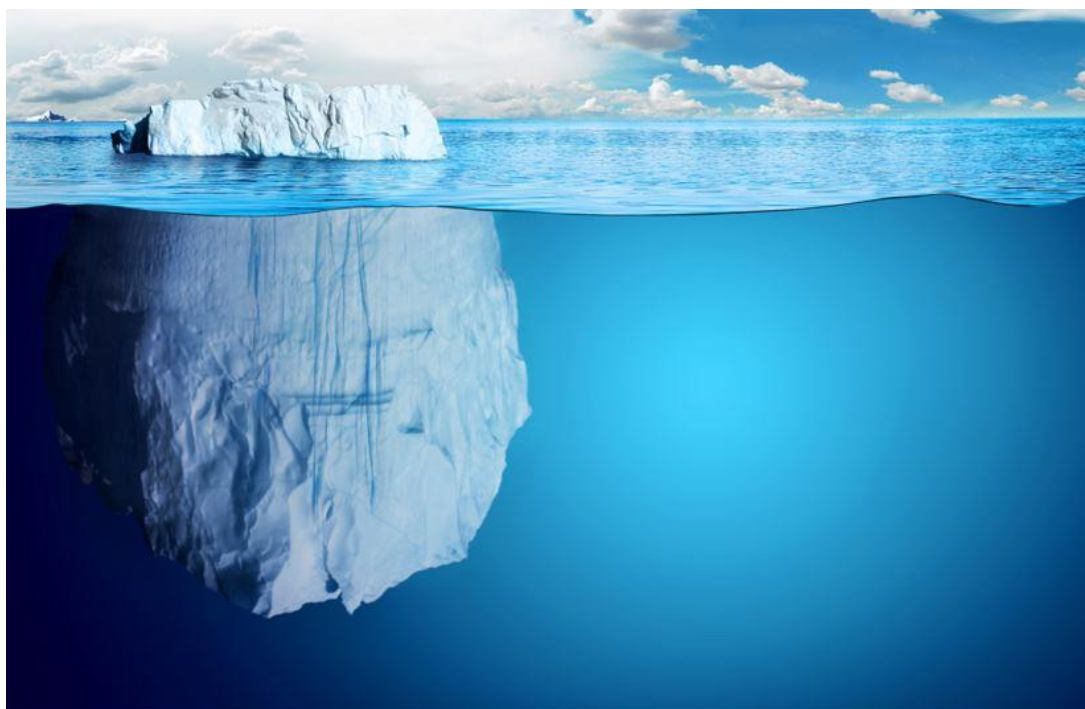




EVALUATION REPORT

DGD-Damien Foundation Programme
Support to the National Leprosy and
Tuberculosis Control Programme in Bihar (India)
2022-26
(1.1.2022-31.12.2026)

Evaluation visit from 16th to 26th of March 2026



"Thanks to the progress of technology, the greater part of the restraints imposed on us by the cosmos have disappeared and, along with them, the creative personal effort which those restraints demanded... The frontiers of good and evil have vanished in a mist of ideologies, whims and appetites...As everyone knows, few observations and much discussion are conducive to error: much observation and little discussion to truth." **Alexis Carell, Nobel Price Medicine 1912**

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Details of home visits and training

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List of people met

DFIT and ILEP in Bihar State

List of abbreviations

References and documents consulted

Human Resources in Bihar State

Terms of reference of evaluation

NLEP Data - intervention and non-intervention districts 2022-25

PPP Darbhanga Referral Laboratory

Project Report by DFIT until 2025

LCDC data 2022-25

District wise Reaction cases 2021-25

District wise RCD cases 2022-25

District wise SC/ST population

Organigramme NLEP and NTEP

MoU for NTEP 2022-26

MoU with SLO 2022-26

Importance and relevance of LCDC

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MDT leprosy completion rate 22-23

MDT leprosy completion rate 23-24

MDT leprosy completion rate 24-25

Photo documentation

LEP selection criteria

1.0 Acknowledgements

The evaluation of the DGD funded project "Support to the National Leprosy and Tuberculosis Control Programme" in Bihar State, India took place from 16th to 26th of March 2026 together with Dr. M. Shivakumar (Board Secretary and Country Representative DFIT¹), Dr. Roy Sarbartha (Chief Medical Advisor DFIT in Bihar, Jharkhand and Chatisgarh) and DFIT staff from Bihar State. Dr. Shivakumar and Dr. Roy are Senior Indian experts in public health, especially regarding leprosy elimination and TB control programmes. Furthermore, they are clinical experts in handling complications during treatment and other socio-economic needs. Dr Sarkar Debajit², WHO New Delhi, significantly contributed with his knowledge and experience in TB/Leprosy control in data analysis and suggesting recommendations for the specific Indian context. He did not participate in the field visit.

I wish to thank the team – especially Dr. Roy - for the excellent logistic organisation of the field visit and organizing meetings with all relevant stakeholders, partners, health staff and people affected. More than 2.000 km travelled, 7 out of 28 intervention Districts were visited (Saran, Rohtas, Arwal, Yaishali, Begusarai, Darbhanga, Supaul), among them also 2 Districts (Supaul, Darbhanga) for the DRTB (drug resistant tuberculosis) project. 1 District without intervention from DFIT (Samastipur) was also visited.

About 100 patients in all visited Districts were interviewed, assessed and counselled for further treatment. The patient visitations – sometimes in their homestead - brought to light the significant financial, private, medical and socio-economic implications that leprosy still carries up to today.

Having been able to witness the existential drama of patients highlights the need to continue supporting the national programme in the challenge of leprosy case detection and management. It was encouraging to interact with health staff ready to serve leprosy and DRTB patients in midst of a reality in which knowledge, time and resources are scarce, the socio-political environment is complex and national programme support is challenged by many constraints. The experienced spirit of serving each other despite challenges rather than fighting or ignoring each other is utterly needed in our troubled world!

It was striking to see so many mostly young patients below 25 years of age with severe Grade 2 disabilities, developed or made worse after insufficient treatment of neuritis and in need of reconstructive surgery (RCS).

The project visit took place in the last project year (2022-26, hence this evaluation might serve to consolidate achieved results and identify further priorities for a highly needed and recommended new intervention period after 2026).



Dr. Adolf Diefenhardt
Health Consultant

¹ Damien Foundation India Trust

² See Annex 11

2.0 Executive Summary

DFIT or DF³ (Damian Foundation India Trust) supports the leprosy elimination program in Bihar since 1993 (interrupted between 2003 until 2017) and the tuberculosis (TB) control program since 2003. Bihar project is among the biggest intervention of DF³ in India with a budget of appr. 320.000 €/yr⁴.

Context

Bihar is among the most populated Indian states with a population of >126 Mio people. Almost 58% of Bihar's population is below 25 years age. Urbanization rate is only about 15%, Bihar's literacy rate stands at 80%. Among some population groups in Bihar (Mahadalit), literacy is below 10%. 85% of the population are registered per AADHAAR, a biometrical ID Card, a precondition to have a bank account.

Despite having made considerable progress and development in recent years (more than the average among Indian States), Bihar is among the high burden leprosy and TB states in India. Elimination of leprosy⁵ is achieved officially but the new annual case detection rate (ANCDR) is still above 10 in 16/38 Districts in 2025 and 10-20% of new cases of child and G2D cases in India come from Bihar State. In Tb, incidence is above 200.000 new cases/year, but still only 50-70% of estimated cases are notified and only 50% of estimated DRTB cases are detected by the health system.

Approach of DFIT (concept)

The DF proposed TB and leprosy project contributes to at least three Sustainable Development Goals (SDGs): SDG 3 'Ensure healthy lives and well-being for all at all ages', including universal health or "leaving no one behind"; SDG 10 'Reducing inequality'; SDG 17 'Bold partnerships for the SDGs', as the fight against the 2 diseases relies on strong national and global partnerships. Both tuberculosis and leprosy (part of the NTDs) are formally recognized as targets for global action under SDG target 3.3 'By 2030, end the AIDS epidemic, **tuberculosis**, malaria and **neglected tropical diseases (NTD)**, and combat hepatitis, water-borne and other communicable diseases'.

The comprehensive "3 pillar" concept⁶ of DF in leprosy in 28/38 districts is of systemic value and a Best Practice model. It facilitates service quality to all health unit levels, training and monitoring human resources (government employees), comprehensive medical and socio-economic aspects for patients, all administrative issues (forms, registers, drugs, appliances etc.) and other operational issues (like transport fees). Rather than directly implementing clinical and public health services, DF's contribution is facilitating support to active (mostly government but also non-government) stakeholders, in form of capacity building, monitoring, improve documentation and data base with focus on suspects and disabled persons affected by leprosy, providing clinical expertise for medical complications, advice on treatment of harmful reactions in order to prevent disability as well as promoting referral for reconstructive surgery in case of need.⁷

The improved treatment of DRTB patients intends to close a specific gap of an extremely important and vulnerable patient group, DRTB patients in 5 districts.

Methodology of field visit

The field visit (16.-26.3.2026) evaluated the five-year (2022–2026) project co-financed by DGD, amounting to 1,5 Mio € according to OACD criteria. The project strengthens leprosy elimination efforts in 28/38 districts (88,9 Mio people) intending to improve accessibility of comprehensive quality care to persons affected by leprosy establishing a functional referral system within the context and premises of government health system. Furthermore, TB control activities are supported

³ DFIT or DF is an Indian non-governmental, accredited private-non-for-profit organization, supporting leprosy and tuberculosis services since 1955 and 1998. The co-operation with government programs is carried out in 7 Indian states

⁴ The denial of the FCRA license of DF between October 2023 until July 2024 affected the project but resilience of staff was remarkable as they continued for months without pay. Efforts are on the way to establish more diversified funding sources.

⁵ ANCDR was 10,87/100.000 people in 2022 according to the NLEP statistics and only 9,76/100.000 people

⁶ Training&monitoring, registration&recording and referral system with socio-medical rehabilitation

⁷ Mostly claw hand, drop foot, lagophthalmos

in 5/38 districts (17,5 Mio people), especially initiating treatment, reducing initial loss, defaulter and mortality for people with DRTB.

7 out of 28 intervention Districts were visited (Saran, Rohtas, Arwal, Yaishali, Begusarai, Darbhanga, Supaul), among them also 2 Districts (Supaul, Darbhanga) for the DRTB project). Government units were also consulted in 1 District without DF intervention (Samastipur⁸). The field visit exchanged with staff from all levels of health system, including Accredited Social Health Activist/Sahija (ASHA) (detail in Annex 3 and 4), including study of forms, records and registers, interviews with about 100 patients. Checklists for different levels were used, describing the situation along human resources, training, management and operational capacity and structural conditions as foreseen by the NLEP (Nat. Leprosy Eradication Program) and NLS (National Leprosy Strategy). Forms and registers were consulted.

Results and main findings

DGD/DF project targets on case detection and case management are mostly achieved or well on track. As there are 10 non-intervention districts in Bihar State with comparable socio-economic pattern, it is very interesting to see the significant difference comparing intervention versus non-intervention districts. (5.2.2 and 5.3.2) The project makes a difference, in detecting, recording and managing leprosy related medical and socio-economic complications!

Regarding case detection, the project highlights the need to further develop detection concepts of better accessibility of services, be it in hotspots **or** in areas of suspected under-detection and under-reporting (esp. among Mahadalits, ST/SC – scheduled tribes/scheduled casts).

In interviews with patients, health seeking behaviour is often characterised by predominantly consulting first informal or private health providers. In case of leprosy this is further promoted in areas with dysfunctional or non-existing (quality) leprosy services. This is especially relevant when it comes to complications. For the patient, this de-regulated and often ignorant (in leprosy and DRTB) health sector aggravates his/her situation, especially if devastating or life-threatening complications arise. In TB, it is well documented that above 50% of patients are diagnosed and treated in the private sector.

Due to this situation, the need to expand working on improving access for patients to quality government leprosy and TB management services is evident.

Lessons learnt

Even a functional health system might treat people late and with severe complications if government services are difficult to access (geographically, culturally etc.).

Therefore, elements of rational, additional active case finding with inclusion of established health cadre (ASHA) will remain relevant, meaningful and necessary. Not necessarily only official leprosy case detection campaigns (LCDC) campaigns. This can relate to hotspots but also to areas with very little officially documented leprosy prevalence, particularly in known high-burden or highly susceptible communities (Mahadalit or Mushhar⁹, SC, ST), representing 12-13% of the population in Bihar State. Sometimes prevalence rates are up to 3% in these communities.

Hence the need to continue working on improving access to quality of early detection in leprosy and quick detection and treatment for DRTB services. Due to characteristics of leprosy¹⁰, the NLEP (National Leprosy Eradication program) will not be able to eradicate¹¹ leprosy in the next 20 years to come.

⁸ LEpra (ILEP member) supports the NLEP in Samastipur

⁹ Mahadalit/Mushhar means "rat eaters" – mostly in Bihar State, also in Jharkhand and Uttar Pradesh (LE low, 8-10% literate, alcohol, few have ID card, hence no access to bank account, no pension schemes, farmers or migrant workers etc.)

¹⁰ The long incubation period of up to 20 years in leprosy and weak, inefficient and politically influenced leprosy programs to deliver desired targets are big challenges. Identified cases are just the top of an iceberg.

¹¹ Officially elimination at national level is achieved since 2005 – defined as a prevalence of less than 1 case per 100.000 people. Eradication would mean no new case. Interruption of transmission at district level: ZERO occurrence of new child cases for 5 consecutive years

Main lessons learnt in summary:

- To make further progress, it is mandatory to involve and integrate the private health sector, maybe introducing a "referral incentive system"
- Apart from campaign-based detection, an institutionalized regular surveillance model (ASHA, geographic information system (GIS) mapping of hotspots, community-based surveillance) is needed

Recommendations

Based on the evidence of achieved project targets as well as documented high-quality indicators compared to non-intervention districts, main recommendations for the future include:

- Strengthen co-operation with state leprosy officer (SLO) expressed in a new MoU with new priorities and continuation of monitoring and training all levels of the health system
- Expand into all districts in Bihar State with the "3 pillar concept" of DF for leprosy management to establish a common standard PLUS
- Pursue a twin-track approach by reducing gradually and consolidating the support in 28 districts where a functional referral system has been established
- Continue pilots (NSP) in ACF considering identifying hotspots via vulnerability GIS led mapping as well as areas in high-susceptible communities ("officially" low ANCDR)
- Consider – if possible as an innovative pilot – to promote and establish an incentive-based system for each confirmed patient with the informal health sector for the referring of leprosy suspects (in accordance with the authorities and linkage with ASHA and PLRC - primary level rehabilitation centre)
- Define future strategies and/or handover of Darbhanga Referral Laboratory and TLRC (tertiary level rehabilitation centre) in Rohtas in the next 5 years to come
- Include and confirm contribution of other ILEP (international federation of anti-leprosy associations) members in a 5–10-year strategy in Bihar State
- Add another 2 (or more) districts from the catchment area of Darbhanga Referral Laboratory for DR-TB control

Conclusions

Leprosy, being a disease reflecting poverty against a genetic and socio-economic background, needs patience, creativity, sincerity and long breath to make steps towards further elimination and hopefully eventually eradication and extinction.

DF intervention is a blessing especially for the patients affected with sequela (disabilities, reactions etc.). Furthermore, LEP (livelihood enhancement projects) projects are for some seriously affected leprosy or DRTB patients a life-changing chance leading from catastrophe towards privilege.

Apart from small observations in the project sites, this evaluation report is evidence to the fact that the DGD funds are very well invested, targets are reached in a cost-efficient and participatory manner and scoring according to OECD criteria reveals an excellent result for leprosy (435/500 points) and an outstanding performance of the DRTB part (462,5/500).

Further support to consolidate and expand the achievements in leprosy all over Bihar State and expanding to some 2-4 more districts for DRTB patient support is highly recommended.

3.0 Evaluation methods applied and its limits

3.1 Methodology

Desk or Framing Phase (before 16th of March 2026)

The documentary review included the ToR¹², a variety of (partly web-based) documents, as well as submitted DF/DGD project reports and NLEP and NTEP documents. (Annex 7, 17)

This resulted in a provisional timetable for the field visit. (Annex 3)

Checklists for different levels of the health system (patients, ASHA, PLRC, SRLC, TRLC, DLO, SLO) were prepared (Annex 1a-c). Focus was put on human resource, training, operational management, working tools and infrastructure. (Annex 8) The DF report until 2025 was consulted (Annex 12)

The evaluation concentrated on the DF supported project aspects and deliverables, along the presented project logframe. The evaluation mainly analyses project activities and outputs as DF contribution and system issues cannot be disaggregated completely.

Questionnaires for interview with patients (leprosy, TB) were developed.

The project supports individual patients, but it is part of a public health intervention with case detection and elimination efforts by NLEP¹³. Therefore, the existing network and data from the Indian government and the DF intervention districts were taken into consideration. (Annex 5, 10, 13-25) Field visit information and data from non-intervention districts were also analysed.

Further in-depths communication with DF India took place online.

In this phase, technical advice was given by Dr Sarkar Debajit, WHO New Delhi.

Field Phase (11 days – 16.-26.3.2026)

DFIT office in Patna, Bihar State was visited on 16th of March and itinerary and locations of the field trip (16.3. and 26.3.26) can be seen in Annex 3.

Extent of evaluation – programme stakeholders and beneficiaries

The evaluation will focus on the key stakeholders and beneficiaries involved in DFIT's 2022–2026 programme. These include:

- DFIT and government staff, including health providers at primary, secondary and tertiary level.
- DLO/SLO and SLO
- ASHA, Community volunteers, including those from the Mushahar population, engaged in awareness, education, and case-finding LCDC exercise as well as HH screening
- Direct beneficiaries, namely people affected by leprosy and DR-TB in the visited districts.
- free interaction with DF staff and group discussions to better understand rationale of certain methods and get a valid perspective of relevance, challenges and impact

Extent of evaluation – other stakeholders

The evaluation includes interviews with stakeholders and beneficiaries involved in DFIT's 2022–2026 programme. These include:

- Few private health practitioners, mainly informal, who might contribute to case detection and referral (formal specialists not interviewed).
- Community volunteers, including those from the Mushahar population, engaged in awareness, education, and case-finding.
- Programme partners, such as ILEP, SLO office and other relevant local or international stakeholders.

Extent of evaluation - geographical

Out of 28 DGD/DFIT intervention Districts in Bihar State, 7 Districts were visited (Saran, Rohtas, Arwal, Yaishali, Begusarai, Darbhanga, Supaul), among them also 2 Districts (Supaul, Darbhanga) for the

¹² Annex 9: Terms of reference with a detailed evaluation matrix were established along OECD-CAD criteria and specific evaluation questions.

¹³ National Leprosy ERADICATION program

DRTB project). Also, one nonintervention District (Samastipur, 5 Mio people) was visited. (Annex 3 and 5) The visited districts cover 28,6 Mio people, 22,6% of Bihar population.

Methods and tools Participatory and collaborative approach:

- interaction with government officials at district and state level
- bottom-up information in health units on staff and training, working tools, concept, infrastructure and management issues (financial aspects were not prioritized)
- checklists for all levels of the Health System (ASHA, PLRC, SRLC, TRLC, DLO -district leprosy office, SLO – state leprosy office)
- questionnaire for interview with health staff at all levels (block to tertiary level)
- questionnaire for interaction with beneficiaries and affected people, individually and through group discussions
- Direct observations of Registers and Forms during the field visit complemented the information collection
- free interaction with other stakeholders (ILEP, private practitioners, representatives from Mushahar community etc.) with the aim to hear their perspective on achievement and challenges

Data collection is a mix of quantitative, semi-quantitative and qualitative data. The overall impression on adequacy, validity, and reliability of information sources was very good.

