

# Ex post evaluation – India

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**Sector:** Basic health infrastructure (CRS Code 12230)  
**Project:** FC Basic Health West Bengal, BMZ No.: 1997 65 496\*  
**Programme executing agency:** Government of the Indian Federal State of West Bengal, represented by the Department of Health and Family Welfare (DoHFW)



## Ex post evaluation report: 2014

		Project (Planned)	Project (Actual)
Investment costs (total)	EUR million	36.87	36.80
Own contribution	EUR million	6.19	7.44
Funding	EUR million	30.68	29.36
of which BMZ budget funds	EUR million	30.68	29.36

\*) Random sample 2014

**Description:** This project was a FC/TC cooperation project to improve primary health services in eight districts of the Indian federal state of West Bengal. The main measure was to rehabilitate or construct a total of 236 primary health institutions. Further action areas in the project included procuring medical and non-medical equipment, purchasing 133 ambulances and introducing ambulance services as well as medical diagnostic laboratories as a pilot scheme, operated as public private partnerships (PPP). Furthermore, a voucher/coupon system for ambulance services was introduced for expectant mothers, while a Planned Preventative Maintenance (PPM) concept was designed and tested. The project was implemented in two stages.

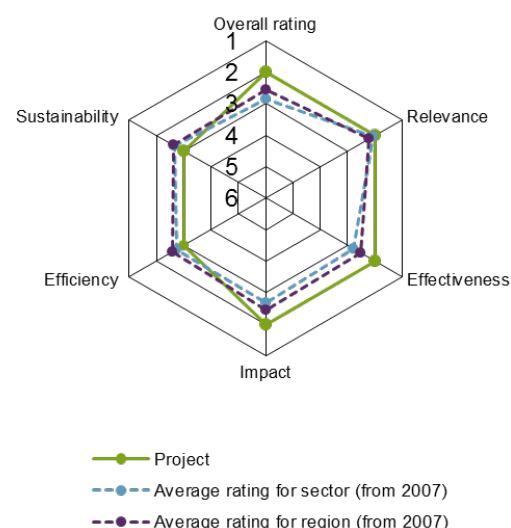
**Objectives:** Quantitative and qualitative improvements to the supply of primary health services in selected districts of West Bengal and using such services was to help increase the standard of health of the predominantly poor rural population in the region.

**Target group:** The programme's target group is the population in the eight districts of West Bengal, most of whom comprise poor rural people.

## Overall rating: 2

**Rationale:** The project was highly relevant and clearly had a developmental policy impact. The sustainability of the project and the efficiency of its implementation were satisfactory, both dominated by positive results. The project's efficiency was fully in line with expectations, producing a good overall rating in the end.

**Highlights:** Two of the innovative approaches developed as part of the project: i) Public Private Partnership models for ambulance services and medical diagnostic laboratories, and ii) voucher systems for the transporting of expectant mothers were rolled out in the project areas of all eighteen districts of West Bengal after successful pilot schemes, and are still used today. The lowest level of primary health-care (sub-centre) was strengthened by extensive federal state and national mother-child programmes alongside infrastructure measures, and exhibits very good quality as well as functionality. This has made a substantial contribution to achieving the ultimate objectives.



## Rating according to DAC criteria

### Overall rating: 2

#### Relevance

The core problem of insufficient health care at the level of basic health-care facilities was correctly identified. The results chain of the project seems plausible, assuming a quantitative and qualitative improvement in services of health-care building on better technical equipment and improved capacities in basic health facilities, and therefore aiming to help advance the health situation in the project areas. The poor rural population, whose proportion in West Bengal still exceeds 30 %, was particularly affected by the inadequate supply of decentralised health institutions. They generally did not have sufficient resources to take advantage of public health services in the district capitals or use private health services. The qualitative and quantitative improvement of decentralised primary health care facilities was therefore considered an appropriate measure to target and improve the situation of this segment of society.

