

Ex post evaluation – India

>>>

Sector: Securing food supplies, agriculture / fishery (CRS code: 31130)
Project: CP – Maharashtra Erosion Control Phase III (BMZ No. 2000 66 506, Investment)*; Training (BMZ No. 1930 01 260, Training)
Implementing agency: National Bank for Agriculture and Rural Development (NABARD)



Ex post evaluation report: 2018

All figures in EUR million	Project (Planned)	Project (Actual)	Training (Planned)	Training (Actual)
Investment costs (total)	20.66	19.72	0.80	0.59
Counterpart contribution	0.72	0.91	0.00	0.00
Funding	19.94	18.81	0.80	0.59
of which budget funds (BMZ)	19.94	18.81	0.80	0.59

*) Random sample 2018

Summary: FC/TC cooperative programme to develop water catchment areas (reduction of soil erosion and improvement of water retention) in arid regions of the Indian state of Maharashtra. This was the third of three phases with the same concept, each of which was geared to different water catchment areas in the federal state. The programme measures included the afforestation of steep slopes, erosion control on agricultural land, the construction of water retention basins and river engineering measures. The measures were implemented by the population under the guidance of local non-governmental organisations (NGOs). NGOs and the target population were prepared for their tasks in a preceding capacity-building phase, mainly financed by TC. Social and income-generating activities of women were to be promoted through a special gender component. A livelihood fund (loans and grants) was designated to support those without land. Phase I was completed by 2000, and Phase II by 2006. Phases I and II were evaluated in 2012 with an overall rating of 2.

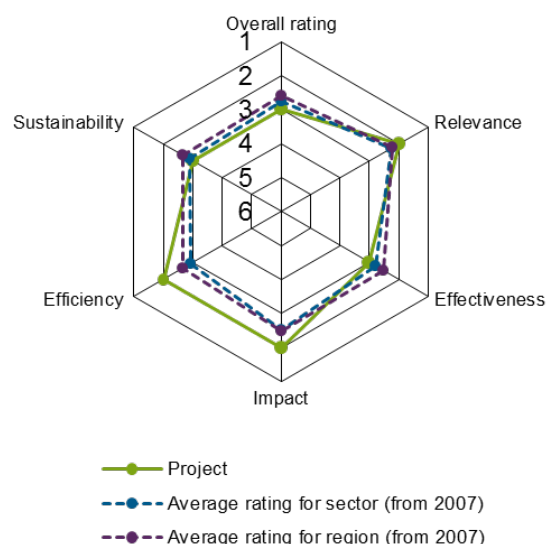
Objectives: The overarching development policy objective (impact) of the project was to make a sustainable contribution to maintaining and improving the living conditions of the rural population. The modular objective (outcome) was defined as stabilising agricultural and forestry production potential at a higher level.

Target group: The target group was the rural population in selected water catchment areas. It comprised more than 165,000 people from just under 28,500 households. The target group was actively involved in designing and implementing the project and benefited from the increased production potential.

Overall rating: 3

Rationale: The project addressed priority problems for India and the target population. The contributions to boosting production, increasing the water supply and thus to improving the living conditions of the target population as a whole are considerable. These very positive results will unfortunately be affected in the longer term by problems with the maintenance and repair of the physical measures and a significant increase in the use of the improved water supply (especially for irrigation). The latter could lead to an overuse of water resources in the long term.

Highlight: While the previous phases I and II had a major structural impact as models for the design of national policies and programmes, the same cannot be said for phase III. Lessons learned with regard to the maintenance and repair of the structures erected and the controlled use of water were not taken into sufficient account in the project design.