During the field visit free interactions with patients, staff and stakeholders (government and non-government) were possible. Relevant constraints or limitations were not encountered.

Dr. M. Shivakumar and Dr. R. Sarbartha, both renown Indian leprosy experts of DF participated in the field visit of more than 2.000 km that was facilitated by DF project vehicles for the transport.

In summary the following institutions and persons were visited: (Annex 4 for further details)

- **1 Health Camp** in Chilwake (Supaul) among Mushahar community (500 suspects, 15 confirmed cases!!)
- **8 PLRC** in 8 districts (Karpi/Arwal, Thilautu/Rothas, Mahua/Vaishali, Manigacchi/Darbhanga, Kishangur (Supaul), Dalsingsarai/Samastipur, Birpur/Begusarai, Marhaura/Saran
- **8 SLRC in 8 districts** (Arwal, Sasaram/Rothas, Hadgibur/Vaishali, Darbhanga, Supaul, Samastipur, Begusarai (was an urban PLRC), Chabra/Saran
- **DLO's/SLO's office** in 2 districts (Supaul, Patna)
- **1 TLRC** (Rohtas, Deheri on Sone)
- **13 ASHA** in Arwal (3), Thilautu (2), Sasaram (1), Manigacchi (2), Birpur (3), Marhaura (2)
- **CHO** (from and working for Mushahar community)
- **100 Leprosy patients** in Arwal (10), Rothas (6), Sasaram (3), Mahua (4), Manigacchi (5+15), Darbhanga (3+5), Kishangur (4), Supaul (5), Samastipur (0), Begusarai (20), Birpur (1), Marhaura (2), Chabra (7)
- **1 RPM** (resident paramedic, informal doctor, local doctor (Saran District)
- **1 referral lab in Darbhanga** BSL-3
- **9 DRTB patients** in Darbhanga (5), Supaul (4)

This comprehensive approach captures perspectives across all levels of programme implementation, service delivery, and beneficiary impact, providing a comprehensive basis for assessing relevance, effectiveness, efficiency, impact, coherence, and sustainability. It ensures that findings reflect triangulated perspectives on implementation of services, results and other contextual factors.

At the conclusion of the field mission, a feedback and debriefing meeting was held in Patna on 26th of March '26 with the DFIT coordination team. A preliminary PPP (power point presentation) on main findings and recommendations was shared with key staff and initial reaction of local teams on findings and recommendation was captured.

Reporting Phase (after 26th of March 2026)

During the reporting phase, the information obtained during the desk and field phases was validated and additional information requested from DFIT.

A draft evaluation report is submitted to DF headquarters within 10 days. This draft report will be discussed online with the evaluators and the Evaluation Committee.

Dr Sarkar Debajit, WHO New Delhi, complemented this phase with his technical advice.

Review and feedback by DF of the report is be provided within 15 working days.

Within 10 days the final report in English is submitted.

Conclusions and recommendations were formulated for future intervention and research related operations in Bihar State.

The core part of the report follows the structure of the ToR (terms of reference) and evaluation criteria provided by DF/DGD.

3.2 Data Limitation

The evaluation uses first-hand experience plus secondary data analysis.

The fact that presented data have a wide variability needs to be better understood. Contextual factors may play a role, but it cannot be excluded that in some places there are challenges in completeness of district and health unit reporting. Lack of social group disaggregation might be another issue.

Furthermore, the small number of visited units and few DR-TB intervention districts might not be representative to 100%. For the sake of transparency and technical credibility a "Cave" should be mentioned, especially if ground impressions are generalized.

The Leprosy and TB valuation and indicator matrix reflect mainly those indicators that are routinely available, district-disaggregated, and verifiable within Government of India programme data systems. They are mostly programme data and -only- to a certain extent project data. All analyses are designed as comparative trend analyses to ensure methodological robustness and avoid attribution beyond available evidence.

It was possible to talk to only one "informal" doctor in Marhaura/Saran District and not to one dermatologist or orthopedic doctor. Talking to the patients, "informal doctors¹⁴" play a big role as first contacts in rural and difficult to access area, where for example the Mushahar community lives. Medical specialists play a bigger role in cities. The consequences for patients are similar - delayed diagnosis (often more than 1 year), wrong debilitating treatment and expenses of several hundred € (!).

Similarly, in TB control the private specialists (esp. in towns) diagnose and treat more than 50% of TB patients. We did not interact with any private specialist.

¹⁴ Also called: quack doctors, RMP resident medical practitioners, informal doctors

4.0 Introduction and preliminary information

4.1 Background of DFIT in India

Damien Foundation India Trust (DFIT) is a charitable organization working for Leprosy (since 1955) and Tuberculosis Control (since 1998) in India. **In Bihar**, DF has worked since 1993 in leprosy (then stopped in 2005 and resumed in 2017) and since 2003 in Tb Control. Currently DFIT supports 7 States in India with leprosy and tuberculosis intervention projects.¹⁵

The DF country budget is above 1 million € per year with 5-10% coming from Indian sources (CSR (cooperate social responsibility), fundraising etc.). The FRCA accreditation¹⁶ was not granted for 9 months (19th October '23 till 12th July '24), leading to a partial interruption of activities in the evaluated DGD funded project period. It gives credit to the resilience of DF staff that the funding crises did not jeopardize achievements despite a phase of little or no salary.

DFIT has a clear vision and mission statement, complies with national tax and audit requirements and has a functional organizational structure with an experienced Board that meets 3-4x per year. It works closely with government programs and avoids parallel structures. Staff are supplied with clear job descriptions and are very dedicated to the cause of leprosy and DRTB. To all staff, regular training is provided. Interaction with partners and patients was witnessed and it is characterized by respect and a participatory approach.

Key documents – website – show DF's compliance with government regulations:

- DFIT 12A Certificate 24.9.21 (income tax)
- DFIT 80g Certificate
- DFIT PAN Card 4.12.92 (income tax reg No)
- DFIT CSR Certificate 18.10.22 (CSR activities)
- FCRA certificate 12.7.24
- Trust Deed with Amendments 4.12.1992 (reg trust)
- MoU's with main partners in Bihar (NLEP, NTEP) are available (Annex 18, 19)

Policies for protection of vulnerable people were not consulted or available. A brief 'ad hoc' assessment based on provided documents, website, information, can be seen in Annex 1a.

¹⁵ currently DFIT with DPMR intervenes in Bihar (28/38 Districts), Jharkhand (12/24 Districts), Tamil Nadu (15/38 Districts), Karnataka (4/30 Districts), Chattisgarh (12/33 Districts)

¹⁶ The FCRA (foreign contribution regulation act) license, issued by Gol, allows local NGO's to receive financial support from sources in foreign countries

4.2 LEPROSY

4.2.1 Leprosy in Bihar

It is known that Leprosy is strongly related to poverty, underdevelopment, illiteracy, social inequality, caste discrimination, migration, poor infrastructure and difficult to access rural areas. Genetic factors also play a role. All these factors characterize the situation in Bihar State that is one of the least developed states in India, counting +/- 127 M people.

The social context in Bihar State is characterized by factors showing the complex interaction of different conditions. They require special attention and specific approaches. To mention a few.....

- High illiteracy in some areas (among Mushahar¹⁷ above 90% are analphabets)
- Rural and tribal areas (appr. 90% of population is rural)
- Easy and hard to reach areas (very isolated areas)
- Male and female issues (poor equity indicators – appr. only 30+% women)
- Tribal and non-tribal areas (almost 15% of population from Musahar, SC/ST¹⁸ areas)
- High and low endemic areas (disease not evenly distributed)
- Migrants and non-migrants (many people work in Jharkhand or other States)
- Still high stigma potential (gets better, but if disability, stigma still present)
- health infrastructure (health infrastructure weak in some regions)
- health providers (very relevant formal and informal private health providers)

Other factors are:

- dwindling clinical leprosy expertise (most leprosy experts above 55 years) on handling leprosy and complications
- few public health experts at District and State level (no recruitment, retirement, fluctuation etc.)
- endemic hotspots
- inadequate research (e.g. drug resistance, second-line drugs etc.)
- still many discriminating laws in India¹⁹ (more than 95 laws against PAL – still existing. Few have been modified or abolished. Many laws are not applied any more, though.
- RCS (reconstructive surgery) is mainly done in private non-for profit, non-governmental institutions that do not receive compensation from Gov or support for these (usually free) services
- weak co-operation of NLEP with IAL (Indian Association of Leprologists), IADVL (Indian Association of Dermatologists, Venereologists and Leprologists) or bodies of RMP “doctors”

Hence...

- Bihar State shares 8,5% of the Indian population and holds accountable for about 11,18% of all detected new leprosy cases in India²⁰ (11.292 out of 100.957 NC in India 24/25 (WHO data 2025)).
- Bihar reports the second-highest number of new Child cases (around 600-800 annually; around 17% of India's child cases), indicating continued transmission.
- Grade-2 Disability (G2D) cases (around 150-200 annually; around 11% of India's G2D burden), signalling significant delays in diagnosis.
- Some districts are among the 10 mostly affected districts in India (among 800 Districts in India).
- **13 new child leprosy cases were reported with disabilities** in 2025 from Bihar, indicating ongoing transmission and late diagnosis.
- Knowledgeable, vertical staff are almost all retired or retiring in the next years

¹⁷ Mushahar is a very poor community, esp. in 3 States in India (Bihar, U.P., Jharkhand) – very poor, little access to H/S, alcohol, illiteracy >90% - prevalence rates up to 2%!, DFIT expects 28.000 NC in Bihar State in this community alone. Pilot approach through volunteers, health camps financed through CSR (e.g. Indian Oil Cooperation) reveal more PB cases and less nerve involvement

¹⁸ SC/ST/Mushahar are considered MahaDhalits

¹⁹ The Union Cabinet cleared the Personal Law (Amendment) Bill 2018 that seeks to strike down leprosy as grounds for divorce only in August 2018.

²⁰ Bihar reports nearly 11,000-13,000 new leprosy cases annually — the second highest in India, accounting for 11–12% of the national burden

Key indicators of Bihar Leprosy Programme:

IN BIHAR STATE - ALL DISTRICTS				Target	Comments
	2022/23	2023/24	2024/25	NSP	
ANCDR/100.000	10,12	10,34	8,95	<10	Proxy of DISEASE BURDEN
Child cases%	8,61	7,37%	6,75%	<2%	Proxy of ONGOING TRANSMISSION
G2D/1.000.000	1,61	1,67	1,29	0	Proxy of LATE DIAGNOSIS
G2D in %	1,60%	1,62%	1,44%	0	Proxy of LATE DIAGNOSIS
MB cases %	50,56%	53,74%	60,12%	50%	Proxy of SEVERITY OF DISEASE
Female cases %	35,56%	35,33%	31,15%	50%	Proxy of EQUITY

Table 1**Objectives of NLEP**

To reduce Prevalence rate less than 1/10,000 population at sub national and district level.

To reduce Grade II disability % < 1 among new cases at National level.

To reduce Grade II disability cases < 1 case per million populations at National level.

Zero disabilities among new Child cases.

Zero stigma and discrimination against persons affected by leprosy.

In recent years, Bihar State improved socio-economic and leprosy indicators but remains among the least performing leprosy programmes in the country.

Furthermore, there is a notable variance when data are disaggregated at district level, for example ANCDR. Range is from 3,81 (Khagaria) up to 37,02/100.000 (Jamui)! **14/28 Districts have ANCDR above 10/100.000, hence they are above the official elimination threshold (2025).** Disease burden is just below the elimination threshold, female detection be at least 50% (now +/- 30%!), grade 2 disability should be less than 1% (now above 1%).

It is against this suboptimal background that the project is timely, relevant and necessary.

Challenges in leprosy are in early case detection and case management, especially for reaction, ulcers and reconstructive surgery, less for MDT adherence²¹,

Government services - Importance of ASHA for case detection and gaps in management

ASHA (accredited social health activist, Sahija) are the key pillars of the health system in India. They do not get a salary but incentives.²² Originally established for improved Antenatal Care (ANC) at rural level, they are now also involved with other health programs like Dengue, Filariasis, infectious diseases and malaria etc. At village level they look after appr. 1.000 people. (USHA at 500 people at urban level). ASHA identify leprosy suspects during LCDC's²³. There are 67.955 ASHA's in the 28 districts of the DFIT/DGD intervention. This creates an average of 1.308 people per ASHA (88.904.604 people in 28 districts). See Annex 8.

ASHA concentrate on patients with patches. Infectious lepromatous cases without patches, neural involvement, Madarosis or Epistaxis might be underreported. But also, over suspicion due to scabies, fungal skin diseases etc. is an issue. Usually 5-10% of suspects are confirmed cases.

ASHA, despite being involved in other primary health care issues are a crucial element in the government system. Therefore, it is mandatory to train them and collaborate with them as much as possible. Their closeness and continuous presence to the community is important for screening suspects for early case detection, to facilitate SDR to contacts and to identify disability as early as possible. They support CSW/CHO/DPMR²⁴ staff (of DFIT) with valuable information.

1 ASHA in the intervention districts usually cares for 400 up to 4000 people.

²¹ MDT completion rate in all states above 90% (see Annex 25, both for PB/MB cases and both in rural and urban areas)

²² ASHA receive from leprosy program: get 75 INR p.d. during LCDC that last normally 14 days), get 250 INR per detected case, minus 200 INR for case with G2D, 400 INR for each Tx completed PB and 600 INR for each completed MB case.

²³ LCDC are not cost-effective (1000€/per NC is calculated) – other diseases like TB/HIV, malaria, MDA of filariasis could be added and LCDC's done 2x/year – LCDC contribute already with 20% to all the confirmed cases

²⁴ Community Social Worker, Community Health Officer, disability prevention and rehabilitation

ASHA are starting to work in Mushahar communities that harbour many patients (prevalence up to 3%) but are not always welcomed due to impeding habits by community members. Mushahar/SC/ST community support in ACF (active case finding) relied on volunteers but was not so successful. Furthermore, they do not have the status like ASHA and do not get incentives from government.

The government has integrated leprosy services entirely in the health system²⁵. The software Ni-Kusth should register PAL (persons affected by leprosy) digitally at PLRC level. Currently, only 8-10% of patients are entered due to several problems – software, internet, human resources and computer hardware.

Gaps in the Bihar government health system (lack of knowledge about leprosy and human resources, insufficient registration of cases and disabilities, lack of a functional referral system) and individual clinical care including lack of clinical skills in case detection, and case management like prevention of disability (reaction treatment, ulcer care etc.) and rehabilitation of disability (RCS reconstructive surgery).

This situation has urged DF to create referral centres of quality and expertise within the existing health system at district level, implemented, managed, recorded by government staff with monitoring and tutoring by DF experts.

4.2.2 Intervention concept DF leprosy

Up to 2016, DF did not work for many years in leprosy in Bihar State (only giving TB support). Realizing the dramatic leprosy situation in Bihar, DF resumed 2017-2022 a 1st DGD funding phase on training staff at PLRC and ASHA level. High fluctuation of staff requires constant training and case management skills as well as monitoring. DGD continued in the current project phase 2022-2026 with PLRC monitoring support (390 PHC in 28 districts) for simple cases **plus** focus on a functional referral system with support at SLRC in the district (28) that can diagnose and manage complicated cases.

In fact, DF has been training a reference person (PT, NMA, PMW, etc.) for **ALL 38 Districts** with training in leprosy. The DGD funded intervention took place in 28 districts.

DFIT's concept to improve access to quality care for people affected by leprosy and DRTB in collaboration with government (NLEP, SLO, DLO as well as NTEP, STO, DTO) relies on **3 pillars**:

Training and regular monitoring of PLRC/SLRC units

- **PLRC** detect, register, screen household (HH) contacts, issue a PIC and start patients on MDT (multi drug therapy).
Each 390 PLRC unit receives 1 day training as well as at least one monitoring visit per year (more if needed). Minimum staff trained is 2 nodal people (one Medical Officer MO and one PMW paramedical worker).
- 40-50% of patients will require referral to SLRC (see p.15). In case of any problems (reaction, ulcer, disability, need of footwear, children) or unclear diagnosis and need of SSS, patients are referred to SLRC level (expert opinion or SSS can be done). SLRC units are supported with 5-day training and each of 28 **SLRC** units in the district is visited once monthly. Minimum staff is a District team, composed of 1 ACMO and one PMW/PT/NMO plus training of other specialists.
- RCS needs are registered, surgical camps are offered in 2 **TLRC** hospitals (Rhotas, Muzaffarpur)
- capacity building of government health staff – directly by DF staff or through other trained staff – at all levels: ASHA (67.955), PLRC (390), SLRC (28) and TLRC (2) level in 12 districts and creating "nodal staff" within the government system (3hr training to all PLRC staff, 2d training of nodal staff at PLRC, 5 d training of nodal staff at SLRC).

²⁵ See Annex 19

Documentation, registration and patient cards as essential tools for case management

Correct and accurate data are essential for monitoring and decision making. A relevant element of DF concept is a digital data base and a variety of with several registers and forms. They are used or filled by trained "Nodal staff". This is particularly essential and important for patients with complications (G1 or G2D, reactions, need of RCS). DPMR staff registers patients once they are not any more on MDT but might have complications like ulcers, RCS need etc.

DF has introduced some additional forms and registers with approval of government.

See table 2: the forms and registers in red are introduced by DF, especially for case management of suspects and complicated cases – hence improving case management, introducing a functional referral system.

	PLRC (PHC, Block)	SLRC	TLRC	CSW/DPMR	Comments
UT Register	X	x	x		
Self care kits	x	x	x	x	
Contact Register	x				
Disability Register	X	x	X	x	
Reaction Register	x	x	x	X	
MDT/loose drug register	x	x	x		
Nerve function assessment forms	x	x	x		
MCR stock register	X	X			
Tx cards	x	x	x		
PIC	x	x	x	x	Essential
Self care Cards	x	x	x	x	Very good
Suspect Register	X		X		Not usually done
Referral/OPD Register		x			Very useful, w/o numbers
Referral Form	X	X	x	x	
RCS Register	X	x	x	X	
RCS follow up register	x	x	X 1 st year		Later done at lower level
LEP register				X	
Foot Measurement Form		X	x	x	Very useful
Feedback Form		X	X		Very useful, w/o numbers
SSS Form		X	x		Rarely used
smear kits		x	x	x	Few available

Table 2

DPMR staff – through regular monitoring visits - play a vital role in ensuring/facilitating updated registers in 28 SLRC units (visited 1x/mon) and 390 PLRC units (visited 1x/6-12mon or more according to need) in 28 districts.