The approach for the project appraisal (PA) entailed promoting institutions on all three sub-levels of the primary health care system: Sub Center (SC), Primary Health Center (PHC), Block Primary Health Center (BPHC) / Rural Hospital (RH). This strategy was also implemented consistently in the first half of the project (hereinafter referred to as Phase I) by constructing and renovating 86 SCs, 91 PHCs and 38 BPHCs between 2000 and 2005. In the second half of the project (hereinafter referred to as Phase II) resources were no longer used for SCs and PHCs. All the investment funds were channelled to renovate BPHCs in the block capitals and to upgrade them to RHs (increasing the number of beds, constructing and installing operating theatres and diagnostic laboratories). The focus on BPHCs and RHs, which are considered primary health-care facilities according to the definition by the Ministry of Health, was primarily brought on by strategy changes in West Bengal health policies. Even though economic and project strategy reasons could possibly justify the shift of focus to fewer but larger buildings in the second phase of the project, the demand for additional decentralised PHCs and SCs was not satisfied. Alongside general medical staff, the upgrade from BPHCs to RHs requires suitable availability of expert staff (anaesthetists, paediatricians, gynaecologists, etc.), who would have to be provided by the DoHFW.

The approach was also designed to increase the functionality of public health services by incorporating private suppliers. This proved to be innovative and useful (public-private partnership (PPP) approaches).

The project was planned and implemented at the same time and in the same areas as projects of other donors (e.g. DFID, World Bank), with complementary scopes of intervention. The project had to be planned (1997) as a cooperation with technical support since alongside infrastructure and equipment, the qualitative improvement of primary health-care was supposed to address identified weaknesses in capacity at the DoHFW, especially at a decentralised level.

From today's viewpoint, the project correctly identified the problems of health-care in West Bengal and tackled measures with due consideration of health policy frameworks at both the project executing agency and the Federal Republic of Germany. These measures were largely suitable for improving the health situation of the poor and marginalised groups in the population. The infrastructure approach of Phase I is assessed as good, and Phase II as satisfactory, because it was not sufficiently focused on needs and some requirements in terms of use were not ensured (expert staff). Based on all project measures the project's relevance can be assessed as good overall.

### Relevance rating: 2

#### Effectiveness

The project objective was the qualitative and quantitative improvement and utilisation of primary health services in selected districts of West Bengal with a high proportion of disadvantaged groups. The attainment of the project objectives defined during the PA is measured based on usage of the improved services, for which the following three indicators were determined:

Indicator	Status PA	Ex post evaluation
<b>(1) Increase in out-patients in health-care facilities by 30 %</b> (Numbers for BPHCs/RHs/PHCs/SCs in 8 project districts of West Bengal)	9.1 million patients	19.5 million patients  <b>Indicator fulfilled</b>
<b>(2) Increase in institutional births by 20 percentage points</b>	40 % of all births in the 8 project districts are attended in institutions	73 % of all births in the 8 project districts are attended in institutions  This represents an increase of 33 percentage points.  <b>Indicator fulfilled</b>
<b>(3) Increase in average number of patients transported by PPP ambulances to 50 per month</b>	There were no PPP ambulances	40-70 PPP transports/month/per institution  On average 1-3 PPP ambulances depending on the institution, user data only available for ambulances that run under the mother/child project. The total number of PPP transports is therefore also based on enquiries and observations on the spot.  <b>Indicator largely fulfilled</b>

The project indicators have shown a positive trend in all project districts since the PA. The number of outpatients more than doubled during the project period, indicating increased capacities within the health-care institutions. The success in developing and implementing a PPP model for ambulance services in primary health-care institutions is clearly shown by the increase in patients transported per month. The collaboration with non-governmental organisations (NGOs) and the private sector has been successful and seems to have enhanced the functionality and quality of the services. The number of inpatients in BPHCs and RHs increased threefold between 2001 and 2013, which was achieved by expanding the institutions, including a larger quantity of beds.

Improving the supply of primary health care services benefits the poor population directly as they are the ones using these institutions the most. The well-to-do among the population mainly utilise private doctors for out-patient services, as public institutions usually have long waiting times and the quality of service is often low. The quality of a hospital is influenced by the quality of the doctors on the one hand, but also by the care and maintenance of the institution.