Ex post evaluation – India

>>>

Sector: Securing food supplies, agriculture / fishery (CRS code: 31130)
Project: Rehabilitation of water catchment areas in Andhra Pradesh (now Telangana) (BMZ No. 2000 66 258, Investment)*; Complementary measure (BMZ No. 2003 70 585, CM)
Implementing agency: National Bank for Agriculture and Rural Development (NABARD)



Ex post evaluation report: 2018

All figures in EUR million	Project (Planned)	Project (Actual)	CM (Planned)	CM (Actual)
Investment costs (total)	9.80	9.29	2.0	1.75
Counterpart contribution	1.11	0.61	0.0	0.0
Funding	8.69	8.68	2.0	1.75
of which budget funds (BMZ)	8.69	8.68	2.0	1.75

*) Random sample 2018

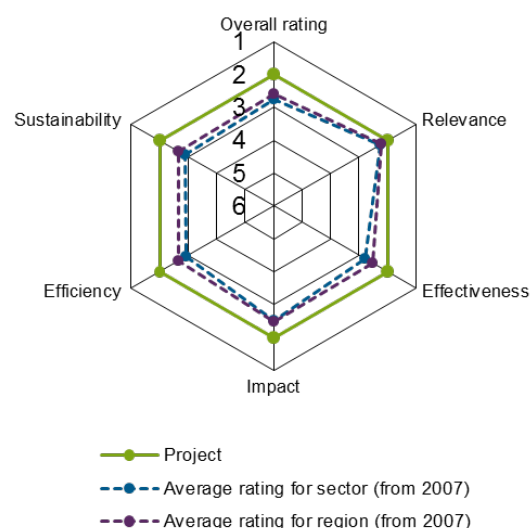
Summary: Project to rehabilitate 36 water catchment areas (WCAs) with an area of 41,634 ha in the Indian state of Andhra Pradesh (now Telangana), which comprised, for example, the construction of contour walls on arable land threatened by erosion, infiltration ditches and the construction of deep gullies. The project was intended to further develop the approach for effective cooperation between the state, non-governmental organisations (NGOs) and village communities developed in the previous project entitled “Maharashtra Erosion Control” (BMZ No. 1991 65 606 and 1996 65 399). The main differences included the introduction of a livelihood fund at WCA level, from which the target population could take out loans, and the roll-out of innovations to increase agricultural productivity. The complementary measure helped to build up the capacities of both NGOs and the target population necessary for the successful implementation of the rehabilitation work. The complementary measure became necessary as the TC measure initially planned for this purpose did not materialise.

Objectives: The overarching development policy objective (impact) of the project was to make a sustainable and equitable contribution to improving the living conditions of the rural population and rehabilitating natural resources in four districts of Andhra Pradesh (now Telangana). The module objective (outcome) was defined as stabilising and increasing agricultural and forestry production as well as the sustainable conservation of natural resources in the water catchment areas by the villagers.

Target group: The target group was the rural population in the selected WCAs in the four districts of Karimnagar, Medak, Warangal and Adilabad. It comprised a total of 70,000 people in about 15,000 households. The target group was actively involved in designing and implementing the project and benefited from the increased production potential. The NGOs involved as implementation partners and the target population were prepared for planning and implementing the physical measures in the upstream capacity building phase (CBP).

Overall rating: 2

Rationale: The project addressed priority problems for India and the target population. The contributions to boosting production, increasing the water supply and thus improving the living conditions of the target population are rather impressive. The successful establishment of the livelihood fund with revolving lending also deserves a special mention. On the other hand, the increase in forestry productivity has been less successful. There are deficits in relation to the maintenance and repair of the physical measures. In addition, the significant increase in the use of the improved water supply (above all for irrigation) could lead to the overuse of water resources in the long term.



Rating according to DAC criteria

Overall rating: 3 (M III), 2 AP

Ratings:

	MP III	AP
Relevance	2	2
Effectiveness	3	2
Efficiency	2	2
Impact	2	2
Sustainability	3	2

General conditions and classification of the projects

Conceptually speaking, both projects evaluated here can be categorised as further developments of the Maharashtra project phases I and II, with the Andra Pradesh (AP) project (now Telangana) transferring the approach to another federal state. In addition to controlling erosion and protecting water catchment areas, the further development essentially meant the projects also established a livelihood fund for the granting of loans and/or grants, including for those without land. Maharashtra I was completed in 2000 and Maharashtra II in 2006; both phases were evaluated in 2012 and given an overall rating of 2.

