

Kingdom of Morocco

Ex-Post Evaluation of Japanese ODA Loan

Rural Secondary Education Expansion Project

External Evaluator: Machi KANEKO, Earth and Human Corporation

0. Summary

Through construction of 101 secondary schools in the five regions in Morocco where most of their rural areas¹ had higher poverty index², this project was intended to expand their secondary education coverage and facilitate efforts to redress urban-rural and gender disparities in access to education.

Both at the time of the project's appraisal and the ex-post evaluation, the Government of the Kingdom of Morocco (hereinafter referred to as "the Government") has put broader access to secondary education in rural areas as a key development agenda. The project has been highly consistent with the country's development plan, development needs, as well as Japan's ODA policy. Therefore its relevance is high.

At the time of the ex-post evaluation, 98 secondary schools³ provided by the project (hereinafter referred to as the "target schools") are operated where approximately 48,000 students are enrolled. This accounts for 20% of the total number of students (about 240,000⁴) who are enrolled in public secondary schools in rural areas of the five target regions.

Indicators measuring effectiveness of the project have mostly achieved the expected objectives in terms of its effectiveness. Namely, access to secondary education has been increased over the rural areas, the age specific enrollment rates among 12- to 14-year-olds improved, and the number of girl students enrolled in secondary schools also increased. Although urban-rural disparities in the enrollment rates remain, the expansion of secondary education in the five target regions will have a positive impact on equitable access to secondary schooling (by redressing urban-rural and gender disparities). Given that the project has mostly produced its effects as intended, its effectiveness and impact is high.

Although the project cost was within the plan, the implementation period significantly exceeded the plan. Therefore, the efficiency is evaluated to be fair. Under the supervision of the Regional Education and Training Academy (Académie Régionale de l'Education et de la

¹ According to its new administrative divisions defined in 2009, Morocco is divided into 16 regions, further broken into 75 prefectures and provinces (13 prefectures and 62 provinces) and 1,503 communes. The last are divided into 221 urban communes and 1,282 rural communes. The project has implemented secondary school construction in the latter. In this report, urban communes are referred to as "urban areas," and rural communes as "rural areas."

² Poverty index is calculated based on the "Poverty Criteria by Region" expressed as percentage of the poor people at the regional level, which is set out by the Agency of Social Development of Morocco using seven indicators including enrollment rates (national and female respectively), literacy rates (national and female), unemployment rates, coverage of water supply and electricity.

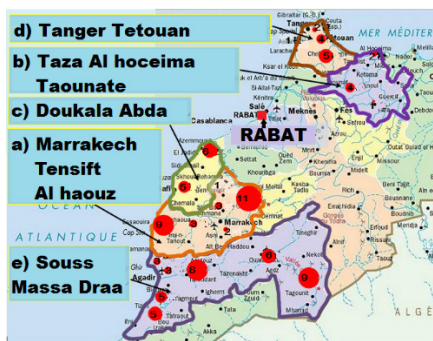
³ Of 418 public secondary schools in the rural areas of the five target regions, 98 (23%) or nearly one in five schools have been constructed by the project.

⁴ According to the educational statistics for 2012/2013, a total of approximately 240,000 students were enrolled in public secondary schools in the rural areas of the five target regions.

Formation, hereinafter referred to as “AREF”) in each target region, Provincial Delegations and the target schools have developed in partnership an institutional setting for operation and maintenance of the project. No major problems have been thus observed in the institutional, technical and financial aspects associated with operation and maintenance. Therefore sustainability of the project effect is high.

In light of the above, this project is evaluated to be highly satisfactory.

1. Project Description



Project Locations (Five target regions)



Sidi Boutmim Secondary School in Al Hoceima province of Taza Al Hoceima Taounate region

1.1 Background

Embarking on a reform of the educational system in 1985, Morocco has been working for improvement of the educational sector. However, the Ministry of National Education at that time conducted an assessment of the reform progress in 1998-99⁵, and its findings revealed the country’s educational indicators including the enrollment rates had not been much improved. Given such outcome, the Government set up the Special Committee on Education and Training, and declared the National Education and Training Charter (Charte Nationale de l’Education et de la Formation, hereinafter referred to as “CNEF”) in 1999, which has become the foundation of Morocco’s educational policies. Announcing the “Decade for Education and Training” for a period from 1999 through 2009, CNEF set forth key priority areas in broadening the coverage of compulsory education (primary and secondary schooling) and quality improvement as well as decentralization of education.