**Effectiveness rating: 2**

### Efficiency

The following indicators are used to measure the funds allocation efficiency: implementation period, realised results compared to planning and intensity of utilisation of the institutions (as a proxy indicator). In

this particular case, comparing construction costs per m<sup>2</sup> does not seem appropriate due to the very different types of work done, such as demolition, reconstruction and the renovation of existing buildings.

The actual duration of the project was 10 years, and therefore 5 years longer than estimated in the PA. The PA volumes from 1997 were revised several times: instead of the 1,430 primary health-care institutions planned (including 900 SCs newly constructed and 360 PHC rehabilitated), 215 institutions (SCs, PHCs, BPHCs) were constructed and rehabilitated in Phase I, and 21 BPHCs were upgraded to RHs in Phase II. These deviations from the PA are due to several reasons: after the reorganisation of the health sector and based on the 2004 national reform project “National Rural Health Mission” (NRHM), the DoHFW focused on expanding capacities at the highest level of the primary health-care system (BPHCs, RHs), among other projects. Due to concept changes this resulted in considerable delays and fewer institutions were built (with larger financial requirements per institution) than originally foreseen in the PA. Further implementation delays were caused by political turmoil and strikes in some of the project districts. Price increases for construction materials entailed time-consuming adjustments of contracts with construction companies, as there were almost two years between the construction contract tenders and the start of the building work. This resulted in another reduction in the number of new buildings.

According to the partner, all institutions are operational (a random test during the ex-post evaluation confirms this statement). The utilisation of SCs, PHCs and BPHCs/RHs is good on average, as can be seen by the increased number of outpatients and inpatients. It is first and foremost the sub-centres – easily reachable by the rural population – which are visited frequently due to their extensive mother/child projects. The situation is different for the specialised treatment rooms (mostly operating theatres) constructed in the renovated BPHCs/RHs as part of the project, including the associated medical equipment. So far there are no official statistics about their usage; however, the operating theatres were not used in any of the 7 BPHCs/RHs visited as part of the ex-post evaluation, and the specialised medical equipment was stored mostly for years in the original packaging within the institution. The lack of medical experts as well as complex, often inefficient staff management largely contribute to these specialised treatment rooms remaining unused. Additionally, patients go directly to better equipped district hospitals (secondary level) without referrals from their doctors, which highlights inefficiencies in the supply system because treatments do not take place at the designated level.

Efficient use of the funds was ensured by the awarding procedure of regional tenders in several lots. Consulting services accounted for 28 % of the total costs after the project close, and were therefore significantly higher than originally planned. This can be ascribed to a variety of factors (such as time delays and compensation services for unimplemented TC measures). The increase in fund allocation for consulting services can be justified by taking into account the necessary expansion of the tasks and the time delays outside control of the project, yet they are too high as they make up nearly a third of the total project sum. A more strategic selection of location could possibly have helped reduce the costs.

Summing up, both phases of the project can be assessed as just satisfactory.

**Effectiveness rating: 3**

### Impact

The overall developmental aim of the project was to improve the health of the poorer population of West Bengal, with mothers and children supposed to benefit most according to the PA. The impacts are measured based on the following indicators:

Indicator	Status PA	Ex post evaluation
(1) Infant mortality rate (IMR) * PA aim for 2010: 45 (in rural areas 47)	55 (in rural areas 53)	32 (in rural areas 33) <b>Indicator fulfilled</b>
(2) Proportion of children (12-23 months) with full vaccine	44 %	97.4 %

protection PA aim: 75% (in rural areas 70%)	(in rural areas: 41 %)	(in rural areas: no information) <b>Indicator fulfilled</b> (on average for federal state)
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\* IMR = number of children that die in the first 5 years of their life/1000 live births

According to the available data, infant mortality of children under 5 has decreased by 35 % since the PA, and in rural areas by 38 %. The number of children with full vaccine protection has increased by 120 % since the PA and stands at almost 100 % in West Bengal. Therefore the figures determined in the course of the ex-post evaluation are significantly above the envisaged levels set in the PA, and also exceed the Indian average, where infant mortality sits at 42 (West Bengal: 32). Regardless of the tremendous improvement within the past 15 years, this figure is still quite high especially in a global context (compared to infant mortality in industrial countries: 4-6/1000 live births). Additionally, further efforts are necessary to keep improving the health situation of the West Bengal population.