As no upstream capacity building phase was carried out by German TC during the AP project (as had been the case in the cooperative programme M III), this task was taken over by the more extensive complementary measure (CM).

All figures in EUR million	M III Inv. (Planned)	M III Inv. (Actual)	M III Training (Planned)	M III Training (Actual)	AP (Planned)	AP (Actual)	AP CM (Planned)	AP CM (Actual)
Investment costs (total)	20.66	19.72	0.80	0.59	9.80	9.29	2.0	1.75
Counterpart contribution	0.72	0.91	0.00	0.00	1.11	0.61	0.0	0.0
Financing	19.94	18.81	0.80	0.59	8.69	8.68	2.0	1.75
of which BMZ budget funds	19.94	18.81	0.80	0.59	8.69	8.68	2.0	1.75

Relevance

The programme approach was fundamentally suited to making a significant contribution to solving the core problem, i.e. the threat to ecologically and socio-economically compatible development in rural areas through the marked deterioration of the natural production base. The implemented measures (input), e.g. the construction of gullies and the installation of contour dams, had the potential to contribute to a significant improvement in water availability (output). This was intended to increase agricultural productivity (outcome) and thus increase revenues, making it possible to achieve a plausible improvement in living conditions (impact). The transfer of expertise both to the NGOs supporting the implementation of the measures and to the target groups was adequately addressed by TC or in the CM-funded capacity building phase. Additional measures to ensure the sustainable use of natural resources (particularly water) should ideally have been taken into account during the project design.

The goal of distributive justice, which is an explicit aim of the AP project, was addressed by the livelihood fund. However, given the unequal starting points (particularly in relation to land ownership) and taking into account the aim of increasing agricultural productivity, it is somewhat overburdening the project(s) to also

demand a contribution to improving the living situation while ensuring equitable distribution. So this aspect tends to take a back seat in the evaluation of the AP (and M III) project.

Improving living conditions for the population in the water catchment areas (WCAs) and increasing agricultural revenues were and are key concerns of the Indian Government (GoI). Watershed development is also an integral part of the respective development strategies of the federal states of Maharashtra and Telangana. In addition, soil erosion and surface runoff were identified as key issues by the target group in Telangana. While erosion is a problem in most parts of India, northern Telangana is also affected by drought; this, among other factors, played a role in the selection of the drought-prone project area. The federal state of Maharashtra is a national pioneer in the field of water catchment area (WCA) management. This very densely populated state in the semi-arid programme area has extremely unfavourable climatic conditions. Heavy rainfall strips away the soil's valuable nutrients, while recurring droughts create serious problems for the drinking water supply and result in agricultural losses. Both projects were therefore well-placed in regional terms.

The German government's development cooperation activities in the fields of erosion control and WCA management are in line with Indian procedures and implementation structures. The projects are also in line with the previous and current objectives of the German government¹. Current and upcoming NABARD and GoI programmes increasingly focus on adapting to climate change; indeed, the activities under this priority area are similar to those carried out in the programmes evaluated here. From today's perspective, adapting to climate change would be included under the programme objectives.

Overall, the relevance is high.

Relevance rating: 2 (both projects)

Effectiveness

Despite their almost identical design, the module objectives (outcome) of the two projects were formulated slightly differently. As a result, the module objectives had to be harmonised and supplemented for the EPE so that the following common wording could be used for both projects: The module objective is to stabilise and increase agricultural and forestry production, as well as help villagers in the WCAs ensure the sustainable conservation of natural resources.

