

Ex post evaluation – Peru

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Sector: Early childhood education (CRS code: 11240)
Programme/project: Primary education programme (BMZ no. 2004 66 102)*
Implementing agency: Peruvian Ministry for Education, MINEDU



Ex post evaluation report: 2019

All figures in EUR million	Project (Planned)	Project (Planned 2017)**	Project (Actual)***
Investment costs (total)	45.30	107.00	89.85
Counterpart contribution	17.70	79.71	61.87
Funding	10.00	9.69	9.69
of which BMZ budget funds	10.00	9.69	9.69
Co-funding IADB	17.60	17.60	17.60

*) Random sample 2019

**) The planned investment costs were adjusted with the 2017 auditors' report.

***) The project is still in progress; information correct as of 15 May 2019.

Summary: The Peruvian primary education programme supported the Peruvian government in modernising the education sector in the area of early childhood education. The project promoted access to and the quality of early childhood education opportunities in rural regions of Peru with high levels of poverty (Huancavelica, Ayacucho and Huánuco) through the expansion of infrastructure, the provision of suitable learning material and play equipment, teacher training, and the institutional reinforcement of the Ministry for Education. Financial Cooperation contributed EUR 9.7 million to the project, which was implemented as part of a parallel financing package with the Inter-American Development Bank (IADB). Of the forecasted total costs of around EUR 107 million, IADB contributed EUR 17.6 million; the Peruvian government's counterpart contribution is due to amount to EUR 79.7 million.

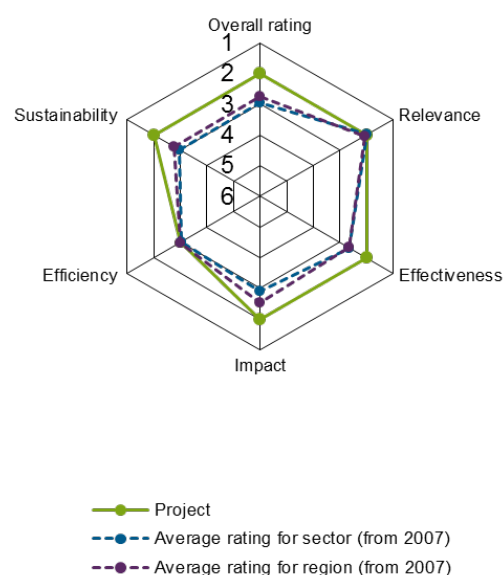
Development objectives: The project's overarching development goal (impact level) was to improve early childhood education in the three selected, very poor rural regions (Huancavelica, Ayacucho and Huánuco) on both a quantitative and qualitative level. The project's objective (outcome level) was: Schoolchildren make the most of access to better teaching and learning conditions at the promoted pre-schools.

Target group: The programme's target group was around 14,000 pre-school-age children (and their parents) in the three (High-) Andean programme provinces, who had inadequate access to high-quality early childhood education. The target group also included teachers and head teachers.

Overall rating: 2

Rationale: The project supported the priorities set out in the national education strategies, and its two-pronged strategic approaches in the field of expanding infrastructure and promoting teachers make it very well suited to address the deficits in the education sector in the area of early childhood education. The objectives were achieved. The education indicators in the three rural regions with high levels of poverty developed disproportionately well compared to the national average during the period under review. Due to the strict political requirements, the cost level for pre-school infrastructure is very high and the project's widespread effectiveness is questionable.

Highlights: Empirical impact analyses – as an integral component of the project design – facilitated effective transitioning and extensive recording of the project's impact on teaching quality and learning performance. The Peruvian government exhibits a high level of political ownership. During the course of the project, it increased its counterpart contribution to 74% of the total costs in order to fully absorb the significant cost increases.