Referral system and Socio-Medical Rehabilitation

Basically, the following conditions lead to referral from PLRC to SLRC:

- Any complication (reaction, ENL etc.) plus counselling and information about leprosy disease to patients as well as availing access to self-care groups that cannot be treated in PLRC.²⁶
- Difficult to diagnose cases (SSS – skin slit smear to be done)
- Every child (before and after treatment)
- Anybody with G2D
- Anybody in need of (customized) footwear²⁷ or assistive devices
- Anybody in need of RCS
- Empower and support for PAL's in providing LEP²⁸ or available pension schemes for disability >40% or RCS patients from the government²⁹
- Anybody in need of social benefits (pension, LEP)

²⁶ DFIT has introduced a PIC (patient information card with pictures in Hindi), esp. important regarding side-effects of therapy

²⁷ MCR footwear is provided by DF 2x/yr for patients – costs are 325 INR/pair, produced by LEPR and paid by DFIT

²⁸ LEP: livelihood enhancing program (could be: new grocery shop (>50%), electric taxi, barber, animals, sewing, hairdresser, fruit/vegetable shop, transport bicycle etc.). Up to 45.000 INR is granted based on certain criteria after thorough assessment (80% successful according to DF staff)

²⁹ Patients with G2D receive 1500 INR/m from the State and 1100 INR/m from central government; After RCS, 12.000 INR/m is paid by government to the patient (after RCS 6000, then 2x 3000 after 2x post-op care); if disabled >40%, a pension scheme can be requested after providing a Certificate of Disability, facilitated by "Nodal staff" or DFIT CSW/DPMR staff; leprosy patients can also receive food support 500 INR/month during MDT treatment if malnourished. If government hospital carries out the operation, then GVT pays a lumpsum per patient to the hospital of 100.000 INR (this is not paid to NGO hospital)

Socio-medical rehabilitation (MCR, customized footwear, assistive devices, reaction treatment and RCS as well as small LEP projects) are part of the functional referral and rehabilitation system.

Summary of service areas at different level in the referral system

PLRC level (PHC, Block level @ about 100-200.000 people)

- UT, diagnosis, treatment (MB, reactions), MCR every 6 months, Self-care Kits, Referral form to SLRC, PIC (pat information card from DFIT), (Suspect register), disability register, EHF score form

SLRC level

- UT (Dx and Tx), skin smear, complication management (loose drugs), ulcer care Management (Selfcare kits), physiotherapy, Aids and Appliances (splints, cuffs etc.), customized footwear with foot measurement form, referral for RCS, counselling, referral form to TLRC, Feedback Form back to PLRC, G2 Register, Physiotherapy, MCR, EHF score form, assistive devices

TLRC level

- RCS (follow up register), ulcer care, neuritis treatment, (SSS services), referral back

Funding

Budget support DGD 2022-2026 (in €)

	2022	2023	2024	2025	2026	TOTAL in €
Investment	14.012	952	0	0	0	14.964
Operation	110.820	97.013	85.049	86.697	88.916	468.495
Personnel	187.544	198.797	210.725	223.368	236.770	1.057.205
	312.376	296.762	295.774	310.065	325.686	1.540.664

Table 3

The overall **Bihar DF budget in India** (2025) is about **1,1 M €/yr.**

In Bihar, above 90% of the budget is from DGD (the rest comes especially for LEP activities from DF Belgium and OPM Italy). The evaluation does not allocate different activities to specific donors. The evaluation targets the concept of DF in Bihar State (which is like the approach in Jharkhand State).

A total team of 39 staff realize the operations and project implementation in Bihar State, both for leprosy (28 districts) and for DRTB (5 districts).

The DF DPMR/DRTB team:

- Core Team (Patna):
 - 1 Chief Medical Advisor
 - 1 State Field Coordinator
 - 1 Office Administrator
 - 2 Office Accounts Staff
 - 1 Office Assistant
 - 8 Drivers
- Technical Support Team:
 - 4 DPMR Coordinators @ 28 districts
 - 1 DRTB Coordinator @ Darbhanga
- Field-level Support:
 - 19 Community Social Workers (15 for Leprosy and 4 for TB), Block level
- Additional Staff:
 - 1 Leprosy Counsellor posted at Darbhanga SLRC

Table 4

In addition, **under two newly initiated (pilot) projects in Supaul and Araria districts** (in 2 blocks each) focusing on active screening among the population: 1 District Coordinator, 3 Block Coordinators, 1 Driver
Total: **5 more staff members**

As mentioned, the rationale of the DFIT/DGD project intervention³⁰ – given the above-described context – is to support gaps in case detection and case management of leprosy in 28 Districts in Bihar State by implementing government units. Apart from Rohtas (1x TLRC) and Darbhanga Lab Referral Centre, DF does not act as an implementer or run institutions.

4.3 TUBERCULOSIS

4.3.1 Tuberculosis control in Bihar (background information)

TB, especially DRTB, poses a serious threat to public health in most high burden countries, particularly in India that holds 25% of the worldwide burden (2,7 Mio patients) and especially DRTB (5-6%) due to unsatisfactory treatment options, increasing resistance, mortality and easy spread in the community (due to droplet infection).³¹

Comparatively easy OVC access to antibiotics (e.g. quinolones without prescription) and a little regulated private practitioner sector that detects and treats cases (often not in line with government guidelines) are key issues to be considered.

Like leprosy, tuberculosis is a disease of the poor with similar challenges ...

- Rural and tribal areas (appr. 90% of population is rural)
- Easy and hard to reach areas (very isolated areas)
- Male and female issues (poor equity indicators – appr. 30+% women)
- Tribal and non-tribal areas (almost 10% of population from Musahar, SC/ST areas)
- High and low endemic areas (health infrastructure not evenly distributed)
- Migrants and non-migrants (many people migrate for work reasons in other States)
- Other health providers (private practitioner/dermatologists or local healers using homoeopathy or Ayurveda) (especially problematic for TB)

The state faces a notable shortage of trained health personnel, including senior treatment supervisors, laboratory staff and laboratory centres, also TB health visitors, which hampers effective field implementation of TB programs and patient follow-up.

CASE DETECTION

- Bihar, being one of the poorest states in India faces significant challenges regarding TB and especially DRTB. About 70% of the estimated DRTB cases are detected and notified. Less are put on treatment.
- 200.000 of TB cases are notified (about 75% of the estimated TB cases/100.000). A significant proportion of TB cases are identified by private providers (appr. 50+%)
- A relevant proportion of 3,6% (4800/134.000) of TB cases in Bihar is multidrug-resistant (national average in India 2024: 2,7%) – data from TB Report 2024. In Darbhanga Ref Lab up to 7%!
- diagnosis of MDR-TB (multi-drug-resistant TB) is decentralized at the district level through Gene Xpert or now TrueNaat (Indian made molecular technique) services. Plan is to cover 100% of cases with TrueNaat at block level³².
- DF is not involved in active case finding, general patient management like screening for other diseases (e.g. HIV, Diabetes, etc.), in screening of contacts among households etc.

CASE HOLDING and MANAGEMENT

- **Only 85% of diagnosed DRTB is put on treatment** (the project wants to raise this to 85% in 5 districts)
- TX success rate of DSTB (drug sensitive TB) in Bihar is about 83,9%
- **Tx success rate of DRTB is 60%** (the project aims to improve the adherence rate (process indicator having another cohort) to 75% in 5 districts)

³⁰ DFIT operates mainly as an advisor and providing expertise at field level (70% of budget) rather than an implementor or substitute to government; it operates through 1 TLRC hospital and a referral Lab centre in Darbhanga (30% of budget)

³¹ DRTB is a great public health concern, because of the increasing resistance pattern

³² The example of Samastipur shows that 7 TrueNaat (2 placed at the District Hospital, 5 at block level (20 blocks in total) serving a population of almost 5 Mio people, does not even reach 50% of the population. For the rest sputum microscopy is the method of choice and resistance might not be detected.

- challenges in DRTB are (1) more than 10% Initial loss to follow up and (2) high death/loss to follow up cases during the treatment
- two functional reference laboratories exist in Bihar State³³ for follow-up and diagnosis of other forms of DRTB (one was established by DF with support of DGD in 2014 covering a population in nine districts in the northern part of the State, this laboratory is covering more than 1/3rd of the DRTB beneficiaries in Bihar (9 districts).
- DF established a network of laboratories in the districts attached to its reference laboratory in Darbhanga. DF trained all the key staff and medical officers at the health facility level in implementing the DRTB programme in its supported districts.
- treatment schedules are followed by WHO and NTC guidelines.

	2024 India	Bihar	Comments
TB estimate disease burden	2,7 Mio	950.307 cases	Proxy of disease burden
TB notification rate	259/100.000	214.000 cases	Proxy of detection
NAAT utilization	30-35%	20-25%	Proxy of best diagnosis and DRT
MDR in % of all TB	5%	6%	
XDR in % of all TB	0,5%	0,6%	
Tx initiation rate of notified patients	90-92%	85-88%	Proxy of functioning health system
Tx success rate DSTB	85-88%	82-85%	Proxy of good case holding
Tx success rate MDR TB	50-60%	40-45%	Target DF project: adherence 75%
Tx success rate XDR TB	40-45%	38-40%	Target DF project: adherence 75%
TB cases screend for HIV	92-94%	85-88%	
TB cases screened f D.m.	72-75%	60-65%	
% female DRTB cases	41-43%	44-46%	
% of DRTB patients receiving DBT, Ni-kshay Poshan Yojana	80-85%	35-40%	

Source: WHO, Chat-Copilot

Table 5

4.3.2 DF approach supporting NTEP for DRTB

There is a MoU from 2011 between DFIT and STO lasting until 2026 that regulates the partnership regarding the running of Darbhanga Referral Laboratory. Government owns the property, pays for electricity, 1-2 Lab Technicians, consumables etc.. Investment in equipment and stop-gaps are provided or organized by DF. LPA-FL and LPA-SL³⁴ for DRTB can be performed within 24-48 hours after TrueNAAT testing reveals Rifampicin resistance. (see also Table 25, 5.2.3.6; Annex 11)

Considering the high mortality due to AMR (antimicrobial resistance) and high defaulter rates (migration, switch to private doctors, deaths) DFIT/DGD provides a small but essential contribution to the NTEP:

- before the project 15% of the **DRTB patients** did not start the MDR TB drug regimen for different reasons. The project improved treatment initiation rate to almost 95%.
- secondly the project aims to raise the Tx (treatment) adherence rate from 60% to 75% in DRTB cases.

The low success rate is partly due to lack of counselling (project will try to raise this from 40% to 100%) and lack of follow-up and monitoring with regular health checks (project intends to increase this from 20% to 90%) to address issues like adverse drugs effects, malnutrition, counselling, handling co-morbidities etc.

DF facilitates initiation and positive treatment outcome for **551 DRTB patients** on treatment in 5 intervention districts.

All confirmed TB cases are to be tested for RIF resistance (universal DST) and then further resistance pattern are provided by Darbhanga Reference Lab from 9 Districts within max. 2 weeks to decide on adequate treatment. Most cases get AOLR treatment.

³³ Darbhanga Reference Laboratory is run by DFIT and responsible for 9 districts (**Darbhanga, Madhubani, Supaul, Saharsa, Madhepura, Sitamarh, Mezzafafur, Sheohar, Samastipur**); the other functional Lab is in IGMS private hospital in Patna

³⁴ Line Probe Assays for first line and for secondline anti TB drugs

5. Analysis of project performance and programme performance

5.1 Evaluation Matrix – goal and specific objectives

Purpose and Overall goal of the Evaluation

The evaluation aims to assess the Damien Foundation India Trust (DFIT) 2022–2026 programme in Bihar “Support to the National Leprosy and Tuberculosis Control Programme” for both accountability and learning purposes, while generating evidence and lessons learnt to better design of the 2027–2031 strategy.

Specific Objective 1

The evaluation will assess the relevance, coherence, effectiveness, efficiency, impact, and sustainability of the programme, as well as cross-cutting areas (gender, environment). The following table clarifies the understanding of the applied evaluation areas at different levels of the health system.

	weight	Definition
Relevance	10%	DFIT's objectives and interventions address comprehensively priority health needs and gaps in leprosy and DR-TB in the target districts, considering population needs, equity, gender, and local health system capacity?
Coherence	15%	Internal: synergies of different project interventions and relation between interventions and standards (internal harmonization, complementarity, contribution, co-operation, MoU's etc.)
		External: How well are DFIT's interventions aligned with government priorities, national programmes, and other actors' initiatives, while avoiding duplication and enhancing complementarity. Relationship, co-operation or synergies/added value between intervention and other stakeholders, actors (external harmonization, complementarity, contribution, co-operation, MoU's etc.)
Effectiveness	20%	Achievement of results (4) over the entire project duration against a defined baseline Furthermore: Improved access, early case detection, treatment adherence, and rehabilitation for leprosy and DR-TB patients, including marginalised groups such as the Musahar community (functioning referral system) How effectively have patients with co-morbidities or high-risk behaviours been identified, supported (medical, social, nutritional)? How effective is the program in linking people with leprosy sequelae to government social schemes (e.g., disability certification)? What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?
Efficiency	15%	2 ways to observe efficiency of reaching outcome indicators: - Input/Output or Cost/Benefit ratio - Timeliness of results or outputs delivered in time Versus achievement of 2 defined outcomes over the entire project duration against a defined baseline To what extent have lessons from prior programme phases been incorporated to improve outcomes, including any broader or unintended effects on health systems, norms, or population-level outcomes?
Impact	20%	Achievement of 2 defined outcomes indicators over the entire project duration against a defined baseline

		What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?
Sustainability	10%	Financial: Are the programme's benefits likely to continue over the medium and long term, considering financial capacities? What risks or threats will affect patients (e.g. transport, SER)?
		Institutional: Are the programme's benefits likely to continue over the medium and long term, considering institutional performance? What risks or threats will affect the health system?
		Social: Are the programme's benefits likely to continue over the medium and long term, considering social issues? What risks or threats will affect patients, especially in SC/ST/Mushahar areas?
		Technical: Are the programme's benefits likely to continue over the medium and long term, considering technical issues and knowledge. What risks or threats will affect health staff, considering high fluctuation, lack of experts etc.?
Cross-cutting Issues (sex ratio, protection vulnerable, environment)	10%	Environmental: Do the programme's outcomes have probable negative or positive implications regarding environmental issues, like pollution, synergies in transport with other stakeholders etc.?
		Sex ratio and protection issues: Do the programme's outcomes have probable negative or positive implications regarding equity of sexes? Background is the striking sex-inequality of female cases of leprosy and DRTB. Does the project and DF transmit issues like protection of vulnerable, women, widows and children and prevents abuse.

Table 7

All relevant stakeholders and patients affected by leprosy were involved in the evaluation, trying to ensure triangulated perspectives on implementation, outcomes, and contextual factors.

Specific Objective 2

- Identify key findings: achievements, challenges, and lessons learned.
- Strengthen accountability to donors, government, partners, and beneficiaries.
- provide actionable recommendations to inform future programming.
- Refine strategies and activities in line with evidence.
- Strengthen collaboration with key stakeholders and government partners.
- Adapt to evolving health and socio-economic contexts.
- Enhance risk management and operational efficiency; and
- Promote sustainability and long-term integration of results.

5.2 DGD/DF project performance

5.2.1 Preliminary remarks

As DF intervenes in 28/38 districts in leprosy (in TB: 5/38), covering 70% of the population (for TB: 13,5%), it was requested to compare data from intervention and non-intervention districts to understand the added value of DF supported districts. Any difference or non-difference must be discussed in the analysis, conclusions and recommendations of the evaluation.

- OACD criteria are applied across the health system and **not disaggregated** for **each level in the health system** or for **each district** for the sake of simplicity and comprehensibility. Wherever meaningful, disaggregation of districts and comparison was done between intervention and non-intervention districts.

- However, due to the nature of the diseases and different service delivery areas, leprosy and DRTB support by DF was segregated in the evaluation
- evaluation /analysis/lessons learnt will concentrate mainly on project performance less on indicators or data of programme performance. Nevertheless, issues arising from programme aspects are mentioned as far as they might be relevant for future planning.
- recommendations will consider issues regarding non-DFIT intervention districts and their data as well as data from Bihar State, hence consider also the programmatic aspects

5.2.2 Project Performance – Leprosy part

Most information discussed here can be found in Annex 12 (strictly reported project data by DF).

5.2.2.1 Relevance

Relevance 10	Project/programme addresses priority health needs/detection and equity gaps, system capacity		
DFIT's objectives and interventions address comprehensively priority health needs and gaps in leprosy in the target districts, considering population needs, equity, gender, and local health system capacity?			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*10= 45/50

Definition:

Relevance means the needs of the beneficiaries match the objectives of local, national and global partners, stakeholders and donors, be they government or civil society (profit or non-for profit)

While the previous DGD project period (2017-22) focussed on enabling PLRC structures (390), the current phase prioritize support to SLRC establishing a functional referral system. The government posting of 23 physiotherapists (PT) to SLRC in 23 SLRC facilitated the programme very much, as PT's are crucial for the functioning of SLRC. This deployment was a catalyst for the success of the project and shows commitment and collaboration from government.

Remarks

Without doubt the project addresses ..

- a stigmatizing disease, causing disability and life-long marginalization to a vulnerable and needy population. It also focusses on high endemicity communities (SC/ST/Mushahar communities represent 13% of the State Bihar)
- it is in line with (inter)national, regional, and local priorities. It refers to international SDG's, target 3.3 on epidemic diseases, as well as SDG 10 (inequality) and SDG 17 (partnerships).
- The holistic approach to support the NLEP at various levels, especially the functionality of SLRC is highly relevant for the system and the patients. It is a logical step forward. It is particularly relevant for the group of patients that develop complications (up to 20-25+% reactions) or need surgical corrective procedures
- facilitating access to quality care at secondary (specialist) level within a functional referral system, focusing on disability prevention (EHF – eye/hand/foot assessment, records/registers, reaction Tx, self-care etc.), reconstructive surgery as well as legal benefits³⁵ for leprosy affected patients are relevant elements for comprehensive management for PAL (people affected by leprosy), often neglected otherwise
- Support by gvt. schemes are facilitated given to people before and after RCS operation³⁶

³⁵ PAL's with G2D receive a monthly support between 1.500 INR from Bihar State and 1.100 INR from central government which DFIT staff tries to advocate and facilitate for the beneficiaries at the relevant authorities

³⁶ Incentives are given after RCS operation by government to patients – see above (12.000 INR after OP and after 2 follow up visits)

- Facilitating disability pension for PAL with disability (8092 people out of 17.983 eligible people benefited hence 45% comparing to the baseline of 20%). This is highly relevant for the affected person because it does not mainly mean money but also recognition and dignity.
- LEP project³⁷ approach is an effort to consider not only health but life of patients more comprehensively. For them it becomes a journey from catastrophe to privilege. For few selected ex-patients, this literally becomes a new chance in life. Mostly business support (small shops), electric Riksha, house construction, barber shop etc. is subsidized with up to 45.000 INR

All planned activities were developed and expected results were shared together with key stakeholders, ensuring focused interventions and maximising effectiveness in achieving the intended outcomes.

Other issues arise

However, it should be mentioned that...

- the beneficiaries in the project – be they leprosy patients or DRTB cases – are to 30% females and 70% males
- the beneficiaries of LEP projects are equally predominantly male

Work in leprosy colonies is done by other ILEP partners.

LCDC and active case finding data suggest more equity as the portion of females identified goes up well above 40+%.

For a special fraction of the population the project is particularly relevant. It deserves intensified attention that the Mahadalit/Mushahar community bears a high leprosy (and TB burden). Evidence to this is a pilot in the given project period where 4 blocks in 2 districts were targeted with prevalence rates up to 2-3%.

This requires strengthening in future project phases. The need in this population group is much higher and should focus on 9/28 districts where the Mushahar community is above 15%. Data suggest that SC/ST/Mushahar represent 12-13% of the overall population in Bihar, yet they contribute 20-20% of all NC per year.