In addition, Morocco had urgent needs at that time to develop human resources essential to generate employment through investment promotion and industrial diversification, while also redressing regional disparities. In particular, nearly 70% of the country’s poor population⁶

⁵ An academic year in Morocco begins in September and ends in June. In this report, the one that begins in September in 1998, for example, is indicated as “1998/99.”

⁶ The poor population presented in this report refers to the population of the regions with high poverty index

reside in the rural areas, and in 1998/99, 64.3% of such group did not complete primary schooling. Given these backgrounds, redressing local disparities in access to education required a special attention as a priority agenda. Also, in some of the rural areas, secondary schools had not been provided within a reasonable distance for children. This was one of the barriers for poor people to attend school.

To address these problems, the project was implemented to construct secondary schools in rural areas in Morocco.

1.2 Project Outline

The objectives of this project were to expand secondary education coverage and redress urban-rural and gender disparities in access to education in these areas, through construction of 101 secondary schools in the rural areas of the five target regions of Morocco thereby contributing to raising living standards of the people.

Loan Approved Amount/ Disbursed Amount	8,935 million yen / 6,647 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2004 / March 2004
Terms and Conditions	Interest Rate 0.9%, Repayment Period 20 years (including 6 years of Grace Period) Procurement: General Untied
Borrower / Executing Agency	The Government of the Kingdom of Morocco / Ministry of National Education and Vocational Training (MENFP)
Final Disbursement Date	September 2011
Main Consultants	Nippon Koei Co., Ltd. (Japan) Conseil, Ingenierie et Developpement (Morocco) (JV)
Related Projects	JICA Technical Cooperation Project: “The Basic Education Improvement Program for Rural Area in Morocco” (September 2003-January 2006) “Equitable Education Promotion Project in Morocco” (July 2014-July 2018: expected) Japanese ODA Loan: “The Basic Education Sector Support Project” (L/A signed in September 2013) (co-funded with the World Bank) Projects of Other Donor Agencies: World Bank “Social Priorities Program” (1996-2003) EU “Basic Education Programme” (Phase 1 :2000-2002, Phase 2: 2003-2006)

provided in the “Poverty Criteria by Region.”

	African Development Bank (AfDB) “Quality Basic Education Support Project (in an amount of approximately 7.6 billion yen)” (2001-2007)
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2. Outline of the Evaluation Study

2.1 External Evaluator

Machi Kaneko, Earth and Human Corporation

2.2 Duration of Evaluation Study

This ex-post evaluation was carried out in the following schedule.

Duration of the Study: September 2013 – December 2014

Duration of the Field Study: January 17 – February 11 and April 17 – May 11, 2014

3. Results of the Evaluation (Overall Rating: A⁷)

3.1 Relevance (Rating: ③⁸)

3.1.1 Relevance to the Development Plan of Morocco

(1) Development policies at the time of the appraisal

At the appraisal phase, the Government was implementing “Social and Economic Development Plan (2000-2004)” as its national development policy with the objectives of (i) redressing disparities in rural development among communities, (ii) employment generation through investment promotion and industrial diversification, and (iii) policy implementation to address poverty, human resource development and social inequalities. In particular, human resource development was one of the key policy agendas in order to achieve social and economic development of the entire country.

Regarding the education policy, Morocco declared CNEF in 1999, which has become the foundation for the educational sector. CNEF set out a period from 1999 through 2009 as the “Decade for Education and Training,” with a particular emphasis on (i) expansion of compulsory education coverage (primary and secondary schools), (ii) quality improvement of the compulsory education, and (iii) rationalization of operation and management (decentralization of education).