The indicators defined in the programme proposals (PP) were harmonised for the EPE and supplemented with other indicators inspired by the evaluations of M I and II. In some cases, monitoring results were available before the EPE (e.g. an evaluation study commissioned by NABARD in 2014, as well as a study of AP by the India-based Central Research Institute for Dryland Agriculture (CRIDA)); however, the assessment was based primarily on the site visits to four WCAs in Telangana and the data collected by an external consultant for a sample of six WCAs² in Maharashtra and Telangana.

Table 1: Outcome indicators and achievement of objectives

Indicator	Status PA, Target value PA	Ex post evaluation
1. Percentage of fully operational and utilised water conservation and erosion control structures without significant damage.	70% of the structures are fully functional.	M III: Partially achieved. Around 67% of the structures are fully functional, but more than 50% require maintenance and/or repairs. AP: Partially achieved. The majority of the structures are

¹ See project proposals (PP) from 23 December 1998 (M III) and 27 December 2000 (AP); Federal Ministry for Economic Cooperation and Development – BMZ (2017): BMZ water strategy 08/2017. Key to implementing the Agenda 2030 and the Climate Agreement.

² Criteria for random sample selection: the sample should comprise a mix of "good", "medium" and "poor" WCAs as rated by NABARD, and the NGO acting as the Project Implementing Agency (PIA) should still be on the ground. A phase II WCA was additionally inspected as a control factor for the impact of phase III.

		fully functional, but more than 55% require maintenance and/or repairs.
2. Cultivated forests and fruit crops have survived and the protection against cattle has proven effective.	60% tree survival rate.	M III: Not achieved. The tree survival rate is around 40%. AP: Not achieved. The tree survival rate is just 30%.
3. Controlled grazing (social fencing, stall feeding) of community-owned areas takes place, i.e. achieved through regulated cattle grazing and the improvement of natural pastures.	Controlled grazing of community-owned land in 80% of WCAs.	M III: Achieved. Controlled grazing takes place in 95% of WCAs. AP: Achieved. Controlled grazing takes place in all visited WCAs.
4. Increased yields of important crops.	Min. 25% increase in yield of important crops. (2000: corn 1,244 kg/ha and sorghum 712 kg/ha).	M III: Achieved. Increase of 11–85% compared to the baseline (2018: corn 2,865 kg/ha and sorghum 1,550 kg/ha). AP: Achieved. Increase of 43–276% compared to the baseline. (2018: corn 3,144 kg/ha and sorghum 1,794 kg/ha).
5. Annual increase of acreage in the catchment area and increase in the irrigated area.	Min. 10% increase in utilised agricultural land.	M III: Achieved. The utilised agricultural land (irrigated area) increased by around 9% (76%) in the high season and by 54% (97%) in the off-season, and was extended to include a third crop in some places. AP: Achieved. The utilised agricultural land (irrigated area) increased by around 8% (125%) in the high season and by 162% (192%) in the off-season.
6. Number of larger, active gullies.	Objective: Prevention of gullies.	M III: Partially achieved. Gullies are visible in some of the visited WCAs. AP: Partially achieved. Gullies are visible in some of the visited WCAs.
7. Only M III: The community	At least 60% of the facilities are	M III: Not achieved. The ma-

facilities started by women are still owned and run by women.

still owned by women.

majority of community facilities are no longer functional.

Based on the available information and the field visits conducted, there is no question that the objective of **increasing and stabilising agricultural production in both projects** was achieved. Revenues from key crops have risen significantly, the proportion of unproductive land has decreased, irrigated land has increased significantly (particularly in AP) and production has been extended to a second and sometimes third harvesting period. This was mainly due to improved water availability and soil moisture, which were increased significantly by the programme.

The planned **increase in forestry production**, by contrast, was only partially achieved **in both projects**. On the one hand, the project implementation in AP was not extended to state forest areas, as no agreement could be reached with the forestry authority. On the other hand, the measures implemented on community-owned or private land were only of limited success, with a tree survival rate of around 30%. State forest areas do appear to have been included under project M III, but contradictory claims were made regarding the scope of such measures. According to data from the field visits, the tree survival rate in the selected WCAs was just 40%. By the end of the project, a survival rate of more than 60% was reported.