Participation of patient groups or initiatives play no (active) role in the programme.

SLRC-allocated, trained physiotherapists (PT) are very relevant to this project. The posting of 23 PT's in SLRC has been instrumental for the success. Yet, some of the PT's have found more attractive employment opportunities or changed position in another district in Bihar. Government has not filled or replaced these positions. This shows how fragile the support in the health sector still is.

Data suggest that 14/28 districts have an ANCDR above 10 and require special attention and an additional extra support.

³⁷ LEP project criteria are outlined in Annex 26

5.2.2.2 Coherence

Coherence 15		Alignment with government priorities and other actors	
Internal: synergies of different project interventions and relation between interventions and standards (internal harmonization, complementarity, contribution, co-operation, MoU's etc.)			
External: How well are DFIT's interventions aligned with government priorities, national programmes, and other actors' initiatives, while avoiding duplication and enhancing complementarity. Relationship, co-operation or synergies/added value between intervention and other stakeholders, actors (external harmonization, complementarity, contribution, co-operation, MoU's etc.)			
RATING 1-5 (1 worst, 5 best)	4	WEIGHTED SCORE	*10= 40/50

Definition:

Coherence means the synergistic and complementary co-operation between stakeholders, avoiding duplication, competition and undermining actions. It also means using different internal capacities in a unitary, complementary, synergistic and pragmatic way.

External

Expression of alignment with the State Programme Office and DF is a detailed MoU that specifies 12 service delivery areas entrusted to DF in 28 districts in Bihar State between 2022 and 2026. Government posting (2025) of 23 PT in 23 of the 28 Secondary Leprosy Referral Centres (SLRCs), to improve secondary services (like self-care, EHF scoring, reaction Tx, customized footwear etc.) facilitated a substantial improvement from the baseline where this expertise was not present. This is a good example of good collaboration.

MoU between State Programme Leprosy and DF (2022-2026)

	SDA -strengthening of the referral system in 28 districts	Comment
1	Assist district in establishing secondary level leprosy services at the District	23/28 districts have functional SLRC; 85% of PLRC referred at least 1 patient to SLRC (baseline: 10%)
2	Identify one dermatologist, orthopedic surgeon, Physiotherapist and 1 PMW in each district and train them in managing leprosy related complications	Nodal person and PT are crucial (PLRC and SLRC) – training of dermatologist and other specialists in districts not consistent everywhere
3	Provide patient information cards to health facilities for counselling patients at the time of treatment (MDT) initiation and completion	100%
4	Provide drugs like Prednisolone, Clofazimine and Thalidomide for management of leprosy reactions	100%
5	Facilitate implementation of NIKUSTH at the district level by mobilising data from Block Level health facilities	Not working at block level (PLRC) throughout – intention is to avoid duplication, ensure complete records
6	Provide customized footwear to persons with deformed feet living in the supported districts	Further avoidance of worsening ulcer and G2D
7	Conduct RCS camps to conduct surgeries for PAL with disabilities	8/12 RCS camps held 550 PAL shall be operated for deformity correction (RCS) (out of 789 eligible) – around 57% (452/789) of the 5 years target is accomplished by the end of 2025. RCS camp in 2025: 108 beneficiaries
8	Provide livelihood enhancement support (education, house construction/renovation, IGA)	(2025): 36 beneficiaries supported (28 IGA, 8 education) – (plan was 120 for 5 years, achieved already 157 by end of 2025) – supported were 72% males and 28% females
9	Improve referrals from Mushahar population in 4 blocks in 2 different districts (Araria: Block	302 volunteers from Mushahar community (in 384 villages and 4 blocks) identified 99 confirmed leprosy cases (out of 146 presumptive cases). Furthermore

	Forbesganj, Raniganj and Saran: Block Chakia, Barhat)	"Screening camps" in these 4 blocks additionally revealed 50 new confirmed leprosy cases. At the end of 2025 112/384 villages have access to TB&L services (in these 4 blocks)- 29% of planned 50% (2025)
10	Involve both formal and informal medical practitioners for leprosy referral system in 2 blocks in 1 District (Saran: Block Marhaura, Garkha (operational research)	Sensitizing 132 (formal and informal) medical practitioners in 254 villages in 2 Blocks – Yield: 13 presumptive and 10 newly confirmed leprosy patients
11	Conduct regular internal evaluation yearly and one mid-term external evaluation of DFIT supported activities	Done 100%
12	Collaborate with government in implementing field research in areas of common concern	Data are shared – results

Table 8

Complementary contributions are made by development partners such as Damien Foundation (DF) and other member organizations of the International Federation of Anti-Leprosy Associations (ILEP), each adding value through their specific areas of expertise.

LEPRA works in other NTD, Active case screening in one district, Supply of MCR and customized footwear to the districts, Mobile Foot Care Unit, Referral Centre at the District level. NLR focusses on rehabilitation, social support and technical support to Districts and at central level. TLMH runs a Tertiary-level care Hospital and does RCS surgery.

There are several other stakeholders in leprosy control to mention:

Stakeholder		Focus Area	Comments
UN		Policy - Sustainable Development Goal 3 (SDG 3)	In line
WHO		Policy - Global Leprosy Strategy (2021–2030)	In line
Government	NLEP programme	Concepts NSP 2023-2027 SLO, DLO (CS-CMO, ACOMO, District Team)	Cordial and respectful working relationship at state and district level (ILEP organizations mentioned in NSP) – policy, planning, strategies etc. -- MoU present
	Patient care	2xTLRC, 28xSLRC (PT, NMA etc.), 390xPLRC (NMO, PMW etc.), Subcentre Level, Block Level	Strengthening prevention, cure and management at all levels (focus on SLRC) – Support in training, records, registers etc.
IADVL – medical bodies	Patient care	Often first contact, especially in urban areas – expensive for patients	Often responsible for delay in Dx and Tx Casual relationship – no formal collaboration or MoU present
Private practitioners	Patient care	Often first contacts, especially in rural areas (esp. RMP's play a very big role!) Urban: more specialists	informal co-operation in several villages, not systematic (see above) Detection and referral
ILEP partners	Lepra Society	NTD Active case screening in one district, Supply of MCR to the districts, Mobile Foot Care Unit, Referral Centre at the District level (in 9 Districts)	Cordial working relationship with regular meetings – DF lead
	NLR	Rehabilitation, Social Support, and technical support to the districts. (present in 5 districts)	Other ILEP members include referral services, provision of microcellular rubber (MCR) (customized) footwear through specialized shoe units, vocational training, and educational support for children affected by leprosy. This deliberate division of responsibilities ensures comprehensive geographic and service coverage while minimizing overlap.
	TLM Hospital	Tertiary-level care Hospital, RCS centre in Muzzafarpur (present in 1 District)	
Community reps	e.g. SC/ST, Mushahar, ASHA etc.	Crucial for detection and referral, HH contacts, screening and LCDC	informal co-operation in several villages, not systematic (see above)

Table 9

The planned activities and expected results were collaboratively developed with key stakeholders, ensuring focused interventions and maximising effectiveness in achieving the intended outcomes

Issues arising

Training by DF is a relevant contribution of DF to the health system MoU could be a bit more explicit on cadres to train (e.g. RSBK, ASHA, PLRC/SLRC etc.), responsibilities, reference to an approved curriculum for different cadres at different health unit level. It should be portrayed as a model for the whole State to avoid double standards in different districts. Capacity building of health personnel includes technical training and hands-on clinical skill reinforcement, enabling timely diagnosis and effective management of complications.

The posting of PT or NMO as SLRC is not mentioned as government responsibility, yet it is an essential and critical contribution of government. These experts for leprosy within the system should be mentioned in a future MoU.

While it is true that ILEP organizations try to diversify their input, it would be desirable that each contribution could be considered as exemplary and uniform for the whole State. TLMI contributes in RCS surgery, LEPRO in footwear for all districts (other ILEP members are buying from them), NLR in socio-economic rehabilitation and training as well as posting of key staff at PLRC and SLRC should be done in a similar manner everywhere, including at least the essential recording and registers that DF could introduce the 3 pillar referral system approach in all districts in Bihar.

Overlap does not seem to be an issue, but the complementary approach could be deepened.

While there is good collaboration at State and District level, co-operation between ILEP and government has not been always easy due to historical misunderstanding, duplication and accusation. ILEP is mentioned only once in the new NSP 2023-27. It gives credit to the DF approach that relationship in the field is built on mutual trust and esteem.

The involvement of informal and formal health practitioners in the project seems not very strong (p.10 in MoU).

Internal

All project elements (apart from DRTB) aim to provide free services for leprosy patients. This is against the historical background that most patients originate from a weak economic background that is worsened by discrimination and stigmatization. In recent years, government has become more sensitive to the cause of PAL's and there is a variety of schemes for disabled persons and allowances for people undergoing RCS. DF has maintained its policy to provide all services free of charge to PAL throughout all project elements (suspect screening, cure, management of complications and provision for socio-economic support). This could be revised, also looking at supporting in transport costs to TLRC or SLRC.

Issues arising

In case DF opts for a renovation, restructuring and offering diversified services in the TLRC in Deheri on Sone (see below), then the policy of "free services" needs to be re-considered and maybe a similar approach like in TLMI hospitals pursued (leprosy services are free but other non-leprosy related services are charged to leprosy patients). (to the best of my knowledge)

5.2.2.3 Effectiveness

Effectiveness 20	early case detection, professional case management (SERVICE DELIVERY)
Achievement of objectives/results over the entire project duration against a defined baseline Improved access, early case detection, treatment adherence, and rehabilitation for leprosy, including marginalised groups such as the Mushahar community (functioning referral system) How effectively have patients with co-morbidities or high-risk behaviours been identified, supported (medical, social, nutritional)? How effective is the program in linking people with leprosy sequelae to government social schemes (e.g., disability certification)? What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?	
RATING 1-5 (1 worst, 5 best)	4,5 WEIGHTED SCORE *15=67,5/75

Definition:

Effectiveness relates to the achievement of defined project results that can be easily accessed by the beneficiaries –

7 outputs under result 1: Referral system established and functional and

4 outputs under result 2: Improved medical and socio-economic rehabilitation of PAL

(1 Outcome indicator for leprosy is discussed under impact assessment 5.2.2.5)

Remarks

Activities and achieved 11 outputs in 2 result areas are well described in Annex 12 by DF.

8/11 project indicators were met (7) or will be met (1) across 28 districts.

The fact that 1 out of the intended 3 functional TLRC could not start the services was equalled by an increased number of RCS surgery in the 2 units, in line of the intended result.

One target (indicator 1.4) not met (0% in Child G2D) is really an outcome or even impact, not an output indicator. It depends also not only or mainly on the work of DF. This target could not be met for all 28 intervention districts, but 24 districts reported 0% in 2024/25. **Saran District** reported each year at least 1 case for 3 consecutive years (2023-2025). 3 Districts (**E. Champaran, Saharsa, Supaul**) reported in 2 of 3 consecutive years at least one Child with G2D. These districts deserve special attention.

The Nikusth indicator (1.5) is not a good project indicator as it lies entirely in the hand of government. Nikusth as such has issues as not every PHC has constant internet access, technical support in case of software issues, electricity and relevant hardware. The same applies somehow to indicator 1.3 as the 3rd TLRC that did not begin working is a unit not run by DFIT but LEPR.

It is to be noted that the posting of 23 physiotherapists in SLRC had a catalysing effect on the project. It shows that posting from government is essential. District Hospitals that are without or have lost the nodal person at SLRC level are deteriorating immediately, like the examples of Vaishali (PT left 2023), E. Champaran (NMA left 2025), Sheohar (PT left 2024), Saharsa (PMW until 2023) and Kishanganj shows. Well-functioning PLRC's can partly cover the gap but not completely. This dependence on understanding and goodwill of government is unfortunately a fragile element.

The fact that activities in indicator 1.6 and 1.7 (4+2 blocks with high endemicity area or high G2D rate) achieved a yield of -together - 218 confirmed NC is very encouraging and should be pursued in future project phases. Little accessibility of some population groups should be addressed by a more active approach – either via volunteers from the communities, by ASHA or posting PLRC or subcentres in their respective communities. Districts with high G2D of adults and children should be subject to a vulnerability GIS mapping and – as started – involve possibly formal and informal

medical practitioners. In almost all patient interviews, it was mentioned that the delay of diagnosis was often more than 1 year and costs for patients several hundred €'s (2-5 Lakhs).

Result 1: Referral system is established and functioning.

Indicators	Baseline	Target 2022-26	result	
1.1. One Secondary Level Leprosy Referral center (SLRC) will be established in each district. At least 50% (14/28 districts) with SLRCs will be functional by the end of 2026.	0/28 districts	By 2024 = 10 districts By 2026 = 14 districts	23 out of 28 in 2025 offer referral services, a significant improvement from the baseline of 0 out of 28 districts. Also made possible due to posting of 23 PT by government.	Over-achieved
1.2 The proportion of Primary health facilities (PLRCs) participating ³⁸ in the referral system will increase from <10% to 80% by the end of 2026.	Around 10% (40/390) Primary Health Facilities	By 2024 = 60% (240 PLRC) By 2026 = 80% (320 PLRC)	85% of PLRCs in 2025 (333/390) referred to at least one patient to SLRC compared to baseline 10% (40/408) (18 PLRCs were closed by the Government in 2022).	Over-achieved
1.3 The 3 tertiary-level referral centers will provide leprosy referral services for the patients referred from SLRCs/PLRCs by the end of 2026	3/3	3/3	2/3 TLRCs provided services throughout the year, and the targets were met even without the third TLRC. (1 TLRC is managed by DF, the other by TLM)	2/3 but functional and targets met
1.4 The proportion of new child cases with grade 2 disabilities will reduce from less than 1% to 0% by the end of 2026 in 7/28 districts. (21 districts are reporting zero G2D cases among new children diagnosed with leprosy).	0% in 21 districts < 1% in 7 districts	By 2024 = 0% in 24 districts <1% in 4 districts By 2026 = 0% in 28 districts	5/28 districts reported 2.2% G2 (13 of 582) disabilities in children among new leprosy child cases. Cases come mostly from 4-5 districts. The baseline was very likely so low due to underreporting. (see non DFIT-districts)	Trend is positive but NSP and project target not met
1.5 The online reporting system (Nikusth) will be functioning in two districts (2/28) as a model by 2023 and expansion will be done as per the feasibility.	0	By 2024 = 2 districts	Nikust 2.0 software should be given to PLRC to upload patient data online. Lack of computer, HR and internet has made district-wide implementation impossible. (programme was not negatively affected)	Not achieved (beyond control)
1.6 At least 50% of the Musahar villages in 4 blocks (Jamui, Araria, also Supaul) will have access to leprosy and TB services by the end of 2026. (pockets of communities have prevalence of 1-2%!)	Not available (OR project)	By 2024 = 30% of villages By 2026 = 50% of villages	Volunteers from Mushahar community (in 384 villages and 4 blocks) identified 190 confirmed leprosy cases (2023-25 in health camps) . At the end of 2025 112/384 villages have access to TB&L services (in these 4 blocks)- 29% of planned 50% (2025)	29% out of planned villages have access (target not met, but data on NC are very encouraging)
1.7 At least one medical practitioner (Informal) in each village and 3 to 4 medical practitioners (formal) in each block level will be identified, trained about signs and symptoms of leprosy and will collaborate in the referral system in 2 blocks.	Not available (OR project)	By 2024 = 60% By 2026 = 80%	All available informal practitioners (132) in 254 villages (2 blocks with high G2D) were sensitized on leprosy and 14/26 of formal medical practitioners . Yield: 28 NC (2024-25)	Rather pilot approach – not implemented on large scale

Table 10

Activity data and consultation of registers in intervention districts show a robust and reliable manual data entry. Cross-checking of Referral Forms and Feedback Forms show very good documentation

³⁸ participation means that at least 1 patient has received appropriate services through reinforcing referral system

culture. RCS registers, VMT registers and reaction registers are in line with standards. There should be for example a plausible relationship between NC and registration or referral of reaction cases as 20-30% reaction in NC (esp. MB cases) is expected during/after treatment.

Some registers, like stock registers, suspect or household contact registers are not there or not filled properly. This can be easily corrected with continuous monitoring. Occasionally "remarks" are not entered (e.g. delay in MDT blister collection) but there seems to be an excellent Whats up communication between DF staff, nodal person at PLRC and PT at SLRC level as well as with patients and CHO/ASHA.

SDR is not systematically given as it is not available at PHC or block level. Screening of HH members is done but follow up visits of NC and HH members for 5 years are not systematically followed. The ASHA play a very important role in regularly following up patients and HH members, e.g. during LCDC.

The functional referral system is reflected in the following figures:

- 13.515 patients of all types were referred from PLRCs to SLRC or TLRC
- Clear referral criteria guide staff and can be seen on page 16 (4.2.2)
- 333/390 PLRCs referred at least one patient to SLRC during the year
- 3.164 new leprosy cases were diagnosed at PLRC level, 382 were difficult to diagnose and sent to SLRC
- Referral Forms and Feedback Forms were consulted in all units visited and express good use and adherence
- Nerve function re-assessment of 96% (536/561) of child cases was done by SLRCs in 28 districts 50/536 (9.3%) child cases were identified with nerve function impairment, some with paralysis that recovered completely after anti-inflammatory treatment
- 452 patients referred for RCS in 4-year project phase
- 334 skin smears were sent from SLRC to Darbhanga (M: 66% F:34%) and among them 35 (11%) were positive
- Criteria for referral from PLRC to SLRC were well followed (see p. 15, 4.2.2)

Regular monitoring and internal quality assurance visits by DF teams to PLRC (visited at 1x/yr minimum for 1 day) and SLRC (1x/month for 3 days) ensure and continually improve performance:

- Check and regular monitoring of register and referral forms
- DF teams assessed 152 presumptive cases and 1.332 patients under MDT to ensure correct diagnosis and management.
 - o 4% (6/152) missed diagnosis in 2/28 districts of the presumptive cases
 - o 1 % of the confirmed leprosy cases were over diagnosed
 - o DF team visited 434 reaction patients and found that 95% of the patients were managed correctly as per the guidelines.
- stop-gap support of prednisolone and clofazimine was supported in all districts for managing lepra reactions.
- number of reactions managed was consistently increased over the years of implementation.

The backlog of PAL with eligibility for RCS is about to become smaller in coming years.

	Backlog (DF and non DF) estimate	New RCS need (50% of G2D in DF districts) – now 137	New RCS need (50% of G2D in non DF districts) – now 26 x1,5 (2024/25)	SUM	Minus RCS done per year in Muzzafar/Rohtas	Balance (need remaining)
end of 26	300+ 200	70	32	602	180	422
end of 27	422	70	32	524	180	344
end of 28	344	60	22	426	180	246
end of 29	246	50	20	316	180	136
end of 30	136	50	20	206	180	26

Table 11

This situation gives rise to the question which role the TLRC in Deheri on Sone should play (see recommendations 6.0) looking at the reduced need of RCS services for the next years to come. Table 11 tries to quantify this need in future.