Rating according to DAC criteria

Overall rating: 2

Ratings:

Relevance	2
Effectiveness	2
Efficiency	3
Impact	2
Sustainability	2

Relevance

The project promoted access to and the quality of early childhood education in rural regions of Peru with high levels of poverty. Triggered by the poor results in the PISA study (2000), in which Peru was ranked last out of the 43 countries involved (15 of which were non-OECD countries), the Peruvian education sector was declared a “national emergency”. The improvement of early childhood education opportunities is one development objective of the national education policy, and is therefore consistently reflected in all the education plans from the last ten years (strategies by the Ministry for Education: Plan Nacional de Educación Para Todos 2005–2015; Plan Estratégico Sectorial Multianual – PESEM 2012–2016; and PESEM 2016–2021). Nevertheless, the sub-sector of early childhood education was neglected in national education policy prior to the project. During the project appraisal (PA), shortcomings were identified particularly with regard to the limited access to early childhood education opportunities in rural areas, the poor quality of lessons and the lack of adequate teacher training. Improved early childhood education is an important mechanism for tackling poor learning performance at an early stage, an approach verified by international comparison tests performed by Peruvian schoolchildren in the past.

The project contributed to the international education targets under UNESCO’s “Education for All” campaign and also to Goal 4 of the United Nations’ Sustainable Development Goals “Ensure inclusive and equitable quality education”. The project is also aligned with the current education strategy of the German Federal Ministry for Economic Cooperation and Development (BMZ), “Creating equitable opportunities for quality education”, and its predecessor “Ten objectives for more education, 2010–2013”. Education is not a focus area for German Development Cooperation in Peru. Donor engagement in the sub-sector of early childhood education is generally low.

Educational research¹ shows that investment in early childhood education provides an important foundation for children’s ongoing educational success and has a long-term effect on development, participation and career opportunities in later life. From an economic perspective, programmes in early childhood education are seen as a cost-effective investment in a society’s human capital. Overall, promoting the educational sector is a key factor in poverty alleviation. The three project regions were specifically selected for their rural character, high levels of poverty and poor education results. The target group was roughly 14,000 children between the ages of three and five living in the project regions and their parents. However, the number of young children living in the project communities fell over time. This is the result of declining birth rates and families deciding to leave their villages for employment opportunities.

The chain of effects assumed during the project appraisal can be transferred to the objectives adjusted for the EPE (see Effectiveness and Impact) as follows: The expansion of pre-school infrastructure, the provision of adequate learning materials and play equipment, the ongoing education of teachers in the promot-

¹ See arguments and scientific findings regarding investment in early childhood education and development (Brief): OECD 2011 “Investing in high-quality early childhood education and care (ECEC)”. <https://www.oecd.org/education/school/48980282.pdf> (Accessed September 2019).

Extensive collection of articles regarding evidence and recommended courses of political action: UNESCO 2015 “Investing against Evidence The Global State of Early Childhood Care and Education”. <https://unesdoc.unesco.org/ark:/48223/pf0000233558> (Accessed September 2019).

ed pre-schools, and the institutional reinforcement of the Ministry for Education lead to pupils having and using the access to improved teaching and learning conditions (outcome). Educated teachers teach better, project pre-schools are maintained properly and their capacity is used to a suitable extent. The project therefore makes an important contribution to the overarching development goal of improving the quantity and quality of early childhood education opportunities in the three very poor rural regions (Huancavelica, Ayacucho und Huánuco) (Impact). Enrolment rates in the regions' pre-schools are rising as a result and the improved range of pre-school opportunities has a positive effect on primary school education indicators (age-appropriate enrolment, repetition rates). The assumed effects were consistent and are also plausible from today's perspective.

The project's relevance is generally rated as very high, both at the start of the project and today. The increasing rate of rural depopulation and the decrease in the target group's share of the population in remote rural districts over time leads to the approach being rated as good (2) instead of very good.

Relevance rating: 2

Effectiveness

The project's objective, which was adjusted during this evaluation, is "Schoolchildren make the most of access to better teaching and learning conditions at the promoted pre-schools ("Centros de Educación Inicial")".

Based on the underlying indicator, the project objectives has been achieved. As part of the project's infrastructure component, 154 new pre-schools were built 8as of May 2019). The completion of two additional kindergartens is planned for 2019. In the programme provinces (La Mar, Acobamba and Pachitea), the project was therefore involved in infrastructure measures in 48% of public pre-schools and intervened with teacher training measures, school management support and the provision of new teaching and learning materials at close to 100% of said schools. A total of 398 teachers and head teachers benefited directly from the project's measures.

