	Tab. trimethoprim-sulfamethoxazole (20+100) Ped	
16	Tab. trimethoprim-sulfamethoxazole (80+400)	
17	Intravenous antibiotics	

SI	Name of the drugs	Drugs available for Boat Clinics (February 2022)
18	Anti hypertensive drugs (Amlodipine/Telmisartan/Atenolol)	
19	Anti diabetic drugs(Metformin/glimepride)	
20	Gloves	
21	Laboratory reagents	

11. What is the re-placement system of the drugs in the boat clinic? Please provide the details.

- From which source is the drug provided to the Boat Clinic:
- What is the mechanism of indent:
- What is the frequency of replenishment:
- Where are the drugs stored:

12. What are the gamut of services provided:

Gamut of services	Available (yes/ No)
OPD	
Reproductive & Child Health Services	
Family planning services	
NCD services	
Laboratory facility , please specify	
IEC/BCC activities	
Specialised facilities and services including COVID	
Others (please specify below)	

13. Is the operational plan of Boat Clinic prepared? (Yes/ No)

14. If yes, for what duration the plan is prepared, pls specify:

15. What is the criteria for selection of camp areas:

Camp areas	Criteria for selection	Average number of camps	Average distance from nearest PHC/CHC/SC
CHC area			
PHC area			
SC area			
Outreach areas			

Pls attach the annual work plan for the year 2020-21 & 2021-22(Till Jan 22):

16. Frequency of coverage of mapped areas in a year:

17. If no work plan, please specify the process of functioning of Boat Clinic:

18. Service delivery by the Boat Clinics during 2021-22 (District wise)

Services	April' 21	May' 21	June' 21	July' 21	Aug' 21	Sep' 21	Oct' 21	Nov' 21	Dec' 21	Jan' 22	Feb' 22	Remarks
No. Of camps												
No. Of villages covered												
No. Of OPD												

No. Of ANC												
No. Of NCD cases												
No. Of referral												
No. Hb test												
No. Of MP test												
No. Of urine test												
No. Of stool test												
Others												

19. Service delivery by the Boat Clinics during 2020-21

Services	April' 20	May' 20	June' 20	July' 20	Aug' 20	Sep' 20	Oct' 20	Nov' 20	Dec' 20	Jan' 21	Feb' 21	Mar' 21
No. Of camps												
No. Of villages covered												
No. Of OPD												
No. Of ANC												
No. Of NCD cases												
No. Of referral												
No. Hb test												
No. Of MP test												
No. Of urine test												
No. Of stool test												

Date:

Signature of the interviewee

INTERVIEW SCHEDULE FOR ASSESMENT OF BOAT CLINIC (DISTRICT LEVEL)

1. District:
2. Total No. of Units functional in the District:
3. Year of inception of Boat Clinic:
4. Numbers and name of block covered by boat clinic:
5. Total population and Number of villages covered by each boat clinic:

Year	No. of Boat Clinics Operational
2019-20	
2020-21	
2021-22(Till Jan 22)	

6. Population covered:
7. Total number of char/sapori covered:
8. Average no. of char/sapori visited per month:
9. Fund received from NRHM:
10. Fund from other sources:

Year	Fund received from NRHM (Rs. in lakhs)	Fund expended (Rs. in lakhs) (audited figure)	Fund received from other sources (Rs. in lakhs)	Any Penalty imposed? Mention amount	Reason for Penalty
2019-20					
2020-21					
2021-22 (Till Jan 22)					

11. Manpower at district level boat clinic with salary

Year	Manpower (District)	Nos	Salary (pm)	Incentive (pm)
2019-20	District Program officer			
	MO I			
	MO II			
	SN			
	ANM			
	Pharmacist			
	LT			
	Community workers			
	Boat crew			
	others			
2020-21	District Program officer			
	MO I			
	MO II			
	SN			
	ANM			
	Pharmacist			
	LT			
	Community workers			

	Boat crew			
	District Program officer			
	MO I			
	MO II			
	SN			
	ANM			
	Pharmacist			
	LT			
	Community workers			
2021-22	Boat crew			

12. Other areas of expenditure from NRHM Funding

Year	Construction /Maintenance of Boat	Equipment	POL / Lubricants	Food	Incentive for Boat Clinic Staff	Incentive for ASHA	Awareness camp	Vehicle hiring	Others
2019-20									
2020-21									
2021-22									

13. Availability of drugs in the Boat Clinic: What are the drugs available provided to the patient during the camp? Please provide the list.