Short briefing on Deheri on Sone in Rohtas TLRC:

- costs 50.000 €/yr (16% of DF budget for Bihar); cost per RCS 500-600 € (roughly)
- 30 beds, BoR 40+%, recording excellent, 9 DFIT staff highly motivated, premise is government owned, Govt. pays one staff plus electricity,
 - 80-100 RCS/yr, up to 4-5x/yr, then 2 follow up visits, pat receives 6000 Rs after OP, then after 2 follow up visits @3000 Rs;
 - OP facilitated and TP availed by DFIT, OPD 3500 pat/yr (skin conditions), 63 NC detected (then referred to PLRC) in 2025, 61 reaction cases were treated in 2025 (10 admitted), RCS 105 in 2025, 64 ulcer care cases per year, 224 MCR distributed, Lab not available
 - deplorable condition of the compound and the hospital, decision suggested on way forward in the next 5 years.

In summary:

- SSS smears and other services reaction care, ulcer care etc. should be done in SLRC hospitals (with good experience)
- RCS need in Bihar State in 5 years under 100 NC per year
- TLMI (The Leprosy Mission International) hospital Mazzafurfar offers free RCS and is otherwise economically self-sufficient
- Looking at reported funding situation an exit strategy should be considered in the next 5 years

Table 12

Issues arising

Some proposed strategic activities by NLEP to combat leprosy have not been specifically explicit part of the DGD/DFIT project intervention.

They are not part of the project logframe but nevertheless part of the NSP 2023-2027 strategy package.

Some of them are not always consistently implemented by PLRC/SLRC or facilitated by DF staff.

For example:

- Household and contact screening plus follow up (2x/yr for MB 5 yrs, PB 3 yrs)
- 5-year post-treatment follow up of index case
- Application of SDR PEP prophylaxis³⁹
- Screening for co-morbidities (diabetes, hypertension, anemia, worm infestation, TB)
- AMR (antimicrobial testing of resistance for leprosy bacillus) testing⁴⁰
- Vulnerability mapping linked with ACF (LCDC, RBSK, SPARSH, ABSULS etc.)
- Suspect and household registers with SDR/PEP register
- Stock registers of MDT blisters and loose drugs

Other issues:

- Up to now, most SSS are sent to Darbhanga, yet ZN stain facilities are available at every District Hospital, hence SLRC. Transport costs could be avoided if full integration of diseases took place and a referral Lab should probably focus on more sophisticated exams
- % of patients eligible for assistive devices was not specifically examined during the evaluation visit but material was in place in SLRC at district level (in Sadar Hospital, Supaul splints for foot drop were o/s)

³⁹ The usefulness of SDR PEP (single dose Rifampicin as post exposure prophylaxis) is debatable

⁴⁰ This might not be really relevant

- Information of % of eligible persons receiving benefits (e.g. Ayushman Bharat linkage) within short time facilitated by DFIT staff (usually within 2-4 months) was given notice but not physically checked through registers
- Registration and recording shortcomings can easily be addressed through regular monitoring visits, especially if a checklist is prepared beforehand
- Occurring variances in recorded data need further investigation (ANCDR, districts with regular and high G2D rate or children rate etc.)
- TLRC in Rhotas is separately addressed in the recommendations

Result 2: Improve medical and socioeconomic rehabilitation of PAL's .

Indicators	Baseline	Target 2022-26	result	
2.1. Re-constructive surgery will be done for 550/789 (at least 70%) people eligible for surgery in a year. At least 50% of the persons will be referred by SLRC to TLRC in 28 districts by the end of 2026	789 cases eligible for surgery (identified in phase 2017-2022)	By 2024 = 40% (315/789) By 2026 = 70% (550/789)	452/550 of the surgeries done until end of 2025 as per the target of 70% (550) Identification and referral of RCS eligible patients need to be strengthened in next phase	To reach intended 550/789 RCS surgery is feasible (70%) Well on track
2.2. At least 85% of the patients operated for RCS will be followed up (3rd follow-up) at SLRCs after deformity correction (RCS) surgery and rehabilitation (disaggregated by sex).	0	By 2024 = 50% By 2026 = 85%	92% (197/213) of the patients received third follow-up services at SLRCs, this saved time and travel for patients after RCS	Well, achieved! Issues will arise in future if transport support is not given
2.3. Around 20% (120/646) of the patients with grade 2 disabilities identified with severe social constraints will be socially rehabilitated by the end of 2026 (disaggregated by sex).	646 eligible for SER (identified in phase 2017-2022)	By 2026 = 20% (120)	In Total 100% (193/120) of beneficiaries received livelihood support as per the target.	total beneficiaries from 2022-2025: 193 ⁴¹ overachieved (with additional funds from OPM and DFB)
2.4. Persons eligible for disability pensions/other public schemes will increase from the present 20% (3596/17983) to 50% (8990/17983) by the end of 2026. (Increase by 30%) (Disaggregated by sex)	14387 eligibles for disability pension	Targets: 2024 = 6653 (37%) (2876 in 2024) In 2025: 1.344 By 2026 = 8990 (50%) (1918 in 2026)	At the end of the 4th year, in total 45% (8092/17983) of the PAL with disabilities benefitted from the income scheme compared to 20% at baseline. In 2025, 1344 (M:981 F:363) people affected by leprosy with disabilities newly availed pension. DF facilitated 1236(M:906 F:330) people to get disability certificates for availing pension and other benefits from the Government.	To reach intended 50% is possible as at the end of the 4th year, in total 45% (8092/17983) of the PAL with disabilities benefitted from the income scheme compared to 20% at baseline. The sex ratio needs to be understood and discussed. 302/1344 persons in '25 availed benefits of other schemes

Table 13

Remarks

Regarding medical and social rehabilitation, results are overachieved. Indicators are either on track, are already achieved or will be overachieved due to additional funds. The eligibility criteria can be seen in Annex 26.

⁴¹ If PAL met certain criteria (see Annex??), they are eligible for an IGA (income generating activity) of their choice.

Several visited small LEP (livelihood enhancement project) projects were visited, and it was obvious that most of them are life-changing for the beneficiaries. It is to be noted that these projects are followed up by DFIT for several years, in case issues arise, then action can still be taken.

Issues arising

- Disaggregation by sex reveals a strong male bias in all NLEP indicators (about 25-35% female only). Looking at sex disaggregation, this is also true for LEP and RCS surgery, pension schemes for disability (27%, 26%). As these are activities that can be influenced more easily, a more balanced sex distribution could be achieved. The question remains if women are underrepresented and disadvantaged.
- Issues in the LEP program component:
 - Beneficiaries of LEP und disability schemes can be influenced by DFIT more easily. The male/female with a ratio of 25-30% female bias. Equity criteria are not met. (if not possible give good reason in report why more men are chosen)
 - LEP is a gift and a commitment and currently no MoU is made between DF and the beneficiary. The evaluator did not consult all LEP granted and their success rate or success criteria.
 - there seems to be little communication between different LEP's
 - consider as indicator – not only availing a new LEP shows the quality of this intervention, but the % of successful LEP 's after 6, 12 or 24 months (if you get above 70%, this would be a very good achievement) – indicator could be the value of items plus cash/bank at 6, 12, 18 and 24 months
 - in most cases LEP support is given as a lumpsum payment, hence if there is abuse, the project becomes a total failure

Most of PAL opt for "grocery shop" as IGA. LEP peer counselling could be considered in case of any challenges or issues.

In summary, for the leprosy component of the project, 8 out of 11 output indicators are overachieved, achieved or will be very likely met (see tables above). Reports are plausible and of high standard. The internal digital databank system "Kobo collect data base" is a data base of all activities of field staff. It produces fast and comprehensive summary of all patients followed.

5.2.2.4 Efficiency

Efficiency 15	Health system, including access to referral services (curative, preventive, social etc.) is functional and lead to results		
2 ways to observe efficiency of reaching outcome indicators: - Input/Output or Cost/Benefit ratio - Timeliness of results or outputs delivered in time Versus achievement of defined results over the entire project duration against a defined baseline To what extent have lessons from prior programme phases been incorporated to improve outcomes, including any broader or unintended effects on health systems, norms, or population-level outcomes? Is the DF intervention reducing late diagnosis, not just increase referrals? Do DF districts show a faster decline in child case and G2D?			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*15=67,5/75

Definition: Efficiency means that output and outcome indicators are reached timely and cost-effectively with a most advantageous mix of input

Speaking of efficiency, we will abstain from a complex cost-benefit analysis and focus more on trends over time (achieved in time, completeness of approach and compare intervention types). Previous DGD funding cycles (2017-21) emphasized training PLRC staff at PHC/Block and subunit level, support with registers/records and improve clinical care. This focus was complemented in this project phase by enabling functional SLRC services for complicated leprosy (in District Hospitals).

Efficient management is not only about **case-finding** but includes also professional **case-holding/handling, especially for 20-40%** of most NC patients who develop further complications (neuritis, reaction, disability etc.).

To increase efficiency of detection and improved case handling, the DGD project 2022-2026 focused on

- strengthening especially the SLRC (23/28 are functional) for case management of complex cases
- introducing efficient ACF detection concepts as inbuilt pilot projects
 - o Village-based health camps were conducted to promote health awareness among the Mushahar population in 4 blocks selected for operational research (the yield of NC was 190).
 - o Another pilot trained formal and informal medical practitioners in 2 Blocks in a community with high G2D, indicating delay in diagnosis (often an issue with medical practitioners (the yield of NC was 28 confirmed cases)
 - o During the evaluation visit (22.3.26) we participated in a health camp near PHC Kishangur in Chilwake where 500 suspects were examined from the Mushahar community⁴² and 15 people (9 PB, 5 MB, 1 lepromatous case) were confirmed to have leprosy. This would correspond to a prevalence of 2-3%!!

Issues arising

EFFICIENCY of EARLY CASE FINDING, interrupting TRANSMISSION and display DETECTION

- Efficiency of data: completeness of digital data through the official digital platform - NiKust – was not systematically implemented. Internet, HR, constant power supply and infrastructure are more likely to be present at SLRC level. Rather than using PLRC, SLRC level might be more realistic. This would need closer consultation with government. In any case, manual analogue registers still play an important role.
- The logframe and theory of change should mention the issue of transport. The best referral system will not be optimally functional if poor patients must move from PLRC to SLRC and from SLRC to TLRC in case of need. Will the referral system work if patients get no support for transport? DF supported for example 97/108 patients with transport (90,6%) to get RCS surgery. Is there any chance for DF to lobby with government to avail free public transport – like DBT in TB? Otherwise, the current situation is not sustainable.
- Visible deformities (G2D- Grade 2 Disabilities by WHO) are still a challenge (1,58% in adults intervention districts. Also, in children in intervention districts: 2,3%. As these 13 children come out of 5 districts only (Katihar, W Champaran, E Champaran, Supaul, Saran) special emphasis could be given in future to these districts, to make the intervention more efficient.
- Data suggests that cases detected in LCDC are characterized: (Annex 20)
 - o **More New cases** - LCDC campaigns contribute to around 20% of the overall detected cases
 - o **More Equity:** More females are diagnosed (43,65% versus 30,74%)
 - o **Less Disease burden:** Less severity of disease MB% detected (45,39% versus 60,32%)
 - o **Earlier diagnosis:** 23,49% of all NC children are diagnosed with LCDC vs overall 6,71%. LCDC identify increasingly more children to the overall new cases (ACF is a good tool to reduce leprosy burden of children) – Annex 20: 2023: 18% in 2025: 23%)
 - o **Less disability:** LCDC show less G2D cases than the usual NC contribution (11,68% G2D and 23,49% NC) – meaning less advanced cases are identified during LCDC

These data are food for thought for future project planning. They could help to draw attention to the government to invest more funds in this exercise of ACF (maybe LCDC 2-3x/yr with a more cost-

⁴² DF estimates about 800-1000 leprosy cases undetected in this Mushahar community in each district, **hence up to 28.000 cases in DFIT districts only**. This community often lives isolated. It has just begun in the last years to frequent the health system (e.g. deliveries). Interestingly there less severe cases, less borderline cases, less neuritis and nerve involvement and more PB patints

effective approach)⁴³. Looking at all the indicators below, it seems that all important leprosy related indicators are favorable due to ACF from a patient's perspective.

	2022/23	2023/24	2024/25	COMMENTS
IN BIHAR STATE - ALL DISTRICTS				
ANCDR/100.000	10,12	10,34	8,95	trend is encouraging
Child cases%	8,61	7,37%	6,75%	
G2D/1.000.000	1,61	1,67	1,29	
G2D in %	1,60%	1,62%	1,44%	
MB cases %	50,56%	53,74%	60,12%	
Female cases %	35,56%	35,33%	31,15%	
IN DFIT INTERVENTION DISTRICTS				
ANCDR/100.000	10,87	11,21	9,76	
Child cases%	8,70%	7,65%	6,71%	
G2D/1.000.000	1,83	2,11	1,54	
G2D in %	1,68%	1,89%	1,58%	
PB/MB total	10.239	9.968	8.674	LCDC contribute appr. 20% to all cases
through LCDC tot.	1.830	1.949	1.734	
%	17,87%	19,55%	19,99%	
Children tot	888	763	562	LCDC identify NC earlier, hence more children proportionally 23,5% vs 19,99%
through LCDC tot.	161	165	132	
%	18,13%	21,63%	23,49%	
G2D total	172	186	137	2025: only 11,68% of all G2D, hence less disability cases
through LCDC	27	39	16	
%	15,70%	20,97%	11,68%	
MB cases %	51,05%	53,83%	60,92%	2025: less MB% in NC in LCDC - hence detection of leprosy burden earlier
MB cases LCDC	37,70%	42,02%	45,39%	
Female cases %	35,09%	34,42%	30,74%	2025: Females% in NC in LCDC is almost equal to male.
Female in LCDC %	42,02%	38,48%	43,65%	

Table 14

Data further suggest that SC/ST/Mushahar population contributes approximately 20% to the overall caseload. This fact should have implications for future planning. Learning from pilots is part of the key issues mentioned in the NSP 23-27. (Annex 16)

EFFICIENCY of CASE HOLDING and CASE MANAGEMENT

The following comparison of Case Management data suggests a significant difference in DF intervention and non-intervention districts.

While one would **expect 25-30% of new leprosy cases (e.g. MB for Type 2) to suffer from reactions 1 or 2**, there should be in 2025 about 400 reaction cases reported – yet, only 19 reaction cases are reported in non-intervention districts (see Table 15), this is only 0,7%!! It is a clear sign that absence

⁴³ Current LCDC campaigns are not very efficient and are quite expensive. Other diseases are not integrated.

of evidence in registers does not mean automatically evidence of absence in real life. There seems to be significant underreporting compared to data in DFIT districts. The same applies to the need of patients to access RCD. (see table 15)

PARTICULARS	DGD/DF intervention districts	Non-intervention districts
No. of Districts	28	10
Population covered	88.904.604 (70,44%)	37.322.708 (29,56%)
Total NC leprosy detected		
22/23: 13.476	10.239 (75%)	3.237
23/24: 13.049	9.968 (76,5%)	3.081
24/25: 11.292	8.674 (76,8%)	2.618
Reactions cases reported		
22/23: 1.244	1.198 (96,3%)	46
23/24: 1.435	1.428 (99,5%)	7
2024-25 = 1.694	1.675 (98,8%)	19
RCS surgery		
22/23: 148	136 (91,9%)	12
23/24: 87	77 (88,5%)	10
2024-25 = 114	108 (94,7%)	6
Total number of PAL with disabilities after updating	789 in need of RCS 14.387 for pension sch.	ND
Source of data: NLEP annual reports		

Table 15

It can therefore be assumed that the focus on a functional referral system helps to record and address leprosy complications in a more effective and efficient way. The recording with PAL with disabilities opens the opportunity to avail them access to government schemes within 2-4 months. This indicator has been also met (Table 13)

Nevertheless, it is worth mentioning that MDT completion rates in intervention and non-intervention districts are comparable and very good (Annex 22-24).

Other aspects of supply of MCR, customized footwear and assistive devices were not compared in this evaluation. Like e.g. % of patients eligible for assistive devices received needy devices (splints, cuffs, foot drop splints etc.) but material was in place. In SLRC at district level (in Sadar Hospital, Supaul splints for foot drop were o/s)

Usually, items were available at SLRC level but that was not part of the project evaluation.

5.2.2.5 Impact

Impact 20	Comparison of key indicators over time and regarding intervention/non-intervention districts Health system, including access to referral services (curative, preventive, social etc.) is functional		
Achievement of 2 defined outcomes indicators (one leprosy, one TB) over the entire project duration against a defined baseline What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*15=90/100

Definition:

Impact relates to the achievement of the chosen project **outcome result in the logframe OF THE PROJECT APPLICATION (not the output results)**

The chosen outcome indicator of the project application was a reduction of 50% of children from a baseline of 6/1.000.000 population. This indicator was achieved.

Outcome Indicator	Baseline	Foreseen 2022-26	Result
1.1.At least 50% reduction in G2D among new leprosy cases per million population	6 per million population	2024: 4/1.000.000 2026: 3/1.000.000	Reduction of G2D from 6/1.000.000 to 1,7/1.000.000

Table 16

It is encouraging to see that most relevant key public health indicators show a positive trend of decline. This is true for the whole of Bihar State.

PARTICULARS	DGD/DF intervention districts	Non-intervention districts
No. of Districts	28	10
Population covered	88.904.604 (70,44%)	37.322.708 (29,56%)
G2D %		
22/23: 215 - 1,60%	1,68% (172)	1,33% (43)
23/24: 211 - 1,62%	1,89% (186)	0,75% (23)
24/25: 163 - 1,44%	1,58% (137)	0,99% (26)
Child G2D %		
22/23: 1,0% (12/1.160)	1,2% (11/888)	0,3% (1/272)
23/24: 0,7% (7/962)	0,7% (7/763)	0% (0/199)
24/25 = 1,71% (13/762)	2,3% (13/562)	0% (0/180)

Table 17

The seemingly lower detection of G2D in adults and children needs to be carefully analysed because numbers are very small. Is there underreporting in non DFIT districts?

5.2.2.5.1 Comparison of key indicators in DF districts and non-intervention districts

If key socio-economic parameters (including government health system, literacy, SC/ST/Mushahar communities, poverty index etc.) are comparable, the key question is:

Are there not only differences in case management/case holding indicators (management of reactions, RCS, supply of devices and MCR, pension schemes etc.) but also in public health outcome indicators in DF intervention districts compared to non-intervention districts in Bihar state?⁴⁴

PARTICULARS	DGD/DF intervention districts	Non-intervention districts
No. of Districts	28	10
Population covered	88.904.604 (70,44%)	37.322.708 (29,56%)
ANCDR per 100.000 population		
22/23: 10,12	10,87	8,31
23/24: 10,34	11,21	8,26
24/25: 8,95	9,76 (10% reduction)	7,01 (15% reduction)
Total NC leprosy detected		
22/23: 13.476	10.239 (75% of all cases)	3.237
23/24: 13.049	9.968 (76,5% of all cases)	3.081
24/25: 11.292	8.674 (76,8% of all cases)	2.618 (23,18% of all cases)
Child proportion		
22/23: 8,61%	8,7%	8,4%
23/24: 7,37%	7,65%	6,46%
2024-25 = 6,75%	6,71% (23% reduction)	6,88% (18% reduction)
% of Bihar population live in tribal region = 12,5%	13% (range 1-21%)	12% (range 7-22%)
SC/ST/Mushhar cases/all NC = 2.196 (19,4%)	19,2% (1.668)	20,1% (528)
NC through LCDC in proportion to all diagnosed cases = 19,1%	19,99% (children: 23,49%)	23,11% (children: 23,33%)
MB proportion 2024-25 = 60,12%	60,32%	59,47%
Female cases % = 31,15%	30,74%	32,51%

Table 18

Not only in reference to case management, but to a lesser extent DF supported districts seem to have slightly higher detection rates (5+%) than non-supported districts. This might not be a significant difference. Analysis on this can be purely result or data oriented and should be of descriptive nature without claiming causal relationships not fully understood in its complexity. NSP defines impact as ...