Based on a sound foundation of collected data, a 2018 impact stud of the project commissioned by the ministry underlines the fact that the project's objectives were reached: (i) adequate, safe and secure learning environments were established and (ii) teachers' teaching practices improved. School visits by the FC and the ex post evaluation team also confirm that all teachers who benefited from the project's training and teaching support measures apply elements from the teaching methods and content that were promoted by the programme in accordance with the requirements of the reformed curriculum.

It can be assumed that the proper maintenance of all financed projects (pre-school buildings and equipment) can be largely assured. All facilities have a maintenance manual. The national programme for maintaining educational building infrastructure was reformed in 2019 as part of the resolution bay the Ministry of Education. It awards all head teachers a budget or preventive maintenance work. The local educational authorities (UGEL) are responsible for allocating this budget. They supervise and check the maintenance and repairs are carried out properly. At school level, maintenance committees (comisión de mantenimien-to) are set up with responsibility for implementing maintenance work.

The main aim of the strategic approach to reinforce and involve parents is to train parents in regular (quarterly) "parent workshops/evenings"/"information evenings" in order to inform them about the pre-schools' goals and learning concept, promote their participation in the schools' organisation, and reinforce their roles in home education and parenting approaches. To implement this strategy, the project developed material for teachers and trained them in the realisation of parent workshops (subjects covered: child development, how children learn, the role of play, emotional support for children, positive discipline, hygiene, communication in the family). Informational material was also developed for parents and distributed.

Parents' involvement in schools management also mobilises local resources and makes an important contribution to maintenance costs and work. The pre-schools visited for the ex post evaluation are adequately maintained. The rooms, sanitary facilities and outdoor areas were clean and found to be in good condition. All of the facilities visited received a small maintenance budget in 2019. Most head teachers also demonstrated examples of maintenance work that they had been able to complete with parental support. According to the final inspection, 80% of the pre-school were maintained adequately in 2018.

The target capacity level for the project pre-schools of the least 15 children per classroom was achieved for 2019. However, the achievement of this indicator needs to be evaluated critically. Analysing the enrolment rates per province clearly reveals that only the project schools in Pachitea (Huánuco) are at full capacity (29 pupils) for the individual projects. In La Mar (Ayacucho), the enrolment rate for the project schools is at the lower level of the targeted capacity, at 22 pupils; the project schools in Acobamba (Huancavelica) fail to reach an adequate capacity level, with just 20 pupils.

Due to the decreasing number of children (see Relevance), the number of pre-schoolers in the project province of La Mar, for example, fell from 4966 to 4708 between 2015 and 2018, despite slight increases in enrolment rates. Based on data from the Ministry of Education, a high enrolment rate can be confirmed in the three project provinces. It can be assumed that almost all three to five-year-olds in the provinces are enrolled, and that a full school capacity can no longer be achieved due to the demographic change described above. On the one hand, this can be deemed critical from the efficiency perspective as the infrastructure's potential cannot be fully exploited. On the other hand, Peru's educational policy follows a human-rights-based approach and this project complies with the requirement to provide even disadvantaged children and young people in the remote rural regions with high-quality education under the remit of equitable opportunities.

to implement the project, an implementation unit was set up as an autonomous implementation mechanism, which reports directly to the Secretary of State for Education Management, facilitating various factors including compliance with donor procedures and flexible project management. The efficient and adaptable approach taken by the implementing units is deemed to be an important prerequisite for the project's effectiveness. By contrast, cooperation between the implementing unit and the relevant departments at the Ministry for Education (for example, for infrastructure, early childhood education, teacher training) only existed in certain areas during the project implementation phase. Effects related to the institutional reinforcement of the Ministry for Education therefore remain restricted to the temporary implementing unit.

It is important to emphasise that the teaching took place bilingually (Spanish and Quechua) and teaching materials and books were also designed in both languages.