In both M III and AP, the physical structures were largely suitable for ensuring the sustainable conservation of natural resources. In some cases, the potential for the optimal design of these structural measures in relation to one another was not fully exploited (e.g. contour dams were not flush with the slope or walling measures in gullies were not coordinated), which limited the effectiveness of the individual structures. As a result, new gullies were sometimes visible during the visits to the WCAs.

In M III, alternative resource-conserving methods such as composting and organic pest control were introduced on a pilot basis through **training and demonstration activities**. In most cases, however, such methods are not actively used. The **women's promotion component** funded social activities (grants; e.g. training in nutrition, health and vegetable growing) and other income-generating group activities (loans; e.g. small enterprises for potato processing or tailoring). The impact of the women's promotion component was not closely tracked, so it is not possible to make any measurable statement here. In the sampled WCAs, the financed community facilities were no longer operational and the rates of repayment were low. Nevertheless, an increase in women's self-confidence was reported over the project period. The **livelihood fund** was set up as a training tool, in particular for those without land (grant) and for start-up loans for basic equipment. In most WCAs, the primary focus was on the grant component. As a result, the fund was only used in a small number of WCAs (two out of six in the sample). While it may not represent a sustainable source of financing, the fund can nevertheless be considered a successful instrument of start-up funding for both land-owning and landless households.

The **innovations** introduced as part of the **AP project** (e.g. drought-resistant crop plants and varieties, water-efficient micro-irrigation systems) contributed to the increase in productivity and are still implemented for the most part. These measures were not introduced across the programme area in a homogenous way, however. Both the types of innovation and the scale of their implementation were dependent on the prior experience of the NGOs involved in the project³.

The revolving **livelihood fund** proved to be a very successful tool **in AP**, giving the population access to affordable funding and reducing their dependency on informal lenders. It was not possible to carry out comprehensive due diligence on the livelihood fund within the context of the EPE, meaning that no clear assessment of performance could be made. It was apparent, however, that in all WCAs the fund was actively managed by the VWCs, utilised by the population, and repayments were being made. The establishment at WCA level appears to have been an important success factor, as the repayments were secured through peer monitoring and there was a shared interest in the continued existence of the fund. Thus the livelihood fund was a successful start-up funding instrument for both land-owning and landless households.

³ In Kakatiya, for example, the past experience of the NGO meant that a significant focus was placed on vegetable growing, whereas in Indervelly almost no productivity-enhancing measures were introduced.

Overall, the target achievement related to increasing agricultural productivity can be considered highly successful. The key success factors for the achievement of the programme objectives were: (a) the very participative and democratic approach, (b) the use of network planning technology⁴ as a planning tool and (c) the implementation of the individual projects in three clearly separate phases (Capacity Building Phase (CBP), Full Implementation Phase (FIP) and Consolidation Phase (CP)). The high levels of interest and project participation among the population in the visited WCAs were impressive. The M III project fell short of the target achievement in promoting women, and both projects failed to achieve the forest productivity objective. This latter shortcoming is due in part to a lack of rainfall at the time of the project implementation (especially 2012–2014). On a critical note, there was no systematic introduction of suitable measures which could be used by villagers to conserve natural resources in the WCAs.

Given that the AP project saw a particularly large increase in agricultural productivity, and considering that the livelihood fund produced better results than the M III project, the latter is considered satisfactory and the AP project is rated as good.