- Reduced transmission (child cases ↓)
- Reduced disability (G2D ↓)
- Reduced stigma and discrimination

⁴⁴ For **case holding and case management indicators** we have already discussed this question in Table 15 under 5.2.2.4

The following can be stated: Table 14+17+18

- The data indicate that a significant number of cases are still being reported from Bihar, but trend is going further down in time in all districts.
- Most case detection indicators do not show much difference between intervention and non-intervention districts. The trend is going down for Child cases and G2D both in intervention districts and non-intervention districts
- There is high degree of data variance in all districts in Bihar State. E.g. ANCDR indicator has a range from 3,81/100.000 (Khagaria) to 37,02/100.000 (Jamui). Hence suspicion that data might not reflect reality well.
- data show that LCDC and focus on areas with high SC/ST/Mushahar population contribute 20% to the overall detection of new cases. Furthermore, pilots done in these areas have yielded good results in DF districts and non-intervention districts. Government should be requested to consider this in future priorities.
- DF covers 28/38 districts in Bihar and about 70% of the population. Yet DF supported districts identify between 75-77% of the NC of leprosy, 80-89% of G2D diagnosed and 76-79% of new cases of children! The concept of DF seems to yield 10-15% more patients with and without complications in need of diagnosis or follow up treatment.⁴⁵ Detection indicators (new cases, disability, reaction and access to RCS) are proportionally higher in DF Districts. Is this an indication for an operational referral system, that starts yielding results grace to the specific input of DF? The answer to this will become clear in the next years to come.
- Overall G2D data and especially Child G2D rate are much lower in non-intervention districts – is this evidence of absence? Again, here the variance of district data is quite big, with 3 districts alone (Jamui 83, Purnea 54, Gaya 45) contributing 32% of all child cases.
- Data indicating equity (female, SC/ST/Mushahar communities), child proportion and disease severity (MB%) do not show significant differences in intervention and non-intervention districts.
- Ideally, female case detection should be at least 50%, child cases should remain below 7%, and Grade-II deformity should be less than 1%. When these thresholds are maintained, it generally reflects that the project or programme is functioning effectively.
- On a positive note, the identification and management of Grade-I cases is encouraging, as it represents a critical intervention for preventing deformities and reducing stigma.
- A faster decline in child cases or G2D (core transmission data) cannot be seen in DF Districts and Non-DF-Districts.
- By looking at data trends, it seems that DF has a detection advance of 5-10% and a patient management advance of much more than 50% (reaction, RCS, LEP etc.).
- Conclusively two main objectives by NSP, like "Learning from pilots" as well as "Health system strengthening" are met by the project intervention.

Looking at all aspects and factors, data suggest that the DF concept with the added focus of the DPMR teams and strengthening PLRC/SLRC level proportionally reaches

- **more patients (NC, G2D and children) in terms of diagnosis, follow up and treatment of complications.⁴⁶**
- **Equity and disease burden indicators are similar in DF and non-DF districts.**

⁴⁵ This hypothesis assumes a comparable socio-economic-health population pattern in intervention and non-intervention districts

⁴⁶ Leprosy has often been described like an "Iceberg" where – out of many reasons – the visible or easily addressable part is rather small in comparison to the bigger invisible part under water. DF approach seems to dig deeper regarding detection and management.

5.2.2.6 Sustainability

Sustainability 10	Learning and system effects		
Financial: Are the programme's benefits likely to continue over the medium and long term, considering financial capacities? What risks or threats will affect patients (e.g. transport, SER)?			
Working tools, hidden costs, institutions: Are the programme's benefits likely to continue over the medium and long term, considering institutional performance? What risks or threats will affect the health system?			
Technical knowledge: Are the programme's benefits likely to continue over the medium and long term, considering technical issues and knowledge. What risks or threats will affect health staff, considering high fluctuation, lack of experts etc.?			
Socio-economic: Are the programme's benefits likely to continue over the medium and long term, considering social issues? What risks or threats will affect patients, especially in SC/ST/Mushahar areas?			
RATING 1-5 (1 worst, 5 best)	3,5	WEIGHTED SCORE	*10=35/50

Definition:

Sustainability relates to the question if the benefits of the subsidized project intervention will continue beyond the project period? To be looked at in financial, working tools, social and technical knowledge areas

Leprosy elimination is a political priority, but does this translate in prioritizing resources (human resources, devices, recording or funds)? If support from government is not consistent and constant, there is a challenge to establish sustainable, high-quality referral services in the supported districts. Bihar State has financial resources for leprosy control; the issue seems to be where and how resources are allocated.

LCDC, SPARSH (leprosy awareness campaigns), RBSK (screening of children) could be intensified further, particularly in areas of high concentration of cases, like in the Mushahar/Mahadalit community. LCDC could be designed in a more cost-effective way by integrating other diseases who are anyway part of the portfolio of ASHA.

This is the programmatic context and sustainability of services is fragile. Yet, DF is very recognized by government authorities at state, district and PHC level for its smart, adapted and all-inclusive approach, its capacity and competence to collaborate well with the authorities creating a climate of mutual esteem and respect.

The fact that DFIT lost officially the FCRA⁴⁷ accreditation for 9 months is a threat overcome.

Financial

Sustainability is partly positive because core programme staff are permanent employees of the state government, providing a good foundation for the continuation of improved services beyond DF's direct involvement. From the beginning double standards of salaries and allowances is avoided. Nonetheless, the possible transfer or retirement of trained staff – together with the fact that some cadre will not exist any longer – (like NMA etc.) is a risk that underlines the need for timely identification and capacity-building of replacement personnel.

The posting of 23 PT staff to district hospitals by government is essential part of the success of this project. While it is good to invest in posting PT's to the district hospitals, there remains a risk – with a monthly salary of barely 200 \$ - that they will join or open private clinics and staff fluctuation – without replacing staff in time - is already an issue.

Nevertheless, it should be noted that DF is training every year 2 PT or alternative staff from ALL 38 districts for 2 days in leprosy.

⁴⁷ FCRA accreditation allows to officially receive donations from foreign countries (was denied between October '23 and July '24)

Working Tools, hidden costs, institutional

DF has been providing MCR customized footwear for deformed feet 2x/yr (400 pat/yr), assistive devices (e.g. splints, pouch arm slings, knee immobilizer, drop foot splint etc.), records, patient cards (see under 4.2.2), drugs for reactions (Stopgap support of drugs: Clofazimine, Prednisolone), at no additional cost for patients. Other support to SLRC include Physio equipment (UST, muscle stimulator, self-care materials, etc.). The muscle stimulator does not seem to be used much. Skin smear equipment is provided by DF.

Furthermore, transport⁴⁸ was paid to go to TLRC for RCS. During surgery, admission and food is covered 100%. Without this support to patients (and staff for training, e.g. NLEP review meetings 4x/yr), the services would be probably not accessible.

A clear proof of this is the situation witnessed in SLRC and PHC in Dalsingsarai, Samastipur (a non-intervention state) that does not receive any support for the NLEP. While training of one PT was given (by DF), without regular monitoring and support basically no services are available at PLRC level (no ASHA, no LCDC, no UT register, no loose drugs for SDR or reaction treatment, no disability register, no reaction cases seen or treated, no MCR given, no SDR etc.) and inconsistent services at District level. Registers at district level were wrongly filled.

Another issue is the support of transport and food of leprosy patients to be admitted and operated for RCS. Without this, there might be doubt that all patients are convinced for surgery. Yet, money should not be an issue as one could argue that RCS is usually performed after obtaining the "disability certificate" that leads to a monthly pension support of up to 2700 INR.

Deheri on Sone (Rohtas)

This TLRC is crucial in the next years to come to reduce and finish the backlog of patients eligible for RCS. After 5 years that need is below 50 new patients per year and considering the state of the premises (Table 12, p. 29) the already started handover strategy to government should be finalised.

Darbhanga Referral Laboratory (Darbhanga)

It is not cost-effective and sustainable that the appr. 350 SSS cannot be done at SLRC (District) level which should be able to do ZN stain. All samples are sent to Darbhanga Referral Laboratory from all DF intervention districts. In some districts this is not more than a handful of smears. Darbhanga Referral Laboratory carries out high-medical laboratory care that is genuinely a government task.

Technical knowledge

At present, 23 of the 28 districts have functional capacity to provide referral services for leprosy-related complications, and approximately 85% of primary health centres are referring complicated cases to district-level facilities for appropriate diagnosis and management. These gains are expected to be sustained beyond DF's phased withdrawal, as the trained human resources remain embedded within the public health system. Nonetheless, transfer or retirement of trained staff represents an ongoing risk, underscoring the need for timely identification and capacity-building of replacement personnel.

And it should be noted that in the absence of the 3 pillars of DFIT approach (training/monitoring, recording/registration and referral system addressing socio—economic and medical needs), the best trained worker and nodal person cannot fill the support rendered by DF up to now (MCR – microcellular rubber sandals), customized footwear, loose drugs, assistive devices, transport, registers, monitoring visits etc.).

Socio-economic

The government has increased financial incentives for leprosy patients undergoing deformity correction surgery, offering compensation for loss of livelihood during the approximately two-month period of hospitalization. (6000 INR after RCS, further 2x3000 INR after post-operative consultation. In Bihar, individuals affected by leprosy with disabilities receive comparatively higher pension benefits than other categories of persons with disabilities (1500 RS/m and 1100 RS/m from State Bihar

⁴⁸ In 2025: 97/108 patients with transportation costs for travelling to referral centres for surgery

and central government). Disabled children under 18 years receive 10.000 INR, then afterwards also the monthly schemes. This government provision is wanted by the political leadership; it is functional and therefore an important step towards sustainability – when facilitated by an NGO like DF. Without DF as catalyst to sustain social protection and continued access to welfare benefits, this support might not happen to that extent, but it will continue in any case beyond the formal intervention period. This recognition gives a bit of dignity back.

The LEP project is basically a grant not to be refunded back. Selection criteria are described in Annex 26. This type of support enables the beneficiary to live a sustainable life. It therefore has an inbuilt sustainability, and we witnessed a life-changing event, looking at the smile and happiness of beneficiaries. (see remarks on page 31)

ISSUES ARISING

Looking ahead, - despite issues in relation to sustainability due to disease and contextual factors - the continuation of support to the referral system beyond the current project period is considered important for preserving long-term gains. In fact, extending operations for an additional period would allow further strengthen system integration, and ensure continued support for communities affected by leprosy while gradually reducing the support in already functional districts.

5.2.2.7 Cross cutting issues (sex ratio, environment, protection)

Cross-cutting issues 10		Gender equity, social equity, innovative approach and data/communication tools	
Environmental: Do the programme's outcomes have probable negative or positive implications regarding environmental issues, like pollution, synergies in transport with other stakeholders etc.?			
Sex ratio and protection issues: Do the programme's outcomes have probable negative or positive implications regarding equity of sexes? Background is the striking sex-inequality of female cases of leprosy. Does the project and DF transmits issues like protection of vulnerable, women, widows and children and prevents abuse.			
RATING 1-5 (1 worst, 5 best)	4,0	WEIGHTED SCORE	*10=40/50

Definition: Cross cutting issues

Different aspects ranging from innovation capacity, addressing protection issues or discrimination, scientific research, using data and environmental issues regarding pollution, protection of environment and do not harm approach

DF's ability to address challenges in a complicated context is evident. Potential to carry out operational research is expressed in the pilot project elements of the DGD project.

It is good to see that DF personnel from different religious and tribal background are working together for "the good cause". The mix of professional and cost-conscious approaches, of empathy with patients, and respect for authorities with a clearly structured approach in an atmosphere of familiarity among all workers is an asset not to be underestimated and gives a lot of credit to senior staff.

Environmental

The nature of a project where core activities contain monitoring and skill transfer cannot avoid lots of traffic, meetings face-to-face sessions etc. Modern media (Whats up) are used for patient information, referral issues and other benefits to reduce analogue costs.

While patient data are safely entered through a password protected database (Kobo), it might be an issue to review the practice of sending What's up messages on patients through this provider. There might be unnecessary movements, like the long and cumbersome transport of SSS smears to Darbhanga, mentioned above.

To reduce the risk of disease transmission, only disposable skin smear kits were used for leprosy diagnosis. This prevented any risk of contamination from re-using and ensured adherence to standard infection control practices in clinical settings.

Sex ratio, vulnerability

Sex-aggregation reveals a consistent male-to-female ratio of 2 to 1. See below:

- 13515 (M: 65% & F: 35%) patients were referred from PLRCs.
- 3164 (M:64% & F: 36%) new leprosy cases were diagnosed
- 1276 (M:65% & F:35 %) reaction cases were identified and managed.
- 334 skin smears were taken (M: 66% F:34%)
- 108 (M:74% & F: 26%) patients underwent RCS for deformity correction i.e.,
- livelihood support: 26 (72%) males and 10 (28%) females benefitted from the support.
- in 2025, 1344 (M:981 F:363) persons affected by leprosy with disabilities newly availed pension.
- DF facilitated 1236(M:906 F:330) persons to get disability certificates for availing pension and other benefits from the Government.

The question is if this 2:1 ratio could not be corrected in the assignment and consideration of LEP. If possible, the more vulnerable women should be getting at least an equal chance. Exceptions to this should be commented on in project reports.

Almost equal male-female ratios are obtained in LCDC campaigns!

SUMMARY SCORING

Several project outputs and outcomes are a common exercise between government and DF, hence including gaps and weaknesses of the government system.

Having this in mind, the scoring is very high and reflects the high quality, commitment and excellency of the project intervention applying the evaluation criteria.

Summary of the scoring: (leprosy part)

	Description	Rating 1-5	*Weighted score	Result	Max points
Relevance 10	Project/programme addresses priority health needs/detection and equity gaps, system capacity	4,5	*10	45	50
Coherence 15	Alignment with government priorities and other actors	4,5	*15	67,5	75
Effectiveness 20	early case detection and case management, (SERVICE DELIVERY)	4,5	*20	90	100
Efficiency 15	Health system, including access to referral services (curative, preventive, social etc.) is functional and lead to results	4,5	*15	67,5	75
Impact 20	Comparison of key indicators over time and regarding intervention/non-intervention districts Health system, including access to referral services (curative, preventive, social etc.) is functional	4,5	*20	90	100
Sustainability 10	Learning and system effects	3,5	*10	35	50
Cross-cutting issues 10	Gender equity, social equity, innovative approach and data/communication tools	4	*10	40	50
			Total	435	500

Table 19

450-500 (92-100%)	outstanding
400-449 (81-91%)	excellent
300-399 (61-80%)	good
200-299 (40-60%)	with serious issues
0-199 (0-39%)	inacceptable

5.2.3 Project Performance (DGD, DFB) – Tuberculosis

5.2.3.1 Relevance

Relevance 10	Project/programme addresses priority health needs/detection and equity gaps, system capacity		
DFIT's objectives and interventions address comprehensively priority health needs and gaps in leprosy in the target districts, considering population needs, equity, gender, and local health system capacity?			
RATING 1-5 (1 worst, 5 best)	5	WEIGHTED SCORE	*10= 50/50

Definition:

Relevance means the needs of the beneficiaries match the objectives of local, national and global partners, stakeholders and donors, be they government or civil society (profit or non-for profit)

DF addresses – on request and in line with government priorities - a specific aspect of TB control which is essential for public health and individual health: The quick initiation and the completion or better adherence to DRTB treatment.

This double intervention reduces the further spread of disease, and it also reduces mortality and morbidity of the patient. It has public health and individual health implications.

The LEP grant tops this further, facilitating an alarming medical catastrophe to become a privilege. The Darbhanga Referral Laboratory plays a vital role in DRTB control in Bihar State – even though not being part of the DGD project and therefore not part of a thorough evaluation.

It is the 2nd functional BSL-3 Lab in Bihar State that can do liquid and solid culture, FL-LPA and SL-LPA – hence further analyzing resistance pattern after TrueNaat or sputum microscopy.

The project is in line with (inter)national, regional, and local priorities. It refers to international SDG's, target 3.3 on epidemic diseases, as well as SDG 10 (inequality) and SDG 17 (partnerships).

5.2.3.2 Coherence

Coherence 15	Alignment with government priorities and other actors		
Internal: synergies of different project interventions and relation between interventions and standards (internal harmonization, complementarity, contribution, co-operation, MoU's etc.)			
External: How well are DFIT's interventions aligned with government priorities, national programmes, and other actors' initiatives, while avoiding duplication and enhancing complementarity. Relationship, co-operation or synergies/added value between intervention and other stakeholders, actors (external harmonization, complementarity, contribution, co-operation, MoU's etc.)			
RATING 1-5 (1 worst, 5 best)	5	WEIGHTED SCORE	*10= 50/50

Definition:

Coherence is understood as the synergistic and complementary co-operation between stakeholders, avoiding duplication, competition and undermining actions

Alignment with the State Programme Office and DF is expressed in a detailed MoU⁴⁹ that specifies 12 service delivery areas entrusted to DF in 5 mentioned districts in Bihar State between 2022 and 2026.

To promote efficient use of resources and prevent duplication, the roles and responsibilities of all stakeholders are clearly described in the MoU, enabling strong complementarity and synergy.

⁴⁹ There is also a MoU between DF and State of Bihar/STO that regulates and expresses the function and contribution of Darbhanga Referral Laboratory between 2011-2026

MoU between State Programme Tuberculosis and DF (2022-2026)

	SDA – to support the Nat TB Elimination Programme in 5 districts (Bihar State)	Comment
1	Sensitization of Lab Technicians at referral Lab (District and DF) about the need to early initiate Tx of confirmed DRTB cases	
2	DF co-ordinator will collaborate with Referral Labs in Districts and DF Lab in Darbhanga	Districts to carry out TrueNaat
3	DF Co-ordinator and Community Social Workers (CSW) will follow up all DRTB cases through Mobile Phone to ensure Tx initiation of DRTB within 1 week of confirmed diagnosis	In 5 districts: Darbhanga, Madhubani, Supaul, Saharsa, Madhepura
4	DF Co-ordinator and Community Social Workers (CSW) will retrieve all confirmed DRTB patients within 1 week through a home visit, for counselling and mobilising patient to go to for TX centre for initiation	
5	DF Co-ordinator will visit private doctors treating DRTB patients and advocacy will be done for availability of MDR-treatment	50+% of TB is treated by private practitioners
6	DF Co-ordinator and Community Social Workers (CSW) will identify risk factors - like BMI - and will provide sputum disposal kits (spit on and disinfectant)	
7	DF Co-ordinator and Community Social Workers (CSW) will do systematic HH contacts of all DRTB cases at the initial home visit	Screening for further cases
8	DF team will visit DRTB patients with risk factors every 2 weeks for 3 months and afterwards once monthly	documented
9	DF team will visit DRTB patients without risk factors every month and afterwards every 3 months	documented
10	All malnourished patients (BMI<?) will be provided with protein supplements and micronutrients during the intensive phase (at least) and food grain for needy patients	Need higher than assumed
11	DF shall provide a quarterly progress report to districts and State	
12	Every year an internal evaluation will take place as well as one mid-term external evaluation of DF supported activities	

Table 20

The government is responsible to essential case detection and case management issues, such as

- anti-TB drugs,
- recording and reporting tools,
- laboratory consumables for the referral labs and district labs,
- drug-resistant TB (DRTB) facilities, and
- human resources.

