

# Ex post evaluation – India

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**Sector:** 41050 Flood protection  
**Programme/Project:** Multi-purpose cyclone shelter Orissa II (2001 65 399) \*)  
**Implementing agency:** Government of Orissa - Indian Red Cross Society - Orissa State Branch



## Ex post evaluation report: 2015

		Project A (Planned)	Project A (Actual)
Investment costs (total)	EUR million	6.15	5.50
Counterpart contribution	EUR million	0.24	0.12
Funding	EUR million	5.91	5.38
of which BMZ budget funds	EUR million	5.11	4.58

\*) Random sample 2015

**Summary:** Drawing on the experience of the first project phase, this project covered the construction and equipping of 36 cyclone protection shelters in rural, coastal areas of the Indian federal state of Odisha (formerly: Orissa) as well as the preparation of local disaster prevention plans and alternative utilisation concepts. The project was supported in cooperation with the German Red Cross, whose contribution amounted to EUR 800,000.

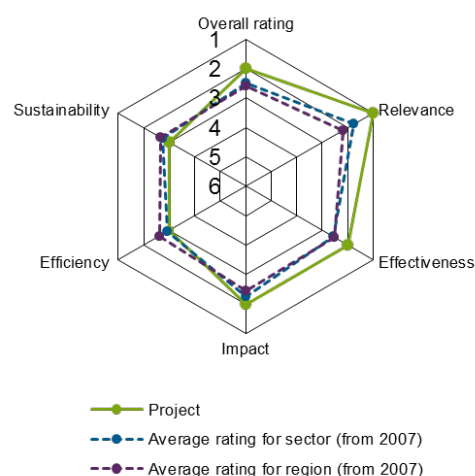
**Objectives:** The intended impact was to help protect people during future cyclones and contribute towards village development through the alternative uses of the shelters erected. The envisaged outcome was to provide the population with sheltered areas and improve the supply of municipal facilities in the project area.

**Target group:** The target group are the residents living in the immediate vicinity of the new shelters (i.e. within a radius of roughly one to two kilometres); they are to find shelter or be brought to safety there by local disaster prevention organisations in the event of a cyclone. Beneficiaries of the premises' alternative uses (e.g. as assembly or school rooms) could be up to 10,000 residents living further afield from the shelter (i.e. within a radius of up to four kilometres).

## Overall rating: 2

**Rationale:** In spite of shortcomings in terms of efficiency and implementing the envisaged maintenance concept, the evaluation assessment is dominated by the high relevance of financed measures and the largely convincing developmental impact.

**Highlights:** The project was based on a previous phase, which set the standard for the development of today's cyclone protection infrastructure in the federal state of Odisha.



# Rating according to DAC criteria

## Overall rating: 2

### Relevance

At the time of project appraisal in 2001, there was a significant need for infrastructure in the state of Odisha to protect the rural population in remote, coastal regions from the dangers of the frequent, and at times severe, cyclone events in this area. The shelters previously established as part of the first project phase were the first of their kind in the region. They were shown to contribute to saving several thousand lives during a super cyclone in 1999. In light of the high relevance of the first project phase and the considerable need for further additional shelters at that time, it was decided to continue the project into the present project phase.

From today's perspective, the assessment of the project's relevance at project appraisal (PA) appears reasonable. The project conformed to the priorities of Indian-German development cooperation at the time. The adopted approach was in line with the priorities of the partner side, as the Odisha State Disaster Management Authority (OSDMA) has continued the expansion of the shelter network to this day.

### Relevance rating: 1

### Effectiveness

The intended outcome was to protect the population against future cyclones and to improve the supply of communal facilities in the programme area. The achievement of the programme objectives defined at programme appraisal can be summarised as follows:

Indicator	Status PA, Target value PP	Ex post evaluation
(1) At least 1,000 people per shelter are given effective protection in the event of future cyclones.	Status PA: --- Target value at PA: min. 1,000	Each of the 36 shelters has a (theoretical) capacity between 1,000 and 3,000 people. The 11 shelters visited were accessible and clean. Emergency equipment was mostly in place, but not always in good working order.
(2) At least two meetings/events take place in each shelter per week (timeframe: 3 years after completion)	Status PA: --- Target value at PA: 2	All 11 visited shelters are used as school or nursery buildings. In addition, other uses comprise religious ceremonies, NGO training activities, as youth clubs, (temporary) shelters for homeless families or a computer training centres. The buildings are often also rented out for private functions.