SI	Name of the drugs	Drugs available for Boat Clinics (February 2022)
1	Tab. Paracetamol 500 mg	
2	Syp. Paracetamol 125mg/5ml	
3	Tab. IFA (L)	
4	Tab. Antacid	
5	Tab. Ranitidine/Omeprazole	
6	Tab. Nifedipine 5mg	
7	Cough syrup	
8	Tab. Salbutamol 2/4 mg	
9	Tab. Vitamin B Complex	
10	Vitamin A solution	
11	ORS	
12	Tab. Zinc Sulphate 10mg	
13	Cap Ampicillin / Amoxicillin 500mg	
14	Syp. Ampicillin / Amoxicillin 250mg/5ml	
15	Tab. Trimethoprim + sulfamethoxazole (20+100) Ped	
16	Tab. Trimethoprim + sulfamethoxazole (80+400)	
17	Intravenous antibiotics	
18	Anti hypertensive drugs (Amlodipine/Telmisartan/Atenolol)	
19	Anti diabetic drugs(Metformin/glimepride)	
20	Gloves	
21	Laboratory reagents	

14. What is the re-placement system of the drugs in the boat clinic? Please provide the details.
15. From which source is the drug provided to the Boat Clinic:
16. What is the mechanism of indent:
17. What is the frequency of replenishment: Monthly /Bi-monthly /Quarterly/ Half yearly
18. Where are the drugs stored:
19. What are the gamut of services provided:

Gamut of services	Available (yes/ No)
OPD	
Reproductive & Child Health Services	
Family planning services	
Adolescent health services	
NCD services	
Laboratory facility, please specify	
IEC/BCC activities	
Specialised facilities and services including COVID	
Others (please specify below)	

20. Is the operational plan of Boat Clinic prepared? (Yes/ No)
21. If yes, for what duration the plan is prepared, pls specify:
22. What is the criteria for selection of camp areas:

Camp areas	Criteria for selection	Average no. Of camps	Average distance from nearest PHC/CHC/SC
CHC area			
PHC area			
SC area			
Outreach areas			

Pls attach the annual work plan for the year 2020-21 & 2021-22(Till Jan 22):

23. Frequency of coverage of mapped areas in a year:
24. If no work plan, please specify the process of functioning of Boat Clinic
25. Service delivery by the Boat Clinics during 21-22

Services	April' 21	May' 21	June' 21	July' 21	Aug' 21	Sep' 21	Oct' 21	Nov' 21	Dec' 21	Jan' 22	Feb' 22	Remarks
No. Of camps												
No. Of villages covered												
No. Of OPD												
No. of PW registered												

No. Of ANC												
No. of 3 ANC received												
TT1												
TT2/Booster												
No. of PW given 180 IFA												
No. Of NCD cases												
No. Of referral												
No. Hb test												
No. Of MP test												
No. Of urine test												
No. Of stool test												
Others												

26. Service delivery by the Boat Clinics during 20-21

Services	April' 20	May' 20	June' 20	July' 20	Aug' 20	Sep' 20	Oct' 20	Nov' 20	Dec' 20	Jan' 21	Feb' 21	Mar' 21
No. Of camps												
No. Of villages covered												
No. Of OPD												
No. of PW registered												
No. Of ANC												
No. of 3 ANC received												

TT1												
TT2/Booster												
No. of PW given 180 IFA												
No. Of NCD cases												
No. Of referral												
No. Hb test												
No. Of MP test												
No. Of urine test												
No. Of stool test												
Others												

27. Immunization performance:

Coverage % against estimated target							
Vaccine	2019-20	2020-21	2021-22	Vaccine	2019-20	2020-21	2021-22
BCG				Rota virus Vaccine			
OPV1				MCV 1			
OPV2				JE			
OPV3				Vitamin A 1 st Dose			
Penta1				MCV2			
Penta2				JE booster			
Penta3				DPT booster			
IPV1				Fully Immunized			
IPV 2				Completely immunized			

28. Cold Chain:

Cold chain equipment	Available	Functional	Remarks if any
ILR			

Cold box			
Vaccine Carrier			

29. Who supervises the immunization session, pls specify

30. **Family Planning services:**

Methods	2019-20	2020-21	2021-22(till Jan 22)
OCP			
Condoms			
IUD			
LTO			
NSV			
Newer Methods			

31.

Test	2019-20	2020-21	2021-22
Hb%			
RBS			
Urine Sugar			
Urine Albumin			
PBS for MP			
Total Positive			
RDK for MP			
Total Positive			
HCG kit test			
Rapid test HIV/VDRL			
Others			

32. **IEC Activities**

IEC	2019-20	2020-21	2021-22
Planned			
Conducted			

33. What barriers have you faced in the Boat Clinic activities following heads:

- a. Vehicular
- b. Drugs
- c. Equipment
- d. Public resistance
- e. Accessibility

34. Training conducted for Doctors / Para-medical staff

Year	Trainings conducted				
	MO	GNM	ANM	Pharmacists	Lab. Technician
2019-20					
2020-21					
2021-22					