DF complements these efforts for a sub-group of DRTB patients in line with the MoU ...

- by focusing on patient-centred support through regular home visits,
- by providing counselling to patients and their families,
- by ensuring treatment initiation reinforcing treatment adherence and
- by addressing social and psychological barriers relevant for compliance and adherence of treatment within 1 week so that treatment can start latest in 2 weeks' time.
- By supporting patients with mild drug adverse effects by assisting primary health centres, while ensuring timely referral of severe cases to tertiary care facilities.
- by supporting reference laboratory services for DRTB.
- including the transport of sputum samples for follow-up testing, contributing to timely assessment of treatment response and continuity of care.

This collaboration generates synergies for the benefit of the patients as well as improving quality of case management.

DF's targeted, patient-focused interventions reinforce the NTEP programme, ensuring better and more equitable access to care particularly for a very vulnerable and marginalized population.

Issues arising

Apart from a higher-than-expected need for food supplements, none.

5.2.3.3 Effectiveness

Effectiveness 20	Referral system, early case detection, (SERVICE DELIVERY)		
Achievement of objectives/results over the entire project duration against a defined baseline Improved access, early case detection, treatment adherence, and rehabilitation for leprosy, including marginalised groups such as the Musahar community (functioning referral system) How effectively have patients with co-morbidities or high-risk behaviours been identified, supported (medical, social, nutritional)? How effective is the program in linking people with leprosy sequelae to government social schemes (e.g., disability certification)? What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*15=90/100

Definition:

Effectiveness relates to the achievement of defined project results that can be easily accessed by the beneficiaries –

1 output under result 3: Persons with DRTB are initiated on treatment and

2 outputs under result 4: Treatment success rate improves among DRTB patients

(1 Outcome indicator for DRTB is discussed under impact assessment 5.2.3.5)

DF achieved a better screening and treatment success rate in its supported districts compared to the state average. Data were not freely available.

Result 3: improve treatment initiation of persons confirmed with DRTB

Indicators	Baseline	Target 2022-26	result
3.1. Treatment initiation of confirmed DRTB (MR, RR, MDR and XDR) cases will increase from 85% to 95% by the end of 2026. (Disaggregated by Sex)	85%	By 2024 = 90% By 2026 = 95%	Achieved: 90-94% of confirmed DRTB cases were initiated on treatment in 2022: 92% 2023: 94% 2024: 92% 2025: 90%

Table 21

The indicator was well achieved compared to government figures of 85% even though challenges persist ...

- Death or migration
- Some patients delay treatment initiation within the desired maximum time frame of 2 weeks after diagnosis of resistance pattern
- DF team informs patients via patients' telephone. As patients change their telephone number frequently, hence calls (via Whats up) are often futile
- Elderly patients are not easily convinced to start treatment
- About 10% of patients go to the private sector for treatment (DF coordinator has to counsel and mobilize the patient)
- Phone calls are often not enough for a patient to start treatment

Issues arising:

A useful indicator could be in future which percentage of patients starts treatment within 15 days and how many above 15 days.

Result 4: Improve treatment adherence and success rate of DRTB patients initiated on treatment.

Indicators	Baseline	Target 2022-26	result										
4.1. All confirmed DRTB patients and family members are counselled within 15 days of treatment initiation throughout the period. (Disaggregated by Sex)	40%	By 2024 = 100 % By 2026 = 100 %	Achieved 92% of the patients along with family members were counselled within 15 days of treatment initiation. 2022: 443/462 (96%) 2023: 585/601 (97%) 2024: 543/571 (95%) 2025: 505/551 (92%) female 34,6%										
Indicators	Baseline	Target 2022-26	result										
4.2. All DRTB patients under treatment will be monitored at least once in 15 days during the Intensive phase and at least once in three months during the Continuation phase (Disaggregated by Sex)	20%	By 2024 = 90 % By 2026 = 90 %	<table><tr><th>Intensive Phase</th><th>Continuous phase</th></tr><tr><td>2022: 336/462 72,7%</td><td>218/346 63%</td></tr><tr><td>2023: 533/601 88,6%</td><td>423/463 91,3%</td></tr><tr><td>2024: 543/571 95%</td><td>408/418 97,6%</td></tr><tr><td>2025: 505/551 91,6%</td><td>427/435 98,1%</td></tr></table> 2025: 92% of the patients were monitored once in 15 days during the Intensive Phase and 98% of patients were monitored once in 3 months during the Continuation phase	Intensive Phase	Continuous phase	2022: 336/462 72,7%	218/346 63%	2023: 533/601 88,6%	423/463 91,3%	2024: 543/571 95%	408/418 97,6%	2025: 505/551 91,6%	427/435 98,1%
Intensive Phase	Continuous phase												
2022: 336/462 72,7%	218/346 63%												
2023: 533/601 88,6%	423/463 91,3%												
2024: 543/571 95%	408/418 97,6%												
2025: 505/551 91,6%	427/435 98,1%												

Table 22

4.1 was not met due to different reasons (death, migration, not present etc.). Anything above 90% is to be considered an achievement.

4.2 was met as indicator reflecting the workload for the less complex cases with DRTB.

In any case both indicators are much better than the baseline indicator.

The following activities were carried out during home visits within the first 15 days of treatment initiation

- Counseling to patients along with family members
- Identification of risk factors including BMI
- Provision of sputum disposal kit and disinfectants (supplied by DF)
- assessment for livelihood support eligibility (see Annex 26 – eligibility criteria)
- screening of household members

DF's counselling approach is to include from the beginning family members as they are crucial in helping to motivate for treatment and further laboratory exams, understand the disease, avoid misunderstandings about adverse drug reactions (more than 10% need admission) and explain the importance of high-caloric food (low BMI was estimated prevalent in 10+% in the beginning but actually 40% are in need of food supply).

For high-risk patients (appr. 50%), the DF team facilitates follow-up consultation, day-to-day counselling through phone for high-risk patients, nutritional supplements, and socio-economic rehabilitation for the needy.

High risk patients are patients with malnutrition, Diabetes, alcohol addiction, HIV, or other co-morbidities that might increase the risk of defaulting

With that approach, DF supported districts are achieving higher treatment success rate compared to State average during 2017-21 with DGD support. (see impact 5.2.3.5)

In 2025, 20 patients identified for livelihood support to generate income, and 11 (8 male and 3 female) patients were provided livelihood support.

113 patients (68 males and 45 females) were provided nutritional supplements as per the availability of resources in the proposal and found 44 (M: 23 F:21) patients improved BMI.

Patients get DBT (direct benefit transfer) of 500 INR per month for DSTB and 1000 INR für DRTB. It seems – due to administrative reasons – this is often cumbersome to realize for the patient.

The number of household members counselled and screened are also indicators for the good case management:

	All patients	Pat. counselled	Family members counselled	Family members screened
2022	462	443 (96%)	2336 (69%)	3394
2023	601	585 (97%)	2821 (79%)	3573
2024	571	543 (95%)	2318 (79%)	2937
2025	551	501 (92%)	2632 (83%)	3160

Table 23

5.2.3.4 Efficiency

Efficiency 15	Health system, including access to referral services (curative, preventive, social etc.) is functional and lead to results		
2 ways to observe efficiency of reaching outcome indicators: - Input/Output or Cost/Benefit ratio - Timeliness of results or outputs delivered in time Versus achievement of 2 defined outcomes over the entire project duration against a defined baseline To what extent have lessons from prior programme phases been incorporated to improve outcomes, including any broader or unintended effects on health systems, norms, or population-level outcomes? Comparison to other districts			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*15=67,5/75

Definition: Efficiency means that output and outcome indicators are reached timely and cost-effectively with a most advantageous mix of input

Timeliness is an issue in DRTB management as it may save lives to start treatment early – within 15 days after diagnosis - and avoid any drug shortages.

DF has contributed to maintain efficiency of DRTB-treatment by supply of nutritional support (the number of needy patients was about 40%, higher than the assumed 10%) and to stop gap intermittent shortages of certain drugs used in the treatment of drug-resistant TB (DRTB) were encountered.

Shortages of drugs and consumables of laboratory material for Darbhanga were largely attributable to procedural and logistical delays in procurement of government rather than limitations in funding.

It was possible to avoid treatment disruptions by proactively mobilizing alternative sources of supply with support from other donors.

As a result, continuity and efficiency of care was maintained, and all DRTB patients received their prescribed medications without interruption.

Active case finding among contacts of DRTB patients (Table 23) accessed 83% of household members, hence efficiently contributing to early detection and interruption of transmission chains. A password protected database was introduced for operational efficiency and real-time monitoring and reporting through dedicated software. This KOBO database reduces a lot of paper work.

During counselling and household screening, in 2025 164 (M:93 F:71) presumptive cases were identified and all were tested. 23 TB cases were confirmed (16 DSTB M:10 F: 6 and 7 DRTB M:3 F: 4). This is an efficient activity to break further transmission and bring to treatment who is in need.

5.2.3.5 Impact

Impact 20	Comparison of key indicators over time and in regard to intervention/non-intervention districts Health system, including access to referral services (curative, preventive, social etc.) is functional		
	Achievement of 2 defined outcomes indicators (one leprosy, one TB) over the entire project duration against a defined baseline What measurable improvements in health outcomes, treatment success rates, social rehabilitation, and wellbeing have resulted from the programme in contrast with the areas without DFIT intervention?		
RATING 1-5 (1 worst, 5 best)	5	WEIGHTED SCORE	*20=100/100

Definition:

Impact relates to the achievement of the chosen project outcome result in the logframe (not output results)

The project log frame defines improvement of Treatment Success from 60% to 75% as Outcome indicator.

Outcome Indicator	Baseline	Foreseen 2022-26	result
At least 75% treatment success is achieved along all DRTB cases resistant to Rifampicin and INH and other drugs	Around 60%	2024: 70% 2026: at least 75%	Tx success rate improved from 60% at baseline increased to 74.9% (2023 cohort) have successfully completed Tx ⁵⁰

Table 24

The key indicator to measure the specific outcome indicator was the adherence or treatment success rate improved from 60% at baseline increased to 72.6% among MDRTB cases registered in 2022; In 2023, 74.9% successfully completed treatment and in 2024, 10% successfully completed and 66% are still on treatment among patients with long oral regimen.

DF supported districts are obtaining significantly better results in Tx success rate than non-supported districts. India achieved success in 57-60% of MDR-TB cases and 40-45% in XDR TB patients (source Gol data).

⁵⁰ This is in line with WHO "End TB strategy", visions a world free of TB by 2035 with one of the three global high-level target indicators - a) reductions in TB deaths by 95%, b) reductions in the TB incidence rate by 90% and c) the percentage of TB patients and their households experiencing catastrophic costs being maintained at zero

5.2.3.6 Sustainability

Sustainability 10	Learning and system effects		
Financial: Are the programme's benefits likely to continue over the medium and long term, considering financial capacities? What risks or threats will affect patients (e.g. transport, SER)?			
Working tools, hidden costs, institutions: Are the programme's benefits likely to continue over the medium and long term, considering institutional performance? What risks or threats will affect the health system?			
Socio-economic: Are the programme's benefits likely to continue over the medium and long term, considering social issues?			
Technical knowledge: Are the programme's benefits likely to continue over the medium and long term, considering technical issues, expertise and knowledge. What risks or threats will affect health staff, considering high fluctuation, lack of experts etc.?			
RATING 1-5 (1 worst, 5 best)	3	WEIGHTED SCORE	*10=67,5/75

Definition:

Sustainability relates to the question if the benefits of the subsidized project intervention will continue beyond the project period? To be looked at in financial, institutional, social and technical knowledge aspects

Case management of DRTB depends on highly technical laboratory-based diagnosis before, during and after treatment. Standardized treatment protocols and close collaboration with STO's office is necessary and implemented.

Previous project periods emphasized training of LT's (Lab technicians) in district labs and technical competencies of key personnel.

In the present DGD funding period, DF bridges a gap between the system and extremely vulnerable patients with DRTB, among them many would either die or default, because without further medical support.

In DRTB - unlike in leprosy - the sustainability of these interventions is lower, as they depend on and are implemented by DF staff (DRTB coordinator and 4 CSW – community social worker). This is true for the intervention as well as the Referral Lab in Darbhanga.

Financial sustainability

Sustainability is partly positive because a good number of human resources are permanent employees of the state government, providing a good foundation for the continuation of improved services beyond DF's direct involvement. It is a sign of recognition that 1-2 LT are posted and covered by government funds in Darbhanga Referral Laboratory for the period between 2011-2026. Nonetheless, unfortunately, repeated shortage of supplies (especially sundries) needs to be gap-stopped by DF or other organizations (FIND, Stop TB, IHH etc.).

Gol offers a range of financial support mechanisms for TB and drug-resistant TB patients (DBT of 500 INR/m for DSTB and 1000 INR/m for DRTB). Incentives intended to cover food grain requirements during treatment, to improve nutritional status and treatment adherence. As an initiative of Gol, this is a sustainable element but in practice it is often not realized due to administrative and other issues. Hence, the target to quickly and swiftly support patients providing protein- and micronutrient-rich food for about 40% of vulnerable patients with BMI (body mass index) below 16, is timely and needy. If Tx adherence is successfully ensured by ASHA, an incentive is given to the ASHA (500 INR for DSTB and 1000 INR for DRTB). This incentive is not paid to one of the DRTB-CSW or the co-ordinator.

Working Tools, hidden costs, institutional

DF provides sputum disposals and disinfectants, not government. The same applies to transport assistance, food supplement and most of drugs for adverse side effects of DRTB drugs.

Short briefing on Darbhanga Referral Laboratory:

-Budget: 45-50.000 €/yr, (16% of DF budget for Bihar), mainly paid by DFB Belgium; gov avails premises, pays electricity and kits/cartridges etc., often lack of consumables, and other sundries as well as repair or investment of equipment.

-1-2 Lab Technicians paid by Gvt, 2 microbiologists, 2 Lab Technicians,

-received 12.467 samples in 2025, Lab Category BSL 3, AMC accreditation every 2 years, Reference Laboratory performing solid/liquid culture, LC-DST (under process), LPA-FL and LPA-SL (samples sent are from District Labs that perform TrueNAAT for RIF resistance); SL-LPA results can be achieved in 24-48 hours (previously 3 months) and this is important to decide on type of MDR/XDR treatment.

Reveals RR 3-6%, INH res 5-10%, Quinolone 35-40% (!), R+H res 8%

-FIND, Stop TB, Jivdaya Foundation, IIH (Innovation in health) are stakeholders that occasionally fill gaps in supply from government, in case DF does not have budget.

- DFIT Districts (5) yield every month 20 new MDR/XDR cases. Tx initiation and completion are facilitated by CHW from DFIT.

Catchment area (thick means DF support): **Supaul, Saharsa, Madhepura, Madhubani, Darbhanga**, Samastipur, Sheohar, Sitamarh, Muzzafarur (all together: 36,7 M people)

Table 25

Darbhangha Referral Lab offers very important highly needed, (one of two functional referral labs), sophisticated and specialized services for extremely vulnerable patients and very dangerous public health problems. In Bihar 6% of TB patients are DRTB patients and 0,6% of these have already XDR TB.

Hence, the fact that Darbhanga renders these services is essential and highly needed. Nevertheless, the deplorable state of the building and the compound raises a lot of questions. On top of that, several times in the last 12 months, government did not send reliably sundries and consumables, threatening the functionality. While it is positive that government covers 1 or 2 Lab technicians, DF staff might have got used to work under challenging conditions but the situation as such is second best and often not satisfying. These services are a genuine government responsibility.

Technical knowledge

Technical knowledge is available at government level. The challenge is staffing and allocation of sufficient TrueNAAT equipment at district level and constant and reliable supply of cartridges, supplies and sundries (consumables) to ensure lab coverage for DRTB for the whole of Bihar State. Currently, less than 50% of the population has access to TrueNAAT tests.

Socio-economic

The LEP project is similar for TB as well as for leprosy patients. There are factual selection criteria described in Annex 26. This type of support enables the beneficiary to live a more sustainable life. It therefore has an inbuilt sustainability, and we witnessed the happiness for the life-changing event, that changes the life of a complete family. It is a step from a catastrophe to privilege. Further comments are to be seen in the recommendations.

5.2.3.7 Cross cutting issues (sex ratio, environment, protection)

Cross-cutting issues 10	Gender equity, social equity, innovative approach and data/communication tools		
Environmental: Do the programme's outcomes have probable negative or positive implications regarding environmental issues, like pollution, synergies in transport with other stakeholders etc.?			
Sex ratio and protection issues: Do the programme's outcomes have probable negative or positive implications regarding equity of sexes? Background is the striking sex-inequality of female cases of DRTB. Does the project and DF transmit issues like protection of vulnerable, women, widows and children and prevents abuse.			
RATING 1-5 (1 worst, 5 best)	4,5	WEIGHTED SCORE	*10=67,5/75

Definition: Cross cutting issues

Different aspects ranging from innovation capacity, addressing protection issues or discrimination, scientific research, using data and environmental issues regarding pollution, protection of environment and do not harm approach

Environmental

The nature of a project where core activities contain monitoring, screening, counselling and home-visits cannot avoid lots of traffic, meetings face-to-face sessions etc. Modern media (Whats up) are used for patient information, referral issues and other benefits to reduce analogue costs.

The introduced real-time password-based KOBO database significantly reduces dependance on paper-based records and reduces the need for physical travel and in-person meetings. The increased use of virtual platforms for coordination and review meetings further contributes to reduced fuel consumption and conservation of natural resources.

While patient data are safely entered through this password protected database (Kobo), it might be an issue to review the practice of sending What's up messages on patients through this provider (data protection).

There seems to be no policy on vulnerability protection and data management available.

DF protects staff and patients alike minimize the risk of cross-contamination and safeguarding patients, caregivers, and health personnel. Especially in DRTB, this is a sensitive and important issue. Infectious materials are handled and outsourced in accordance with biomedical waste management protocols, ensuring safe containment and environmentally responsible disposal. AMC certificate is obtained regularly and was availed recently in 2025.

Infection control protocols are followed during sputum collection, handling, and processing. All confirmed TB patients and their family members receive counselling sessions emphasizing cough hygiene, respiratory etiquette, and safe sputum disposal. To ensure hygiene practices after discharge, patients are provided with spit containers and appropriate disinfectants for home use. In addition, patient information leaflets are distributed, highlighting the importance of treatment adherence, cough hygiene, and environmentally safe sputum disposal.

Transmission in the Laboratory is minimized through applying disinfection and waste management procedures. Used GeneXpert cartridges are disinfected and disposed of as biomedical waste in compliance with available hospital protocols. Smear slides are autoclaved and securely buried after use to prevent environmental contamination. Comprehensive infection prevention and control (IPC) measures are thoroughly enforced in sputum collection centers, and TB and Drug-Resistant TB (DRTB) wards. These efforts aim to reduce both facility-based and community level transmission.

Sex ratio, vulnerability

Sex-aggregation reveals a consistent male-to-female ratio of 2 to 1, not only for leprosy but also for TB projects. This phenomenon is not seen in Bihar alone but also countrywide.