The target achievement at the outcome level can be summarised as follows:

Indicator	Status PA, target PA	Ex post evaluation
(1) Trained teachers work according to adapted curricular requirements	Status PA -- (No trained teachers) Target value: 70%	Approx. 80%*. The indicator was achieved. Teachers who benefited from the training and teaching support measures apply elements from the promoted teaching methods and content, which comply with requirements for the reformed curriculum.
(2) Individual projects are maintained properly	Status PA -- (No individual projects) Target value: 67%	Approx. 85%**. The indicator was achieved. Proper maintenance of the financed individual projects (school buildings and equipment) is largely assured by the national programme for maintaining educational building infrastructure. All of the pre-schools visited for the ex post evaluation are maintained to an adequate extent with parental involvement and were found to be clean and in good condition.

<p>(3) The capacity utilisation of the project schools is adequate.</p>	<p>Status PA -- (No individual projects) Target value: Based on a feasibility study, a capacity utilisation of at least 15 pupils per classroom was targeted. This corresponds to 22 pupils per school (1.46 classrooms).</p>	<p>The indicator was achieved for the 2019 school year. The average enrolment rate per project school is 25 children (La Mar 22, Acobamba 20, Pachitea 29)***.</p>
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*) Information based on estimates. An exact quantification is not possible as there is no data available on how many of the trained teachers continue to teach at pre-schools.

**) Information based on estimates.

***) Enrolment rates were collected for 124 project schools.

Effectiveness rating: 2

Efficiency

The project's efficiency was heavily impaired by an ambitious adjustment and restructuring of political standards for school infrastructure. During the project term, the Ministry for Education revised the underlying technical standards twice (2011 and 2014) and added new requirements related to heat insulation, barrier-free access, the design of outdoor areas, play equipment and furniture. The goal was to improve the quality of infrastructure, which is geared towards the needs of early childhood education. As a result, the unit costs per classroom rose significantly, increasing the programme's total costs with them. The 2025 National Plan for Educational Infrastructure adopted in March 2017 sets out the target indicators for pre-school infrastructure costs (buildings and outdoor facilities), which amount to between USD 1,000 and 1,250 per m² depending on the school's predominant climate and topographical conditions. According to the final inspection, this cost level was exceeded at some of the project pre-schools (random sample during final inspection: USD 1,000 to 1,500 per m², or roughly USD 515,000 per classroom). The construction standards implemented in the project comply with the political requirements to provide high-quality pre-schools, even in remote rural areas. All of the individual projects were new buildings. In some cases, existing pre-school buildings were replaced due to their poor condition, while others were used for other purposes. Under the difficult conditions in the locations, some of which were difficult to access and therefore not attractive to building companies, lower unit costs or a more economical process would likely be impossible. Furthermore, the revised technical specifications meant that local materials could not be used in some cases as the materials needed were not available in Peru. A cost-reducing effect could have been achieved by the adjustment of procedural requirements, which stipulate that the MINEDU may not purchase property, but merely have the land signed over. Due to this regulation, the MINEDU had little influence over the quality of the land. Even though the political requirements for technical standards and the difficult building conditions justify the high costs, it is questionable whether expanding this model would be realistic and could be financed by the Peruvian education sector. It can be assumed that the high quality of the buildings has a tendency to reduce maintenance costs. On the other hand, these quality standards also call for a high standard of maintenance, which may be difficult to achieve at some rural schools. There are no known examples demonstrating how the pre-school buildings' economic efficiency is increased through alternative usage outside of teaching hours.

An evaluation of allocation efficiency in the form of a cost-benefit analysis during the ex post evaluation is not possible as these analyses are highly complex in the education sector. The project's impact study (GRADE/AIR 2018) clearly shows the positive effects of both the project's infrastructure- and education-related measures. International educational research studies confirm the high educational dividends brought about by investment in early childhood education and early school years in particular.

Despite the very high costs, the project is rated as satisfactory in light of the good production and allocation efficiency, i.e. the objectives achieved as a result of using this finance.