Effectiveness rating: M III 3; AP 2

Efficiency

At the beginning of the M III programme, the estimated costs per ha were around 50% higher than the threshold value for WCA programmes financed by the GoI. However, this threshold was raised several times until it reached the current level of INR 12,000 (around EUR 150⁵) per ha, which is largely attributable to the programme evaluated here and its predecessor phases. The better impacts of the DC-financed programmes were revealed in various studies⁶, and the cost caps for the state programmes were adjusted as a result. The actual costs per hectare were INR 9,631 (around EUR 120). Some measures could have been implemented more cheaply by using machinery. However, this was deliberately dispensed with since creating paid labour for the target population was an important programme component. Against this background, the production efficiency is rated as good. Not only did the expected payment act as an incentive for participation in the programme, the performance of the work also increased ownership of the measures within the population. Preliminary observations based on the early years of use suggest that the investments were economically viable, and as such the allocation efficiency can also be assessed as positive.

In the AP programme, the estimated costs of INR 9,541 per ha calculated at the project proposal were significantly exceeded due to wage increases that did not affect the M III programme, resulting in a total amount of INR 13,500 per hectare. The costs were thus above the current (2018) threshold of INR 12,000 per ha, which – as described above – had been set for other WCA projects financed by the GoI. The reason for this, unlike in GoI-financed projects, is that the use of machinery was largely dispensed with – much like the M III programme – given that providing paid labour for the target population was also an important component of the AP programme. The effects of a strong incentive to participate and the feeling of ownership over the infrastructure created were also felt here. As with M III, we can also assume based on rough preliminary calculations that there will be microeconomic advantages, despite the higher investment costs.

However, the increase in costs resulting from the higher wage rate was not always priced into the budget of the projects at WCA level. As a result, it was not always possible to cover the entire WCA. It would have been sensible to adjust the project budget of the individual WCAs accordingly, in order to ensure full processing of the respective project area – particularly in view of the considerable residual funds at programme level. This shortcoming is attributable to insufficient communication between NABARD and the respective NGOs supporting the measures at WCA level.

⁴ The network planning technique is a project planning and management tool used to create graphical representations of impact chains and of the logical and temporal sequence of sub-processes. In the context of the programme it was used to find appropriate measures for each project area (WCA level) in a participatory way and to avoid “one-size-fits-all” solutions.

⁵ Calculated according to the daily exchange rate on 27 March 2018.

⁶ Kerr, John et al. (2002): Watershed Development Projects in India. An Evaluation. International Food Policy Research Institute (Vol. 127); Kulkarni, B. N. et al. (1999): Evaluation Study of Mendhwan Watershed Project Under IGWDP-Maharashtra State. NABARD

Overall, however, the production efficiency and the allocation efficiency for both projects can be rated as high. Targeted solutions were identified for the respective project locations, and largely implemented to a satisfactory standard.

Efficiency rating: 2 (both projects)

Impact

The programme objective (impact) for both projects M III and AP was to contribute to maintaining or improving the living conditions of the target population. In the case of the M III programme, this objective was supplemented in order to bring it into line with the AP project in Telangana by including the objective of contributing to the rehabilitation of natural resources in the programme area.

The impact indicators of both programmes were also harmonised (only one indicator was originally defined for M III: the marked reduction in poverty-induced seasonal migration). The aspect of distributive justice, which was included in the formulation of objectives for the AP programme, is reflected in the indicators. As explained in the “Relevance” section, however, distributive justice as an objective is almost impossible to achieve when promoting an increase in agricultural productivity if the target group members hold very different quantities of land; consequently, the distributive justice aspect is given a subordinate role when evaluating the target achievement.