(2) Development policies at the time of the ex-post evaluation

At the time of the ex-post evaluation, Morocco had not drawn up a “National Development Plan” since 2005, but it has been implementing development plans and policies targeting individual sectors. In regard to human resource development agendas, the “National Human Development Initiatives (Initiative Nationale de Développement Humain, hereinafter referred

⁷ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁸ ③: High, ② Fair, ① Low

to as “INDH”) revealed in 2005 is a major policy highlighting priorities in reducing poverty through human development and redressing social inequalities and community disparities. Currently, INDH has entered into its second phase (2010-2015), serving as an underlying principle for Morocco’s human resource development programs.

A post-CNEF scheme titled “National Education Emergency Programme (Programme d’Urgence de l’Education Nationale 2009-2012, hereinafter referred to as “PUEN”) had been implemented. Concrete actions were taken to deliver four objectives, namely (i) full coverage of basic education up to 15-years old (increase in the enrollment rates and completion rates), (ii) expansion of higher education and universities, (iii) reform of educational systems, (iv) resource allocation to realize these objectives. Part of the efforts to achieve (i), which is related to the project’s objectives, include provision and rehabilitation of primary and secondary schools, development of school dormitories, provision of school meals, support for school commuting, financial assistance for low-income households, and scholarship provision. These programs were intended to improve the educational environment and facilitate access to education.

As a post-PUEN scheme, Morocco has formulated “Mid-term Action Plan⁹ (Plan d’Action à Moyen Terme, hereinafter referred to as “PAMT”) to improve the environment of basic education including enhancing access to secondary education as well as strengthening educational administration.

In light of the above, Morocco’s national development plan and educational policies have stressed importance of redressing educational disparities and expanding access to secondary education both at the time of the appraisal and ex-post evaluation. Therefore, the project has been relevant to the Morocco’s policies.

3.1.2 Relevance to the Development Needs of Morocco

(1) Development needs at the time of the appraisal

Under the reform of the educational system launched in 1985, Morocco strove to expand and improve primary education coverage. As a result, the primary school enrollment rate rose from 52.5% in 1990/91 up to 90% in 2001/02. In May 2002, Morocco decided to make primary school (primary education) and secondary school (lower secondary education) compulsory. Thus, six years of primary school (6 to 11 years old) and three years of secondary school (12 to 14 years old) have officially come under a period of compulsory education.

On the other hand, the sharp increase of students completing their primary schooling resulted in insufficient number of secondary school facilities to accept new entrants.

⁹ According to Ministry of National Education and Vocational Training, PAMT is an interim measure with a transitional period from 2014 through 2016. Currently, an education policy targeting 2020 is under preparation, which is expected to be announced in September 2015.

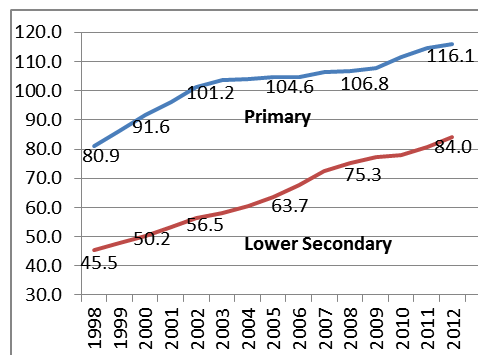
Accordingly, the age specific enrollment rate¹⁰ of secondary school was 63.1% in 2001/02 compared to 42.2% in 1990/91, indicating the secondary education coverage remained limited nationwide. Furthermore, compared to urban children’s enrollment, that of their rural counterparts was low. Although the 12-to-14-years old enrollment rate in urban areas was 85.2% in 2001/02, that of rural areas remained 42.1%, revealing a striking disparity. Given such circumstances, the Government, under its CNEF, embarked on construction of secondary schools in the rural communes (municipalities) across the country. At the time of the appraisal, however, only about 40% of its planned secondary schools were completed. Lack of secondary schools within a reasonable commuting distance was a major impediment to raise the enrollment rates in rural areas.

Moreover, the enrollment rates of rural girls, particularly of those residing in remote areas, were low. The 12-to-14-years old enrollment rate of rural girls was 32.9% in 2001/02, compared to 50.3% for rural boys in the same year. The leading cause of this disparity was parents’ hesitance to allow their girl children to commute long distances, given underdeveloped transportation services, or their reluctance to put them in dormitories for the sake of schooling.