Efficiency rating: 3

Impact

The project's overarching development goal (impact level), which was modified during the ex post evaluation, is: early childhood education in the three very poor rural regions selected (Huancavelica, Ayacucho and Huánuco) has been improved on both a quantitative and qualitative level.

This target has been achieved. All three of the indicators formulated at impact level have been met. They allow conclusions to be drawn regarding an improvement to the quantity and quality of early childhood education opportunities. In the three project regions the educational indicators selected were significantly below the national average at the start of the project. For instance, enrolment rates at pre-schools (three to five-year-olds) in the regions rose from 69.6% to 94.2% and therefore brought about important progress in achieving the requirement of compulsory two-year pre-school education.

High-quality early childhood education opportunities are geared towards preparing children for school, making sure they are ready for school, and opening up new opportunities for disadvantaged children. They therefore have a positive impact on children's subsequent time and performance at school in their early years and promote the early compensation of social and gender-specific disadvantages. In this regard, two indicators were formulated at impact level in order to describe the project's effects at primary schools: age-appropriate enrolment at primary school and repetition rates for school years one to three. Both indicators improved significantly in the project regions: age-appropriate enrolment rose from 73.3% to 95.3%, while repetition rates fell from 11.1% to 3.9%. A comparison of the development of educational indicators at national level also clearly shows that the results in the project regions have aligned with the national average (repetition rates in primary schools) or even exceeded them (enrolment rates in early childhood education, age-appropriate enrolment at primary school). It is plausible that the project contributed to the impact-level objective and the aforementioned positive development of educational indicators in the project regions; this suggestion is supported by the results of an empirical impact analysis drawn up in 2018 (GRADE/AIR 2018): children at the project schools exhibit better cognitive skills in standardised tests (speaking and listening, non-verbal cognition test) than children in a control group with similar conditions.

At this point in time, no broad-scale impact beyond the project regions has been identified for the project. Over the course of the project, the Ministry for Education has demonstrated great willingness to promote early childhood education. This is reflected in the nationwide improvement in the coverage of early childhood opportunities, in reforms to pre-school curriculum and in the fact that the significant cost increases incurred during the project were covered by the ministry's own budget. The project's teaching-related interventions in particular (component 2) are model-like in nature, and their effective approaches and the evidence produced offer good conditions for the replication of certain sections. The project pre-schools meet the high national standards. The accessible layout and equipment of the pre-schools have been adapted to the curriculum's requirements and are able to promote high-quality early childhood education. However, the reproducibility and an upscaling of the infrastructure measures (component 1) are regarded more critically due to the high costs (see section under Efficiency).

Indicator	Status PA, target PA	Ex post evaluation
<p>(1) The proportion of children going to pre-school in the project regions is approaching the national average (total/female/male)</p>	<p>Net enrolment rates for three to five-year-olds; 2011:</p> <ul style="list-style-type: none"> - National average: 77.3% - Avg. for project regions: 69.6% (Ayacucho: 74.6%; Huancavelica: 70.2%; Huánuco: 63.9%). - Difference between national level and project regions: 7.7% <p>Target value: Enrolment rate 2019>2011; Difference from national average has reduced 2019<2011</p>	<p>The indicator is fulfilled. The net enrolment rate in early childhood education facilities (three to five-year-olds) in the three project regions is 1.2% above the national average.</p> <p>Net enrolment rates for three to five-year-olds; 2018:</p> <ul style="list-style-type: none"> - National average: 93% - Avg. for project regions: 94.2% (Ayacucho: 95%; Huancavelica: 97.1%; Huánuco: 90.4%). - Difference between national level and project regions: -1.2%
<p>(2) Age-appropriate enrolment rates at primary schools in the project regions increase</p>	<p>Pupils aged six enrolled in primary school; 2011:</p> <ul style="list-style-type: none"> - National average: 81.5% - Avg. for project regions: 77.3% (Ayacucho: 66.3%; Huancavelica: 90.1%; Huánuco: 75.5%). <p>Target value: age-appropriate enrolment rate increases (2019>2011)</p>	<p>The indicator is fulfilled. In the intervention regions, the rate of six-year-old children starting primary school rose by 18% (national growth: 11.7%).</p> <p>Pupils aged six enrolled in primary school; 2018:</p> <ul style="list-style-type: none"> - National average: 93.2% - Avg. for project regions: 95.3% (Ayacucho: 90.1%; Huancavelica: 97.1%; Huánuco: 98.6%).
<p>(3) Repetition rates at the primary schools in the project region (school years 1/2/3) decrease</p>	<p>Repetition rates in primary school (years 1 to 3) 2011:</p> <ul style="list-style-type: none"> - National average: 6.6% - Avg. for project regions: 11.1% (Ayacucho: 10.5%; Huancavelica: 10.3%; Huánuco: 12.5%). <p>Target value: Repetition rate at primary school drops (2019<2011)</p>	<p>The indicator has been achieved; the repetition rate in the first stage of primary school (years 1 to 3) in the project regions fell by 7.2% (national decrease 3.3%).</p> <p>Repetition rates in primary school (years 1 to 3) 2018:</p> <ul style="list-style-type: none"> - National average: 3.3% - Avg. for project regions: 3.9% (Ayacucho: 2.1%; Huancavelica: 3.9%; Huánuco: 5.6%).