The indicators determined at PA appear plausible from today's perspective, and objectives have largely been achieved. However, according to almost all the communities visited, the actual utilisation of the protective structures during multi-day disasters is up to 20% less than the theoretical capacity. In addition, the structures' relative importance in terms of protecting the communities has been reduced by further population growth of the : as a consequence, during more recent cyclone events, a portion of the population had

to seek shelter in other buildings (in schools in particular). Nonetheless, this does not seem to be particularly problematic since the municipalities now have other fortified structures. As a result, recent cyclones in the visited communities resulted in no fatalities.

The aforementioned availability of alternative solid structures reduces prospects regarding the use of protective structures for community purposes: against the background of the government's efforts to improve community infrastructure, the relative importance of protective structures for everyday community life will continue to decline.

### Effectiveness rating: 2

#### Efficiency

Like the first phase of the project, the present second phase also covered the basic protection requirements of the population. Appropriate infrastructure was virtually non-existent at the project start. The criteria applied for site selection used at the time are also considered reasonable from today's perspective. As a result, it can be assumed that protective structures were essentially built where they were most needed - taking cost-benefit aspects into consideration. Temporary shortcomings in financial management during implementation pointed to inefficient internal procedures.

Established capacities have proven to be appropriate. No lives were lost in the communities visited during the severe cyclones in the years 2013 and 2014, despite the fact that – as previously shown – actual capacity utilisation was below planned capacity and the population has continued to grow. In recent years, additional fortified buildings - to be used as complementary shelters - have been built in the vicinity of almost all municipalities.

When compared over time, construction costs seem appropriate from today's perspective.

In retrospect, the maintenance concept is inefficient. It states that major maintenance should be carried out by the project-executing agency and should be funded from a maintenance fund - co-financed by FC funds (Maintenance Corpus Funds, MCF). In contrast, minor maintenance works should be carried out by the user groups themselves, with user contributions charged for this purpose. No major maintenance activities have thus far been carried out by the project-executing agency. The capital tied up in the MCF earned interest income, but otherwise remained unproductive. The reasons for this – especially capacity constraints at IRCS OSB – are explained below in the "sustainability" section. Due to the lack of major maintenance work, user groups have in turn significantly reduced their efforts when it comes to minor maintenance. This resulted in the (rather poor) user groups building up relatively large capital reserves (between INR 70,000 and 100,000, which is equivalent to EUR 1000-1300). Previously, those sums were unlikely to be used productively. The groups have meanwhile reacted to this and have, on the one hand, mostly discontinued the collection of contributions and, on the other, begun in some cases to use the capital for other – often social – purposes. The tying up of capital at both levels is all the more regrettable, as OSDMA has arranged for renovations of "its" shelters constructed to be financed from the state budget in future. However, it is questionable whether respective work will be carried out timely and to what level of quality. As a result, the conservation status of the shelters is problematic: while the building substance at the sites visited (with one exception) is still largely intact, damages are increasing due to a lack of maintenance. The protective effect of the building is still secured at present, but will decrease with a continued lack of repairs.

All in all, however, we assess the project's efficiency as just satisfactory.

### Efficiency rating: 3

#### Impact

The intended impact of the project was to contribute to the protection of human life in the event of future cyclones in the coastal areas of Odisha as well as to contribute to village development. The technically similar shelters built during the first phase had already played a key role in protecting human lives during a super cyclone in 1999 and thus proven their effectiveness. Consequently, the definition of the corresponding impact indicators was dispensed with at project appraisal. This decision appears to be justified with hindsight.

For a more precise impact assessment– particularly with regard to the objective of village development – the following indicators were subsequently defined prior to the evaluation mission:

Indicator	Target value <sup>1</sup>	Ex post evaluation
(1) The buildings are available as shelters on demand.	90% of the shelters are technically suitable, in a reasonable condition and available in case of need.	All visited shelters are technically suitable, clean and accessible According to beneficiaries surveyed, access is provided in a non-discriminatory manner . In an emergency - with priority being given to the elderly/infirmary, pregnant women, and children. Thereafter, access is provided on a first-come, first-served basis. Those who cannot find a place are housed in other solid buildings.
(2) Use of the buildings in the event of a disaster is controlled by means of an evacuation plan.	All shelters are part of an evacuation plan.	Disaster warnings are disseminated by local authorities, the Red Cross and through the media. Mobilisation on the ground is carried out under local direction, using sirens, megaphones, drums, etc. A state-wide disaster drill (“Mock Drill Day”) is held each year. In the visited communities, the two recent cyclones were handled without any fatalities.
(3) Municipal services and initiatives have been set up as the result of the shelters' establishment .	At least one additional initiative per shelter.	All visited shelters are used for (pre-) school education. Although this also took place before the establishment of the shelters in most cases, target group reports show that this was irregular and under difficult conditions. In numerous villages, initiatives have emerged which go beyond the status quo prior to the start of construction (use of shelter premises as youth clubs, etc.).