In light of the above, the needs of secondary school construction in rural areas were very high.

(2) Development needs at the time of the ex-post evaluation

Through the Government’s promotion of CNEF and PUEN, access to primary education has been largely improved, as indicated in Figure 1 below, with the gross enrollment rate of primary education¹¹ rose from 91.6% in 2000/01 to 116.1% in 2012/13. However, quality improvement of education is now a key issue to be addressed, and the Ministry of National Education and Vocational Training (Ministère de l’Education Nationale et de la Formation Professionnelle, hereinafter referred to as “MENFP”) is taking coping measures¹².



Source: UNESCO database (2014)

Figure 1: Gross Enrollment Rates for Primary and Secondary Schools

¹⁰ Age specific enrollment rate of secondary school is the share of children in the 12-to-14-years old age group who are enrolled in primary or secondary school among the total children of the same age group. In this report, it is expressed as “12-to-14-years old enrollment rate.”

¹¹ Gross enrollment rate of primary school is the share of children who are enrolled in primary school, regardless of age, among the total population of the school age between 6 and 11 years old. Also, gross enrollment rate of secondary school is the share of children who are enrolled in secondary school, regardless of age, among the total population of the school age between 12 and 14 years old.

¹² The 2011 International Mathematics and Science Study targeting Grade 4 revealed low academic

As indicated in Figure 1, the gross enrollment rates of secondary school have been improved, with a notable increase from 50.2% in 2000/01 to 84.0% in 2012/13. Thus, secondary education has been expanded in this decade. It was seemingly stagnated when the difference in the gross enrollment rates of primary and secondary schools was as large as 45 percentage points in 2002/03. In 2012/13, however, the gap was filled up to 32 percentage points, suggesting it is on a narrowing trend.

Table 1 shows the net enrollment rates of secondary school¹³. These are different from the gross enrollment rates shown in Figure 1 in dealing with the age of children. While the gross enrollment rates are calculated regardless of age, the net enrollment rates include only children aged at 12 through 14 years. The national average of the gross enrollment rates was 57.4% in 2012/13, largely increased from 43.5% in 2007/08. Nonetheless, secondary schools are not sufficiently provided, unable to take all the school-aged children who completed primary schooling. To cover all of these children with compulsory secondary education, the number of school facilities needs to be increased.

Table 1: Net Enrollment Rates in Morocco (%) 2007/08 to 2012/13

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
National Average						
Total	43.5	42.7	48.0	51.1	53.9	57.4
Male	44.0	43.3	48.7	51.8	54.8	58.0
Female	43.0	42.2	47.2	50.3	52.9	56.8
Urban Average						
Total	68.3	65.8	71.9	74.7	77.4	80.7
Male	69.9	64.5	70.4	73.2	76.1	79.3
Female	66.8	67.1	73.5	76.2	78.7	82.1
Rural Average						
Total	17.7	18.5	22.2	25.1	27.5	30.6
Male	20.8	21.3	25.8	28.6	31.3	33.9
Female	14.5	15.4	18.5	21.4	23.6	27.2

Source: MENFP data (provided in February 2014)

As indicated in Table 1, urban-rural disparities in access to education also exist. In 2012/13 the rural average of the net secondary enrollment was 30.6%, while that of urban counterpart reached 80.7%, making the difference of 50 percentage points. It should be also noted, however, the increase in net enrollment rates between 2007/08 and 2012/13 was 12.9 percentage points in rural areas, slightly greater than in the urban areas which resulted in 12.4 percentage points.

performance of Moroccan students (ranked 40th in math and 41st in science respectively among 42 countries), which has posed a challenge for the country in terms of the quality improvement of education.

¹³ Net enrollment rate of secondary school is the share of 12- to 14-year-old children who are enrolled in secondary school among the total population of the school age between 12 and 14 years old. Net enrollment rate of primary school is the share of 6- to 11-year-old children who are enrolled in primary school among the total population of the school age between 6 and 11 years old.