Table 2: Impact indicators and target achievement

Indicator	Ex post evaluation
1. The real incomes of those without land and smallholder households with less than two acres of land have not decreased compared to the start of the project.	M III and AP: Partially achieved. During project implementation, real income increased due to paid labour; at the EPE, a random sample of six WCAs in Maharashtra and Telangana showed that the purchasing power ⁷ of landless people decreased by around 6.5% (M III) and 4% (AP) respectively compared to the situation at the project start. For small farmers, the data collected during the EPE showed an increase in real incomes of 87% (M III) and 85% (AP) respectively.
2. The real incomes of farming households with more than two acres of land have increased by at least 10% compared to the situation at the start of the project.	M III and AP: Achieved. According to data collected during the EPE, the real incomes of farming households with more than two acres of land increased by 77% to 328% (M III), and by 70% to 284% (AP) respectively.
3. The counterpart contributions of landowning households for investment costs and maintenance funds are levied according to distribution.	M III and AP: Achieved. In all WCAs, the counterpart contributions of households were based on land area, and in AP on irrigated area.
4. Number of villages with year-round water supply from wells (no quantitative target formulated, no baseline).	M III: Achieved. Water from wells is available all year round in 80% of the villages; data on compliance with international drinking water quality standards is not available. AP: Partially achieved. Water from wells is available all year round in all the villages visited (six out of six), but according to the population it

⁷ Calculation based on the national Consumer Price Index (Handbook of Statistics on Indian Economy, September 2017).

	does not comply with drinking water quality standards for the most part.
5. There is a reduction in poverty-induced seasonal migration (no quantitative target formulated, no baseline).	M III and AP: Achieved. Migration in both programme areas fell by around 80% during the implementation; but according to the population it has risen slightly again in recent years. In M III this is due in particular to employment opportunities on sugar cane plantations and in AP to better employment opportunities in urban areas.

In light of the available information (notably the final review report from 2016 and an evaluation carried out by NABARD in 2014, as well as the CRIDA study for AP), along with the data collected by the consultant at six WCAs for M III and six WCAs for AP, and supplemented by the observations on site in AP during the field mission, there is no doubt that the projects made a significant contribution to improving the living conditions of the target population. This is evidenced, among other things, by the fact that incomes from agricultural production have risen considerably as a result of improved water availability, improved irrigation facilities and other productivity-enhancing measures. In the AP project, need-based access to financing options via the livelihood fund also played a role.

The impact on the rehabilitation of natural resources was also significant: the water storage capacity of the soil and the general water supply improved significantly. At the end of the programme, the water table had risen by around 1.1 m in the M III area and by around 3 m in the AP area. Within the framework of the EPE, the target achievement was approximated by the fourth indicator (year-round availability of water from wells). Drinking water from wells was available all year round in the villages visited. Since the majority of water in the AP area was not of drinking water quality according to the population, some people were still dependent on water transport. A large-scale National Rural Drinking Water Programme (GoI) aimed at improving the supply of drinking water in rural areas is currently underway, and as such, improvements can be expected in this area. In any event, the implemented measures mitigated the irreversible degradation of important cultivated areas and preserved the natural living conditions of the population. In this way the project also made a significant contribution to reducing the vulnerability of the population to high climate variability and the effects of climate change, i.e. it contributed to adapting to climate change.

The measures to increase water availability were and continue to be of particular benefit for landowners in lower valley areas, where infiltrating water is concentrated, and especially those near weirs for groundwater recharge. The benefit for households in the upper areas of the WCAs and for those without land, on the other hand, was significantly lower. Unlike M III, since the AP programme paid special attention to distributive justice in line with the formulation of objectives, this programme also contained specific measures to prevent the further consolidation of income and wealth differences in the project region, and also to address issues faced by the landless and rural poor (the “poorest of the poor”). These included the creation of paid labour by avoiding the use of machines in the implementation of physical measures, the introduction of the livelihood fund – through which landless people could acquire sheep or goats for example – as well as ensuring payments to the maintenance funds reflecting the respective benefits. Despite these achievements, the EPE household survey indicates that the purchasing power of the landless and rural poor has decreased slightly compared to the situation at the beginning of the project. However, the target group itself believes their income from wage labour increased slightly during the project implementation. In general, the mission notes that the goal of socially just distribution – i.e. ensuring everyone benefits equally – is too ambitious for a programme that concentrates on improving agricultural production through the development of WCAs. The mission therefore considers the term “socially just” unfavourable, and instead proposes the use of the term “inclusive”.