35. Equipment available

Equipment	Available		Functional	
	Boat 1	Boat 2	Boat 1	Boat 2
Weighing scale				
Delivery Tray				
Nebulizer				
Generator				
Semi Auto Analyzer				
ILR				
Microscope				
Centrifuge machine				
Sterilizer				
BP machine				
Glucometer				
thermometer				
TV/Laptop				
Projector				
Others				

36. Condition and functioning status of boat clinic MMUs

- i. Total down time of boat in the year 2020-2021 & 2021-22 in hours/days:
- ii. No. of times there has been a breakdown of boat in the year 2020-2021 & 2021-22:
- iii. No. of times boat is sent for maintenance in the year 2020-2021 & 2021-22:

Date:**Signature of the interviewee**

MEDICAL OFFICER**Part 1**

1. Name of the respondent:
2. Educational qualification:
3. Date of joining:
4. Platform through which posted (tick as applicable):
 - a. State health service (M&HO-I/M&HO)
 - b. NHM contractual medical officer
 - c. Contracted by service provider (C-NES)
 - d. Compulsory 1-year rural posting for MBBS graduates
 - e. Others, specify:
5. Monthly remuneration (including allowances, performance & annual increments):
6. Trainings received from date of posting to present (in chronological order):
7. Total population and villages covered by boat clinic:

Part 2: Service Delivery

8. Average daily OPD:
 - a. Males:
 - b. Females:
9. Average daily referral to higher / link facilities:
 - a. Males:
 - b. Females:
10. Interviewee to give a description of the referral mechanism and the steps undertaken to ensure follow-up/CoC:
11. Common ailments encountered in OPD (in ascending order):
 - a.
 - b.
 - c.
 - d.
 - e.
12. Non communicable diseases services (tick as applicable):
 - a. Screening, diagnosis, and management of HTN
 - b. Screening, diagnosis, and management of DM
 - c. Screening for Oral and Breast cancer
 - d. Others, specify:
13. Is a separate register maintained for NCD: (Yes / No)
14. Reproductive, maternal, child & adolescent health services (tick as applicable):
 - a. Ante natal care
 - b. Post-natal care
 - c. New-born care
 - d. Child health care including immunization
 - e. Family planning service
 - f. Management of RTI/STI
 - g. Facilities for JSY and JSSK
 - h. Adolescent health services

- i. Counselling services (if yes, specify):
15. Disease control programme services (tick as applicable): **Interviewer to make brief note of specific service provided under each programme
- a. National TB Elimination Programme
 - b. National AIDS Control Programme
 - c. National Vector Borne Disease Control Programme
 - d. National Leprosy Eradication Programme
 - e. Integrated Disease Surveillance Programme

Part 3: Programme Management

16. Do you follow any operational plan for organizing boat clinics - Yes / No
17. Who prepares the operational plan for boat clinic (mention the officials):
Are you a part of the operational planning process? Yes / No
18. How many days in advance you get the operational plan before the actual camp date:
19. How often is there a deviation from pre-decided operational plans and reasons thereof:
20. Operational and management challenges faced in the boat clinics:
21. How do you intimate the villagers about the camps:
22. What is the additional allowance that you get per camp (TA/DA/ Food allowance, etc)?
23. Does any representative from relevant services/organizations conduct monitoring & evaluation visits (tick as applicable with frequency of M&E visits)?
- a. State / District Health Services Officials
 - b. State / District NHM Officials
 - c. PPP Partner Officials
 - d. Representatives from local bodies

Date:

Signature of interviewee

LABORATORY TECHNICIAN

1. Name of the respondent:
2. Educational qualification:
3. Date of joining:
4. Platform through which posted (tick as applicable):
 - a. State health service
 - b. NHM contractual position
 - c. Contracted by service provider (C-NES)
 - d. Others, specify:
5. Monthly remuneration (including allowances, performance & annual increments):
6. Trainings received from date of posting to present (in chronological order):
7. Daily activities conducted by you in a camp day: Please specify
8. What are the different tests done in boat clinic, please specify:

Tests	Yes / No	Remarks
Routine blood examination		
Routine urine examination		
Urine for Albumin / Sugar		
Blood grouping		
Random blood sugar		
Rapid tests for Malaria		
Blood smear examination for malaria parasite		
Rapid tests for pregnancy		
RPR test for Syphilis / VDRL		
Rapid tests for HIV		
Others (specify)		

9. From where you get the consumables / reagents for laboratory:
10. Are the consumables / reagents for laboratory adequate for day to day activity? Y/N
If No Major causes for inadequate supply:
 - a. Irregular supply from District store
 - b. Short expiry
 - c. Wrong indent
 - d. Surge of cases recently (outbreak/health mela etc)
11. What is the additional allowance that you get per camp (DA/ Food allowance etc):
12. Operational and management challenges faced in the boat clinics:

Date:

Signature of interviewee

PHARMACIST

1. Name of the respondent:
2. Educational qualification:
3. Date of joining:
4. Platform through which posted (tick as applicable):
 - a. State health service
 - b. NHM contractual position
 - c. Contracted by service provider (C-NES)
 - d. Others, specify:
5. Monthly remuneration (including allowances, performance & annual increments):
6. Trainings received from date of posting to present (in chronological order):
7. From which source is the drug provided to the boat clinics:
8. What is the mechanism of indent:
9. What is the frequency of replenishment:
10. Where are the drugs stored:
11. Is the present stock of drugs adequate for day to day activity? Y/N
If No Major causes for inadequate supply:
 - a. Irregular supply from District store
 - b. Short expiry
 - c. Wrong indent
 - d. Surge of cases recently (outbreak/health mela etc)
12. List of drugs available at the boat clinic. (copy to be attached)

Date:**Signature of interviewee**

NURSES QUESTIONNAIRE

Name and Contact Number of SN: _____

Name of the Boat Clinic: _____

Name of the Boat Clinic Unit: _____

Name of Block PHC: _____

District: _____

State: _____

SI	Questions	Options
1	What is your educational qualification?	ANM course
		GNM course
		Post-Basic (Nurse)
		B. Sc (Nurse)
		M.Sc (Nurse)
2	Total years of work experience in Boat Clinic	
3	Platform through which posted (tick as applicable):	a. State health service b. NHM contractual position c. Contracted by service provider (C-NES) d. Others, specify:
4	Monthly remuneration	
5	Trainings received from date of posting to present (in chronological order):	
6	What are the services you look after in Boat Clinic?	
7	Are services under CPHC available?	Yes
		No
8	If Yes, give a brief description of the available services under CPHC	
9	Do you cross-check CBAC forms filled by ASHAs?	Yes
		No
10	Do you attend/conduct the Deliveries during your duty in Boats/Home of the patient?	Yes
		No
11	If Yes, briefly explain the process you follow	
12	Whether different registers are maintained for different services? (RCH, Immunization, HRP etc.)	
13	Is there is a mechanism to follow-up diagnosed / referred cases	Yes
		No
14	If yes, a brief description of the mechanism followed	
15	What are the challenges faced in performing duties in Boat Clinic?	

Date:

Signature of interviewee

BENEFICIARY QUESTIONNAIRE- BOAT CLINIC

1. Name of the District
2. Name of the Block
3. Name of the village
4. Distance of the nearest PHC
5. Name of the respondent:
6. Age of the patient :
7. Sex of the patient: Male/ Female
8. How did you come to know about the boat clinic camps (Multiple option):
 1. ASHA
 2. Service provider
 3. From nearest PHC/SC
 4. Relatives / Villagers / Neighbor
 5. Miking
 6. Banner / Leaflet
 7. Others (specify).....
9. How many times was the boat clinic camp organized during 2020-21?
1 / 2 / 3 / 4 / More than 4 / Do not Know
10. Is camp organized in your village? If yes: how far is it from your locality?
11. What was the reason for going to the boat clinic camp:
 1. For initial diagnosis / treatment
 2. Seeking information on Health Issues
 3. For follow up and drugs refill
 4. To know about boat clinic
 5. Others (specify).....
12. What was the type of illness (Specify):
13. Was complete treatment provided at boat camp: Yes / No
14. If Yes, what services did you receive:
 1. OPD:
 2. Diagnostic services:
 3. Family Planning:
 4. Others(specify):
15. If No treatment offered at boat clinic were you referred to any hospital: Yes / No
16. Reasons for referral (Specify):
17. If any Lab. Test done at boat clinic, which was it:
 1. Hb % estimation
 2. Urine
 3. RBS
 4. Blood for MP
 5. Others (specify).....
18. Did you get the required medicine: Yes/ No
19. If yes, for how many days' medicine received:
20. How long did you wait to get the services:

1. Less than 30 minutes
2. 30 minutes to 1 Hour
3. More than 1 Hour

21. Was there any sitting arrangement for the patients: Yes / No
22. Was IEC material displayed: Yes / No
23. If Yes, can you recall them (Specify):
24. Was there any discussion on health related issues: Yes / No: any meetings organized:
25. Overall were you satisfied with the services provided at boat clinic:
 1. Fully satisfied
 2. Partially satisfied
 3. Not satisfied
26. Suggestions for improvement of Boat clinic service in your area:

Signature of interviewee

Date

Signature of the investigator

Photos:



Boat Clinic Unit I Dhubri Team



IEC meeting going on at Camp Site of Boat Clinic Unit I Dhubri



Diagnostic Services being provided at Boat Clinic Unit II Dhubri Camp Site



Immunization Services being provided at Boat Clinic Unit II Dhubri Camp Site

Contributors:

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