As for gender disparities, the national average of the net enrollment rate for boys was 58.0% in 2012/13, slightly greater than for girls which remained 56.8%. In the urban areas, however, the net enrollment rate for girls was 82.1% in 2012/13, somewhat greater than the 79.3% for boys. According to MENFP, girls in the urban areas have obtained higher net enrollment rates than boys since 2008/09 for the reason that some rural girls commute to urban secondary schools. In fact, the net enrollment rate for girls in the rural areas remained 27.2% in 2012/13, compared to 33.9% for boys. However, this does not draw a conclusion by itself that the rural areas have failed to narrow gender disparities in access to education in comparison with that of urban areas.

In light of the above, compared to the appraisal phase, the ex-post evaluation has observed expansion in secondary education, however, redressing the urban-rural disparities in access to education requires further efforts, and that the rural areas will continue to have strong development needs in expanding secondary education coverage.

3.1.3 Relevance to Japan's ODA Policy

At the time of the appraisal, Japan had been engaged in assisting human resource development of Morocco as a key area of cooperation, which involved redressing local disparities and reducing poverty. Japan's cooperation in the education sector in Morocco had been consistent with JICA Country Assistance Strategy for Morocco and Medium-Term Strategy for Overseas Economic Cooperation Operations (2002-2004), which was valid to the time of appraisal phase. Japan's commitment in Morocco's educational sector was underpinned by these strategies to "develop human resources" and "redress local disparities and reduce poverty."

Given these backgrounds, the project has been relevant to Japan's ODA policies.

In light of the above, the project has been highly relevant to the country's development plan, development needs, as well as Japan's ODA policy. Therefore its relevance is high.

3.2 Effectiveness¹⁴(Rating:③)

In addition to expanding secondary education coverage in the rural areas, the project objectives included supporting Morocco's efforts to redress the urban-rural and gender disparities in access to education. As mentioned in the "Relevance" section, the major factor to hinder an increase in the rural enrollment rates was the "lack of secondary schools within a reasonable distance." To address this quantitative problem existed at the time of the appraisal, the project was committed to increase the number of secondary schools by constructing 101 school buildings in the rural areas, however other components were not particularly included.

¹⁴ Sub-rating for Effectiveness is to be put with consideration of Impact.

Also, in the appraisal phase, the five target regions were regarded as the “rural areas” collectively. By increasing the number of secondary schools in these areas, the project was intended to ultimately raise the enrollment rates of Morocco as a whole. Thus, although the project had appropriately selected the five target regions, it had not covered inputs particularly aimed at redressing interregional and intraregional disparities. Notably, however, in the ex-post evaluation conducted about 10 years after the appraisal, MENFP provided a set of data at the national level along with detailed comparison paying attention to interregional disparities as well as urban-rural and gender disparities within regions.

Given these settings, the first step of the ex-post evaluation to assess the project’s effectiveness is to examine direct results of its inputs regarding “whether the project has expanded rural secondary schools in the five target regions in quantitative terms” and “whether the project has increased the number of students enrolled in the rural secondary schools” through the intended “construction of secondary schools in the rural areas.” The next step involves assessing quantitative effects (Section 3.2.1) assumed in the appraisal phase through monitoring the actual achievements measured by the national targets. Furthermore, the ex-post evaluation uses identified interregional, intraregional urban-rural, and gender disparities in access to secondary education as benchmarks to unveil current challenges. These data will be consulted for reference in evaluating the project’s effectiveness. Assessment of qualitative effects (Section 3.2.2) and impact (Section 3.3) of the project will require a certain period of time until students completed secondary schooling gain their career opportunities and achieve a livelihood improvement. Thus, the evaluation will alternatively examine the current secondary school coverage in the five target regions and the progress of the Government’s programs to increase secondary school enrollment and support commuting in the rural areas. These will eventually contribute to develop young human resources to serve their communities in the future.

Given these backgrounds, the findings of the ex-post evaluation study are provided below.