The contribution of the FC-funded projects to improving the health situation in these 8 districts in West Bengal cannot be regarded independently from the overall impact that has also been influenced by health projects initiated by the Indian and/or the West Bengal government. With the help of FC some 39 % of all BPHCs/RHs, 20 % of PHCs and 2 % of SCs were constructed and rehabilitated in 8 districts. The improvement of infrastructure in primary health-care institutions can be regarded as a prerequisite for successfully implementing some other projects.

The achievement of the overall objective can be rated as good (in both phases, though Phase I was a touch stronger).

**Impact rating: 2**

### Sustainability

The PPP model is probably the most successful component of the project. Its concept was developed back in 2003 and included strategic collaboration between public health services and NGOs/the private sector, aiming to improve health-care services at the municipal level. Due to its great success in ambulance transport as well as laboratory and diagnostic services, this concept was not only implemented country-wide, but also applied to other service sectors (e.g. fair price medicine shops, catering, medical waste disposal, etc.) and seems to have contributed to an improved performance. The DoHFW is even planning a pilot model in which a PHC is completely led by a PPP initiative. Sustainability is also ensured by a PPP policy that was approved by the government in 2006.

The introduction of the “voucher system” was just as sustainable, allowing pregnant women to use transport for free and therefore ensure the care of women and new-born babies. These vouchers have been introduced all over the country now, and make a significant contribution to improving the use of public institutions as well as the health of mothers and children.

However sustainability is still insufficient regarding the operation and maintenance of institutions and equipment. Even though the concept of “Planned Preventive Maintenance” (PPM) was successfully developed, tested and introduced to the general public with training materials, it was not pursued further due to a lack of state support. The experiences gained with PPM were considered to be altogether positive by the hospital and district management teams involved. However, care and maintenance are still rather performed on an ad-hoc basis and used for corrective measures (instead of preventive measures). The ex-post evaluation revealed that hygienic and maintenance standards are on very different levels at the institutions, and primarily depend on the capacities of the given hospital management. Resuming the PPM concept and securing financial coverage within the framework of a special fund seems to be a pressing matter in order to safeguard the sustainable use of buildings and equipment.

The project was planned as a cooperation project together with German Technical Cooperation (TC). TC was responsible for elaborating district health plans as the foundation for needs-oriented infrastructure decisions, and for supervising the development of an appropriate waste disposal system with the

involvement of private suppliers. However, the TC component was discontinued back in 2004. Since the technical support of the DoHFW still played an important role for the sustainability of project success after the TC project ended, a large part of the technical support was taken over by the FC project (PPP, PPM, etc.), and possibly resulted in the fact that not all of the measures could be supported as comprehensively as would have been required.

From today's perspective, sustainability is assessed as satisfactory on the whole.

**Sustainability rating: 3**

### Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being **relevance**, **effectiveness**, **efficiency** and **overarching developmental impact**. The ratings are also used to arrive at a **final assessment** of a project's overall developmental efficacy. The scale is as follows:

<b>Level 1</b>	Very good result that clearly exceeds expectations
<b>Level 2</b>	Good result, fully in line with expectations and without any significant shortcomings
<b>Level 3</b>	Satisfactory result – project falls short of expectations but the positive results dominate
<b>Level 4</b>	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
<b>Level 5</b>	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
<b>Level 6</b>	The project has no impact or the situation has actually deteriorated

Ratings level 1-3 denote a positive assessment or successful project while ratings level 4-6 denote a negative assessment.

### Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability): The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The **overall rating** on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Ratings 1-3 of the overall rating denote a "successful" project while ratings 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (rating 3).