Source: Peruvian Ministry for Education (<http://escale.minedu.gob.pe/> – Accessed 20 August 2019)

Impact rating: 2

Sustainability

The education sector is one of the Peruvian government's priorities. The funds allocated to the sector have risen continuously since 2011 and corresponded to 17.5% of the budget in 2018, or almost 4% of GDP. In view of the political interest in the education sector, the as yet unrectified shortcomings in the sector, and the forecasted sectoral cost increases (e.g. in the area of teacher salaries), it can be assumed that funding will remain available for the medium to long-term.

Continuity in the sector's policies is heavily impaired by frequent changes in government and the replacement of education ministers. There have been eight different Ministers for Education since the project planning stage. Nevertheless, there are general threads running through the reform efforts, particularly improvements to the quality of education and learning performance, the reinforcement of teaching staff, and school management. However, the educational sector is currently seeing a clear shift in political priorities in favour of secondary and tertiary education and to the detriment of early childhood education.

The infrastructure provided by the project is in good condition and the facilities are used for the intended purpose. From the current perspective, it can be assumed that the Peruvian government will use the facilities for their intended purpose in the long term and will provide funds from the state budget for running and maintaining the facilities even though full capacity use of the pre-schools is not expected due to demographic developments (declining birth rates, rural exodus). A national programme for maintaining school buildings has funding and structured processes to guarantee a minimum standard of maintenance at all schools. At school level, the mobilisation of additional local resources is another important factor for the ability to cover costs for maintenance and repairs. As some of the locations are remote, difficulties arise as a result of specific technical requirements, such as the proper operation and maintenance of the provided water pumps as there are no people in the villages and their surroundings with the relevant technical knowledge.

In contrast to the infrastructure components, the sustainable effectiveness of teaching-related measures is rated as critical. Using a small share of the project budget (almost 9%), teacher training, teaching support and the provision of teaching materials were able to achieve good results in improving teaching practices and children's learning performance within three years (2014–2017). However, the executing agency developed and ran the project on a pilot basis, which was largely independent of institutional processes and the relevant structures. The Ministry for Education has not yet formulated a strategy for incorporating the project's approaches and experience into national teacher education and training, school management concepts and the development of early childhood curriculum in future. In view of the current lack of institutionalisation in teaching approaches, the high rotation of teaching staff is another risk factor in the project's sustainable effectiveness. Large numbers of teachers, particularly those in rural areas, are not civil servants and work with one-year contracts. Teaching staff within the provinces and sometimes even beyond the regions change on an annual basis. In Ayacucho and Huancavelica, these unfavourable dynamics were exacerbated further in 2019 following a change in employment conditions for pre-school teachers (obligatory knowledge of Quechua). It is likely that a large number of the trained teachers will continue to be available to the national education system in another role. However, the continuity of improved teaching skills is questionable over the long term.

As such, the sustainability of the project is rated as just about good.

Sustainability rating: 2

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).