3.2.1 Quantitative Effects (Operation and Effect Indicators)

The project was intended to construct 101 secondary schools in the rural areas of the five target regions¹⁵. The ex-post evaluation has confirmed 98 out of these 101 schools are in operation. As indicated in Table 2, 23% of the total (public) secondary schools, or one in five schools existing in the five target regions are provided with new buildings by the project. In 2012/13, about 48,000 students are enrolled in the target schools, which accounts for 20% of the total (public) secondary school students (approximately 240,000) in the rural areas of the

¹⁵ The five target regions were selected on the condition that they had (i) limited secondary education coverage in rural communes, (ii) low 12- and 14-years old enrollment rates, and (iii) the small share of girl students enrolled in rural secondary schools.

five target regions.

Table 2: Percentage of the Project's Target Schools among the Rural Secondary Schools (public institutions)

Target Region	Plan	Actual		
	Number of Schools Planned by the Project	Number of the Schools Opened	Number of Secondary Schools in the Target Regions* ¹	Percentage of the Target Schools among the Rural Secondary Schools
a) Marrakech Tensift Al haouz	29	29	98	30%
b) Taza Al hocceima Taounate	7	7	74	9%
c) Doukala Abda	11	11	52	21%
d) Tanger Tetouan	13	12	53	23%
e) Souss Massa Draa	41	39	141	28%
Total	101	98	418	23%

Source: JICA document and Educational Statistics of Morocco 2012/13

*1: Results indicated in the Table are as of 2012/13.

In light of the above, it is generally evaluated that the project has expanded secondary school coverage in the rural areas as initially planned, with the number of the enrolled students also increased. Based on these direct effects, the ex-post evaluation examines the target and actual values measured by the following three operation and effect indicators set out for this project. As mentioned above, the most important indicator used to assess the quantitative effects is the national target values. Interregional and intraregional comparisons are subsidiary reference.

- (1) 12-to-14-years old enrollment rates (public and private institutions): the share of children in the 12-to-14-years old age group who are enrolled in primary or secondary school among the total population of the school age children between 12 and 14 years old
- (2) Percentage of the girls enrolled in the rural secondary schools (public institutions): the share of girls among secondary school students in the rural areas
- (3) Gross intake rates of secondary school (public institutions): the share of new entrants as first-year students in secondary schools among the total 12-year old population of the school age children

(1) 12-to-14-years old enrollment rates (public and private institutions)

The target and actual rates of 12-to-14-year-old enrollment are shown in Table 3. The national target of 95% was mostly achieved up to 85.1% (80.1% for girls) in 2012/13.

Looking at the enrollment rates of each target region, Marrakech Tensift Al haouz has achieved 84.7%, the highest among the five regions, increased to a level nearly equivalent to its target rate. Taza Al hoceima Taounate, on the other hand, has the lowest enrollment rate among the five regions, remaining 67% compared to the target rate of 84% in 2012/13. However, this is still a significant improvement up from 52.5% obtained in 2008/2009. Many students in this region reside in a steep mountain range, requiring longer commuting time. This geographical feature has been a major factor to hinder the enrollment rate increase compared to other regions. However, in the interviews with school directors and students in Taza Al hoceima Taounate schools, they have revealed that many students would have been unable to obtain secondary education if the project had not provided the schools. This indicates educational opportunities have been enhanced through construction of secondary schools amid the harsh environment of rural communes.

Given these outcomes, the national target of the 12-to-14-year-old enrollment rate has been mostly achieved. Although interregional disparities in the enrollment rates exist, the five target regions as a whole have successfully expanded their secondary education coverage.

Table 3: 12-to-14-year-old Enrollment Rates (public and private institutions) (%)

National Total and Region (AREF)	Target (Five years after the project completion)	Actual		
	2008/09	2008/09	2012/13	(Achievement rate = Actual/Target)
National Total (Female)	95.0	70.2 (64.8)	85.1 (80.1)	(90%)
a) Marrakech Tensift Al haouz	86.3	75.3 (64.7)	84.7 (75.3)	(98%)
b) Taza Al hoceima Taounate	84.0	52.5 (42.5)	67.0 (58.9)	(80%)
c) Doukala Abda	89.7	57.4 (51.2)	82.3 (74.3)	(92%)
d) Tanger Tetouan	87.8	65.5 (63.1)	76.9 (75.6)	(88%)
e) Souss Massa Draa	88.0	71.7 (61.4)	86.6 (78.3)	(98%)

Source: MENFP data (provided in February 2014) and Educational Statistics of Morocco 2012/13

(2) Share of girls enrolled in the rural secondary schools (public institutions)

The shares of girls enrolled in rural public secondary schools are shown in Table 4. For the national target of 50%, the actual share of girl students was 45.1% in 2012/13, mostly reaching the intended level. All five regions also have achieved close to their targets.