Like the first phase, the second project phase not only contributed to a much-needed expansion of protective infrastructure, but also upgraded municipal infrastructure through the construction of solid buildings, which were a novelty for many municipalities. Moreover, the approach adopted at the time of constructing multi-purpose shelters as a supplement to the project was taken up by public authorities and has been continued to present, though often without ensuring community participation. Around 400 multi-purpose

<sup>1</sup>The target values correspond in this case to the values defined in the evaluation concept prior to the evaluation mission.

cyclone shelters are currently being constructed under the aegis of OSDMA, with many of those financed from World Bank loans. After completion, the number of such shelters in the state will have increased to well over 800.

All in all, the developmental impact was thoroughly convincing in both respects. However, it is questionable whether this can be achieved to the same extent in the future. The shelters will only be able to reliably contribute to protecting human lives in the coming years if the required maintenance measures are taken immediately. Otherwise, it cannot be ruled out that persons seeking protection will come to harm during a cyclone. At the same time, the progressive deterioration of the buildings would also affect their communal use. In any case, the solid construction of other public buildings will create premises that could provide an alternative to the shelters for local initiatives.

**Impact rating: 2**

### Sustainability

The assessments made in the evaluation relate to conceptual, as well as financial and institutional sustainability of the intervention.

- Conceptual sustainability: According to the project-executing agency IRCS OSB and the Disaster Management Authority OSDMA, the measures financed under the two phases of the project played a leading role. At the time of the second phase appraisal in 2001, only the 23 shelters built during the first phase existed across the whole state. Since then, the concept has been replicated hundreds of times. After completion of roughly 400 shelters currently under construction (using World Bank loans), there will be over 800 shelters available in Odisha.
- Financial sustainability: At project appraisal, the strategy was selected to ensure the sustainability of measures through the establishment of a capital fund (“Maintenance Corpus Fund - MCF”). With hindsight, this is very understandable in the context of the uncertainty which existed at the time - concerning the willingness and ability of state institutions, the project-executing agency and user groups to ensure the maintenance of the buildings in the long term. In actual fact, however, no maintenance measures have been initiated thus far, despite funds being available through the project-executing agency IRCS OSB. The buildings' physical condition is (still) acceptable; however, this is entirely due to their relatively solid construction. Paint and weather protection coatings are seriously affected, and components made of wood and metal (mainly doors, windows) are often damaged. Important pieces of equipment (generators, megaphones) are often not in working order.
- Institutional sustainability: The reason for the lack of maintenance measures is also due to the institutional proficiency on the part of the project-executing agency IRCS OSB. It has not yet been possible to form the decision-making bodies required under the MCF statutes, nor has the project-executing agency recruited the necessary staff for the proposed Maintenance Management Unit (MMU). The IRCS OSB generates own revenue from renting out one of the buildings constructed under the first phase of the project and made a commitment to that respect. However, and by its own assessment, IRCS OSB is not in a position to permanently finance the funding of market-rate salaries for much-needed engineers from its own resources. Moreover there has been almost no monitoring or supervision of the user groups, in recent years. At the same time, however, the project-executing agency's efforts to meet their own responsibility to a greater extent in the future are recognisable: after an extended period of personnel changes and - in particular - a change at the top of the IRCS-OSB, the first key personnel – including a coordinator for the MMU – have now been recruited. Ways of raising the funds for the required engineers' salaries are also being sought.

All in all, sustainability is undoubtedly below expectations at present. At the same time, however, the project was used as a model for an action concept which has now been replicated a hundred times in Odisha. Moreover, there is a chance of overcoming the existing (institutional) barriers and of addressing the overdue maintenance tasks.

**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

Rating levels 1-3 denote a positive assessment or successful project while rating levels 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. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 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" (level 3).