- 360/551 (65%) among patients were male

- Among 2632 of contacts 1639 were male (62,2%)
- 272 DRTB patients (M:173 63,6% were identified with one or more risk

The question remains if this 2:1 ratio should not be addressed in the assignment and consideration of LEP. If possible, women should get a 50% chance of access to LEP. If this is not possible, a given reason should be communicated through reports.

Research, Funding diversification

DF's ability to address challenges in a complicated context is evident. Furthermore, potential to carry out operational research is expressed in the pilot project elements of the DGD project. Also, the gained output and outcome in DRTB treatment initiation and success rate could be made public as a research paper to facilitate fact-based government decisions and prioritize resources.

As CSR involvement of private partners and companies are actively promoted by government in TB control, industrial groups, and civil society organizations could be contacted, including companies through Corporate Social Responsibility (CSR) initiatives, to support TB patients' nutritional needs during treatment. To a certain extent this seems to be happening already successfully.

SUMMARY SCORING

Several project outputs and outcomes are more a reflection of the DF input for a common project in a specialised and small contribution of TB control/eradication.

Considering this, the scoring is very high and reflects the high quality, commitment and excellency of the DF contribution applying the evaluation criteria.

Summary of the scoring: (TB part)

	Description	Rating 1-5	*Weighted score	Result	Max points
Relevance 10	Project/programme addresses priority health needs/detection and equity gaps, system capacity	5	*10	50	50
Coherence 15	Alignment with government priorities and other actors	5	*15	75	75
Effectiveness 20	Indicators are met regarding Tx initiation and Tx completion of DRTB	5	*20	100	100
Efficiency 15	Health system, including access to referral services (curative, preventive, social etc.) is functional and lead to results	4,5	*15	67,5	75
Impact 20	Comparison of key indicators over time and regarding intervention/non-intervention districts Health system	5	*20	100	100
Sustainability 10	Learning and system effects	3	*10	30	50
Cross-cutting issues 10	Gender equity, social equity, innovative approach and data/communication tools	4	*10	40	50
			Total	462,5	500

Table 26

450-500 (92-100%)	outstanding
400-449 (81-91%)	excellent
300-399 (61-80%)	good
200-299 (40-60%)	with serious issues
0-199 (0-39%)	inacceptable

5.2.4 View of beneficiaries

During the evaluation visit, 100 patients were examined by the DF team, mostly at PLRC or SLRC, and time was given to ask several questions, especially regarding period until diagnosis was made, health seeking behavior, socio-economic conditions etc.. Their perspective found their way in all evaluation criteria.

It was striking to see so many young patients between 20-25 years of age affected by Grade 2 disability and with severe reactions. The welcoming patient centered approach of DF staff evidently encouraged patients to accept treatment and management proposals by DF.

It was encouraging to realize that patients gain dignity through the facilitation of different government schemes by DF. This is a good antidote against marginalization and stigma.

In the interaction with patients, it was obvious how effective clinical expertise can prevent and treat disability of a – principally – curable disease. It also emerged that the private sector, especially non-formal doctors as well as specialists (dermatologists, orthopedics...) do not always play a beneficial role for the patients. Absurd prescriptions with several antibiotics and often more than 8 drugs were prescribed by specialists, increasing the economic pressure of already poor patients. Drugs were given in low doses or too short time. Referrals to SLRC or PLRC are not followed by private medical units. Treatment protocols are ignored. RMP's (rural medical practitioners) too, do not have tools to diagnose and treat leprosy (complications) well. Apart from delay of diagnosis, unnecessary debilitating complications, there is also a considerable price-tag attached for the patients (often several 100 \$).

In a certain way, the burden of patients is multiplied – the disease burden is not alleviated but doubled due to a failing system.

Looking at the data in non-intervention districts, where reactions (20-40% of patients will develop reactions) are officially non-existent in the health system, one might not imagine which suffering these patients are going through because of futile treatment in the private sector – both formal (more in cities) and informal (in rural areas).

From a patient's perspective, the project enables the existing health system to address an important health issue, to increase accessibility, quality of managing conditions and if ASHA facilitate the link into the community (we saw several examples where ASHA were crucial in detection community hotspots), then also case detection will improve. GIS guided vulnerability mapping could be of complementary value.

It should not be forgotten how important active search is for patients, especially for the Mushahar community where prevalence rates of 2-3% are not unusual (the health camp in Chilwake/Supaul revealed out of 500 suspects 15 cases).

That leprosy binds patients and DF staff into a kind of special relationship, can be seen in the LEP projects that have a life-changing profile. It gives meaning and dignity back to PAL.

It was encouraging to see that DF makes efforts to employ ex-TB patients (even DRTB) among their staff. This is meaningful and adds quality and value.

6.0 Conclusion and lessons learnt

The findings and challenges of the evaluation clearly highlight the necessity and usefulness of a government programme to be complemented by an NGO with a commendable track record of expertise, dedication and respect for government services. The districts where the support is not given are evidence of that.

The distinctive design of the 3-pillar approach of DF is “the best practice model” with a facilitating rather than implementing approach. It is also cost-effective, as a comparably little input (330T € for 88 Mio people) is needed to promote or kickstart a functional referral system provided a minimum of ingredients are in place. Among them...

- good working relationship and esteem for each role, expressed in an MoU
- HR provided by government
- MDT and a minimum package provided (MDR, blisters, loose drugs, devices etc.) by central government and/or WHO
- Readiness to stopgap critical shortcomings and
- Facilitate (not necessarily implement!) comprehensive services considering all needs of the person (medical, rehabilitative, pension, socio-economic etc.)
- Involve and integrate the private health sector because they seem to be very relevant to people (urban – more specialists, rural – more RMP's)
- Wherever possible, creating synergies with other ILEP stakeholders
- Openness towards to new ways of deeper case detection and research

Conclusively, DF portrays all characteristics showing professional approach, maintaining public health and clinical expertise within a complicated and challenging medical, political and socio-economical context. DF staff have proven to be equipped with the necessary expertise and empathy towards patients.

From a patient's perspective, a functional health and referral system make services more accessible, it reduces further disability due to complications, and it is highly cost-effective, to say much cheaper than the irregularated formal and informal health sector.

Without hesitation, it should be noted that the current double standard in Bihar State (DF intervention districts and non-supported districts) should be overcome. Talks with other ILEP members welcome the idea of having this approach in the whole State of Bihar. This means that a further funding cycle is recommended by the consultant – in case funds are available - that could improve services in currently unaddressed districts in Bihar State. This might be done gradually or all at once.

Furthermore, looking at the DRTB part of the project, it would make sense to expand to other districts that are in the catchment area of Darbhanga Referral Laboratory (all together 9 districts) in Bihar State. The intervention might seem small but is very relevant for public health and for the individual health of patients.

Main lessons learnt in summary:

- To make further progress in leprosy control, it is mandatory to involve and integrate the relevant private health sector, maybe introducing a “referral incentive system” for confirmed new cases and cases with complications
- Apart from campaign-based detection, a continuous surveillance model should be introduced (ASHA, GIS mapping of hotspots and community-based surveillance)

7. Recommendations

Main recommendations for the future include:

- Strengthen co-operation with SLO expressed in a new MoU with new priorities and continuation of monitoring and training all levels of the health system
- Expand into all districts in Bihar State with the “3 pillar concept” of DF for leprosy management to establish a common standard
- Pursue a twin-track approach by reducing gradually and consolidating the support in 28 districts where a good referral system has been established
- Continue pilots (NSP) in ACF considering identifying hotspots via vulnerability GIS led mapping as well as areas in high-burden communities (with “officially” low ANCDR)
- Consider – more innovative pilots – to promote and establish an incentive-based system for each confirmed patient or patients with complications referred from the informal health sector to a PLRC/SLRC (in accordance with the authorities and linkage with ASHA and PLRC)
- Define future strategies and/or handover of Darbhanga Referral Laboratory and TLRC in Rohtas in the next 5 years to come
- Include and confirm contribution of other ILEP members in a 5–10-year strategy in Bihar State
- Add another 2 (or more) districts in the catchment area of Darbhanga Referral Laboratory for DR-TB control

7.1 LEPROSY

DF-SLO co-operation approach in future

-Design a new MoU with SLO

- get authorization from SLO office about implementing the 3-pillar model of DF in 10 remaining Districts (rationale: avoid double standards and implement best practice)
- lobby for getting Nodal person at PLRC level and PT (or similar) at SLRC level
- use concept of GIS mapping and get approval of vulnerability mapping and consecutive intensified ACF in
 - either hotspot areas with high number of cases (with possible underdetection) or
 - Mayadalit areas where there is underdetection and underreporting (only low figures) or
 - other criteria why to investigate further in each „hotspot“– always children reported or Child G2D etc.
- Lobby for being able to do SSS in (all or some selected) District Labs (workload appr. 350 in one year – 8-12 slides per district per year)
- Get reassurance in MoU by mentioning there your relevant contribution to training (at different levels)
- Try to convince SLO to replace NMA's (non medical assistants) with other cadre that could support in future (among others) registration, monitoring and management of leprosy cases
- current gaps in case management of leprosy (esp. Reactions, RCS) to discuss openly with SLO on the ground of existing data (in intervention and non-intervention districts)

DF conceptual approach in future

- Reduce gradually frequency of monitoring/training inputs in 28 existing districts and increase gradually within 5 years the DF leprosy concept to all remaining districts. Still maintain a minimum (monitoring/training etc.) support for remaining “old” districts
- consider finding an alternative site where to do RCS during or after the next project

period (backlog for RCS cases is in 5 yrs almost over) – this issue should also be discussed with TLMI in Muzzafar

- identify a rational way where to set priorities in intensified case detection⁵¹ – examples:
 - Focus on 9/28 districts where Mushahar community is above 15% (health camps with ASHA and referral to PLRC) and where blocks/villages are suspected to have low reporting and low detection
 - Focus on 14/28 districts where ANCDR is above 10 and where you might suspect still more undetected cases
 - continue as a pilot training private practitioners (formal/informal) in a hotspot area or among vulnerable communities (as they play a relevant role in the system) – like in the blocks in Supaul and Saran (up to 10% more patients)
 - think about implementing a mixture of survey and health camp approach in 2-3 districts etc. (get information about methods and costs from LEPRAs how they did it) – involvement of ASHA is mandatory
- improve cost-effectiveness of LCDC if acceptable to government (include anemia, malaria, TB, leprosy, filariasis MDA, maternal health) if possible, if not possible propose 2x/yr LCDC with approval from SLO in hotspot areas and better cost-benefit ratio
- More emphasis to work with dermatologists, orthopedic surgeons etc., especially in urban hotspots (negative examples seen in Begusarai and Samastipur)

Share key issues (data, projects, forms) with ILEP and SLO and National Health Mission Director

- Disseminate data on usefulness and impact of LCDC with disease pattern that are relevant to curb transmission, reduce disease burden, less disability, equity etc.
- disseminate data on gaps in case management of leprosy to discuss openly within ILEP (esp. Reactions, RCS), SLO and Nat Health Mission Director proposing to introduce the 3-pillar approach everywhere
- continue with standard IEC/training material, established for different cadres, proposing frequency, including key records/register/reporting – (avoid double standards)
- co-operate in districts with LEPRAs on patient care
- SLO has agreed to print Patient Tx Cards, Master Registers and Stock Registers
- lobby with GVT to include Clofazimine in PB Tx blisters (expected less reactions)

DF – internal project indicators and procedures:

- use always project indicators where you do not strongly depend on the input of government or any other stakeholder (2 indicators in the current project, e.g. 1.4 Nikusht and 1.5, depend strongly of the partner or are beyond control and you may lose credibility in front of the donor if you do not meet results)
- consider an indicator that portrays well the functioning referral system, e.g. No. of referrals by PLRC's to SLRC versus No. of feedback forms filled from SLRC to PLRC's (then express a valid % indicator)

⁵¹ Other options are (from 2024/25 data)

3 worst districts with ANCDR >10: Jamui 37,02, Supaul 15,02 and Jehanabad 14,28

3 worst districts with NC in SC/ST/Mushahar/versus all NC: Gaya 21%, Jamui 19%, Shekapura 18%

3 top districts with SC/ST/Mushahar community: Nalanda 66%, Saran 53%, Kaimur 44%

3 worst districts with reactions: E. Champ 150, Jamui 131, rohtas 126

3 worst districts with RCS -OP: Rohtas 45, Nalanda 41, Gaya 39

3 worst districts children diagnosed (Jamui 83, Purnea 54, Gaya 45) 32% of overall caseload

- in case a SLRC are not sending a feedback form back to PLRC, they could still fill a feedback form in their SLRC unit and put a remark on that form with a telephone number that PLRC unit has been informed (in case for example a suspect was sent and then diagnosis was something else – not leprosy)
- improve filing of referral and feedback forms (No. to be entered on referral form and that number should also appear on Feedback Form)
- stock reports for MDT and loose drugs to be improved in some units (drug stock e.g. in TLRC Deheri on Sone, Mahua PLRC/Vaishali)
- register: improve on HH and contact screening registers as well as follow up of HH screening for 3 or 5 yrs of index case (PB/MB) by ASHA
- Household registers with SDR/PEP register and follow up data
- Follow up of RCS for 2 years by TLRC and 3 years by SLRC
- Application of SDR PEP prophylaxis – more systematic
- Screening for co-morbidities (diabetes, hypertension, anemia, worm infestation, TB)
- Transport allowance paid to PAL: Transport to RCS for patients (there is an element of positive discrimination if everything is given free for PAL. They receive partly higher pensions than other disabled persons – decision to be taken/confirmed within DF)
- implement key elements of NSP as indicated (see page 29)

7.2 TUBERCULOSIS

- DF reached good Tx adherence rate of almost 75% in MDR/XDR multi-and extensively drug resistant TB) cases (gov figures reflect Tx success rate of 40-45% for MDR and 38-40% for XDR TB in Bihar). Adherence rate and success rate should be similar or comparable over time but do not refer exactly to the same cohort. Decision to be taken if process indicator or Tx success indicator to be chosen.
 - in a new project, it may be better to distinguish between cohorts of MDR TB and XDR TB in terms of outcomes (make **2 indicators in future**) – for adherence and/or Tx success. For comparative reasons, you might consider using the same indicator as government (Tx success rate)
- the added value of DF and relevance for patients is so evident through the indicators, (and patients' stories) that it would be deplorable not to continue and even expand this support
- SSS smears should be done in SLRC hospitals (with good experience or as you have organized zones in Bihar, maybe 3 or 4 zonal Labs could be doing the SSS at District Level)

As Darbhanga Referral Lab has a catchment area of 9 districts, it would be plausible to expand the DRTB project part gradually from the current 5 districts towards these 9 districts in future project periods to come. Especially if there are districts where DF works already. (e.g. Samastipur, Sheohar, Sitamarh, Muzzafarur). This also given the fact that the benefit for the patients according to indicators is relevant and significant

7.3 LEP program

- consider providing LEP projects with women as 50% of beneficiaries (if not give good reason in report why more men are chosen)

- LEP is a chance desired to facilitate commitment: to increase commitment and perception of the value of this chance, you might consider signing a MoU with the beneficiary with 2 or 3 key expectations/milestones (even if such a MoU does not have a legal value)
- link successful LEP projects with a new peer PAL who is considered to become a beneficiary or who has challenges during his new business
- consider a second indicator – not only availing a new LEP shows the quality of this intervention, but the % of successful LEP's after 6 or 12 months (if you get above 70%, this would be a very good achievement) – for the many groceries “the value of the inventory and cash/bank” could be easy indicators to obtain after 6, 12, 18 and 24 months for example
- pay the LEP support given in 2 instalments to avoid total failure

7.4 TERTIARY CENTRES IN ROHTAS AND DARBHANGA

Darbhanga Referral Laboratory

- SSS smears should not be done in a Referral Laboratory (ZN – Ziehl Neelsen stain is available at District level)
- Very poor infrastructure
- DF implements Ref Lab on behalf of government, support from Gov on cartridges is good but lack of sundries and consumables, acquisition and maintenance of highly specialised equipment remain an administrative and financial burden for DF
- considering the funding situation of DF, the next project period could be used to define a 5-10 yr (handover) strategy together with government for Darbhanga (exit?). The Referral Lab is a government responsibility. The current building is in a deplorable state and requires huge renovation costs or should be built completely new. DF as implementor has of course capacity and competence to support government but ideally should not shoulder government tasks.
- The relevance of DF is more to be seen as a facilitator in (future) projects where it can successfully fill gaps left by government, improving patient management. DF's core competence is expertise, not running non-self-reliable expensive institutions bearing the costly administrative responsibility for buildings, premises, equipment, key consumables of a Referral Laboratory etc.. Years ago, this step has begun by handing over the ownership of premises of Deheri and Darbhanga officially to government.

TLRC Rohtas/Deheri on Sone

Currently the TLRC in Rohtas is underutilized⁵² with a BoR (bed occupancy rate) of 45-50%, not cost-effective (1 RCS costs around 500 € - 2x more than in TLMI hospitals) and premises and buildings are in a deplorable shape.

For the time of operating the backlog of RCS for disabled patients for the next 5 years it might make sense to keep this premise for surgery but eventually cases are going down (less than expected 50 RCS/yr after 5 years). Currently 80 RCS can be done in a year.

⁵² OPD 3500 pat/yr (skin conditions), 63 NC detected (then referred to PLRC) in 2025, 61 reaction cases were treated in 2025 (10 admitted), RCS 105 in 2025, 64 ulcer care cases per year, 224 MCR distributed, Lab not available

In summary:

- SSS smears and other services reaction care, ulcer care etc. should be done in SLRC hospitals (with good experience)
- RCS need in Bihar State in 5 years under 100 NC per year
- TLMI hospital Mazzafurfur offers free RCS and is otherwise self-sufficient
- Looking at reported funding situation an exit strategy should be considered in the next 5 years

OPTIONS in future:

1. renovate structure in next years with the current concept (for 5 years ok, then to be revised – see table) – funding problem, real owner is government etc. – probably unrealistic
2. invest in building etc. and introduce a similar concept like TLMI – 3 big obstacles: gov, mindset, funding – probably unrealistic either
3. continue for another 5 years, phase out and look for a partner in the next 5 years where you perform RCS with a consultant to address the lower number of RCS needed in future (e.g. Kurji Holy Family Hospital, Patna or else) – **to be decided by DF**
4. continue for another 5 years, phase out and look for a partner in the next 5 years who could accommodate the lower number of RCS needed in future (e.g. TLMI) – **to be decided by DF**

Discuss in the next months and include an strategy (exit?) in next project proposal

Option 3 or 4 might be the most cost-effective and pragmatic option remains to refer more to TLMI after the next 5 years. Considering the funding situation of DF, running an institution is a heavy commitment and DF's core competence is expertise and facilitation rather management of a big structure with a lot of funding and administrative implications.

8. Good Practices identified

The evaluation revealed several good practices elements:

- The 3-pillar approach of DF is a “best practice model” of facilitating (not implementing) and promoting in a cost-effective manner a functional quality referral system
- The combination of leprosy and TB projects still have some synergies to be considered and is not outdated, provided certain conditions
- Co-operation and supplementary services by ILEP members are good practice too
- Undertakings by DF to tap CSR funds are to be encouraged
- Future project design should also include elements of pilot and research elements



Dr. Adolf Diefenhardt, 31st of March 2026