Table 4: Share of Girls Enrolled in the Rural Secondary Schools (public institutions)

National Total and Region (AREF)	Target 2008/09	Actual 2012/13	(Achievement rate = Actual/Target)
National Total	50.0%	45.1%	(90%)
a) Marrakech Tensift Al haouz	42.7%	44.7%	(105%)
b) Taza Al hoceima Taounate	42.0%	44.7%	(106%)
c) Doukala Abda	47.0%	45.1%	(96%)
d) Tanger Tetouan	48.9%	46.6%	(95%)
e) Souss Massa Draa	45.5%	44.8%	(98%)

Source: MENFP data (provided in February 2014)

Table 5 shows the number of students and shares of girl students who commute to the target secondary schools. Compared to five years ago in 2008/09, the number of girl students commuting to the target schools have more than doubled. In terms of girls' shares in the target schools, although they remained between 34% and 43% in 2013/14, which is lower than the regional average indicated in Table 4, however, they have been increasing slightly in the last five years. MENFP points out the following three as principal reasons why the shares of girl students enrolled in the target secondary schools fall below the average.

- 1) The school districts of the target schools have mountain ranges that require longer commuting time.
- 2) MENFP allows students to attend secondary school outside their school districts when they have difficulties in commuting from their home¹⁶.
- 3) To ensure safety of commuting roads, parents often wish to enroll their girl children in urban secondary school.

It should be noted that there is no information tracking system to obtain data on students transferred from rural to urban secondary school. Consequently, they may be counted in the data as children not enrolled in any school. To address this problem, MENFP plans to adopt a registration system that assigns a code to each student and managing the enrollment administration based on accurate information, which is expected to take place after 2014/15.

¹⁶ MENFP assigns a primary and secondary school in a particular school district to a student based on a certificate of residence submitted by the head of the household. In some provinces, however, there are only three or four secondary schools available. MENFP permits those students who are unable to commute a long distance to attend a school outside the assigned district. This requires a submission of their relatives' certificate of residence. Alternatively, they are allowed to transfer, after once enrolled in an assigned secondary school, to another outside their initial school districts (which may be in other province or region).

Table 5: Number of Students (persons) Enrolled in the Target Schools and Share of Girl Students (%)

Target Region	2008/09		2011/12		2012/13		2013/14	
	Total	Female (%) ^{*1)}	Total	Female (%)	Total	Female (%)	Total	Female (%)
a) Marrakech Tensift Al haouz	8,032	2,560 (32%)	12,315	3,794 (34%)	14,113	4,653 (33%)	14,763	5,022 (34%)
b) Taza Al hoceima Taounate	939	254 (27%)	1,930	618 (32%)	2,310	796 (34%)	2,530	924 (37%)
c) Doukala Abda	3,577	1,026 (29%)	4,784	1,736 (36%)	5,515	2,000 (36%)	5,941	2,245 (38%)
d) Tanger Tetouan	2,340	898 (38%)	5,809	2,368 (41%)	7,097	2,968 (42%)	8,059	3,457 (43%)
e) Souss Massa Draa	7,592	2,594 (34%)	14,658	4,868 (33%)	15,960	5,692 (36%)	16,812	6,219 (37%)
Total	22,480	7,332 (33%)	39,496	13,384 (34%)	44,995	16,109 (36%)	48,105	17,867 (37%)

Source: MENFP data (provided in June 2014)

*1) Share of girls among the total students enrolled in the target schools

(3) Gross intake rates of secondary schools (public institutions)

Gross intake rate of public secondary school is the ratio of the number of new entrants as first-year students in secondary school, regardless of age, to the total 12-years old population of the school age. The difference between the target and actual rates is shown in Table 6. The national target of the gross intake rate set at 90% has been nearly achieved, reaching 87.5% which is more than 80% of the target rate. The gross intake rates per region also have mostly achieved their targets.