With regard to the potential capacity-building effects of the programmes, it should be noted that key project elements are reflected in the design of national support measures for WCA management (Integrated Watershed Management Programme, IWMP) and for the Watershed Development Fund (WDF) set up by NABARD. However, the structural impacts of DC in the rehabilitation of WCAs are mainly attributable to

the previous project of “Maharashtra Erosion Control phases I+II”.

Impact rating: 2 (both projects)

Sustainability

Due to the better availability of water, agricultural productivity was improved and stabilised at a higher level. Around two thirds of the physical measures realised in project M III and slightly more of those realised in project AP are still fully functional. However, the infrastructure in all areas is in need of increasing maintenance (mainly due to sediment deposits) and/or repair. A maintenance fund was set up in each WCA to ensure that the Village Watershed Committees (VWCs) responsible for maintenance would have sufficient funds to cover the maintenance and repair costs for municipal infrastructure. There was no evidence of any misappropriation of funds. In the M III project area, however, maintenance works were carried out in just two of the six WCAs sampled; one using funds from the maintenance fund, the other financed by another NABARD programme. The situation in the AP project is similar; the maintenance funds lie unused in the bank accounts. The low utilisation rate of the maintenance funds appears to be due in particular to (1) a lack of understanding among VWCs and NGOs around how to operationalise the fund (including access to and approval of funds) and who is responsible and (2) insufficient technical capacity at WVC level to assess the maintenance and repair requirements and carry out the necessary work. NABARD has been made aware of this issue on several occasions, including during the final review in 2016 and at the Maharashtra I+II EPE in 2012. Ideas for resolving it (e.g. option to use 50% of monies from the maintenance fund to provide loans to farmers to promote use of the maintenance fund) have not yet had any effect in practice.

Further information from the AP programme area indicates that the VWCs are still operational in all 36 locations and continue to grant loans from the livelihood fund. In 30 of the 36 WCAs, the VWCs also assume tasks within the framework of another NABARD programme (Sustainable Development Plan).

As a result of the FC measure, the water table in the project areas initially rose by around 1.1 m (M III) and 3 m (AP) respectively. It can be assumed that the observed increase in the use of groundwater (due to the higher number of wells and increased irrigation intensity) will continue due to the lack of institutionalised water budgeting. In Telangana, the current policy of promoting agriculture through the provision of free electricity has a further impact increasing water consumption. In some areas, water withdrawals now exceed the available water supply despite the increase in the available water supply achieved as a result of the programmes, with the result that the water tables in some WCAs have fallen again in recent years. Despite the fact that the physical measures realised will continue to provide a greater water supply than in the past – assuming appropriate maintenance and repair – the stabilisation of the water table cannot be guaranteed in the long term as there is generally no legal means to avoid overuse. In project M III, one of the WCAs in the random sample had a municipal initiative for water budgeting and clear rules for drilling wells. In the AP programme area, overuse of groundwater had already been identified during the project implementation and this was taken into account in programme activities during the consolidation phase. However, both projects lacked a design component which addressed the problem of water overuse from the outset and which institutionalised and operationalised targeted activities (e.g. municipal water budgeting, raising awareness of water conservation) from the start of the project (CBP).

The residual funds from the AP programme were used to finance an internet and satellite-based monitoring system, which was successfully introduced. This tool is used in all current NABARD-WCA programmes to monitor physical and financial progress in real time, to map out the physical measures created in the projects, and to assess the impact of the projects. It is also used to measure impact.

The sustainability continues to be assessed as good due to the water usage problems addressed during the implementation and the creation of conditions for the improved monitoring of all WCAs using the system financed from residual funds; the sustainability of the M III programme is rated satisfactory.

Sustainability rating: 3 (M III), 2 (AP)

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:

Level 1	Very good result that clearly exceeds expectations
Level 2	Good result, fully in line with expectations and without any significant shortcomings
Level 3	Satisfactory result – project falls short of expectations but the positive results dominate
Level 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Level 5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
Level 6	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).