The gross intake rate in Taza Al hoceima Taounate is lower than in other regions, resulting in a 20 percentage point below the rate of Marrakech Tensift Al haouz which achieved the highest rate. One of the reasons for this is that students in the former must travel long distance to attend secondary school.

Table 6: Gross Intake Rates of Secondary Schools (public institutions) (%)

National Total and Region (AREF)	Target	Actual		(Achievement rate= Actual/Target)
	2008/09	2008/09	2012/13	
National Total	90.0	72.1 (Female 66.0)	87.5 (Female 82.4)	(97%)
a) Marrakech Tensift Al haouz	89.9	69.7 (Female 60.6)	87.6 (Female 77.5)	(97%)
b) Taza Al hoceima Taounate	83.1	49.1 (Female 38.8)	67.6 (Female 56.7)	(81%)
c) Doukala Abda	89.7	58.1 (Female 51.9)	77.4 (Female 69.2)	(86%)
d) Tanger Tetouan	90.0	63.6 (Female 59.5)	79.2 (Female 77.1)	(88%)
e) Souss Massa Draa	91.6	68.3 (Female 56.7)	82.3 (Female 74.6)	(90%)

Source: MENFP data (provided in February 2014)

Given these outcomes, three indicators to assess the project's operation and effect have mostly achieved their targets. The national target of the 12-to-14-year-old enrollment rate is mostly achieved. The project has made contribution to obtain better results by increasing the number of girl students in the rural secondary schools and the gross intake rates of secondary school.

It should be noted that these improvements have been underpinned by a series of MENFP's programs to promote enrollment of rural children. As shown in Table 7 through Table 9, MENFP has provided various support, including provision of school meals, development of school dormitories, financial assistance for students' families and scholarship programs. Many of the students enrolled in the target secondary schools have received these programs. In particular, girl students in the rural areas are given priority to obtain benefits of the programs (note that the number of days attended and grade reports are assessed). The quantitative expansion of secondary schools and MENFP's enrollment assistance programs have been important factors to enhance secondary education coverage in the five target regions.

Table 7: Number of Students Provided with a School Meal Program

Coverage		2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
National	Total	22,411	25,314	31,387	42,556	48,452	55,501
	Female	8,446	9,474	11,115	15,198	17,823	21,547
Rural schools	Total	21,090	24,292	29,770	39,079	44,694	51,496
	Female	7,931	9,113	10,341	13,915	16,301	20,120
Target schools	Total	1,365	2,630	4,471	7,971	9,778	n/a
	Female	588	991	1,480	2,291	3,582	n/a

Source: JICA document and Educational Statistics of Morocco 2012/13

Table 8: Number of Students Using Off-Site Dormitories

Coverage		2008/09	2009/10	2010/11	2011/12	2012/13
National	Total	22,482	24,922	24,369	34,612	34,908
	Female	7,782	9,620	10,227	14,420	14,948
Rural schools	Total	16,371	19,656	18,953	26,353	27,855
	Female	5,558	7,622	7,991	11,275	11,778

Source: Educational Statistics of Morocco 2012/13

Note) Off-site dormitories (Dar Ettalib) were launched in 2008.

Table 9: Number of Students Receiving a Financial Assistance Program to Prevent Dropout

Coverage		2010/11	2011/12
National	Total	30,946	43,533
	Female	14,395	20,168
Target Schools	Total	5,461	9,028
	Female	2,936	4,697

Source: JICA document and Educational Statistics of Morocco 2012/13

BOX 1 Post-project Facility Conditions of the Target Secondary Schools

The ex-post evaluation conducted a survey of 98 target secondary schools, which obtained the responses from 52 schools as of May 2014. The summary of the survey results is provided as below.

✓ Current operation of school meal service

The project has provided a dining hall in each target school. The survey result indicates 50 out of 52 schools are offering school meals at their dining halls. The school meals are served primarily for those students who have long commuting distance or for girl students receiving a financial assistance program to prevent dropout. They are unable to return home during the lunch break.



A dining hall at Oulad Zerrad school in Marrakech Tensift Al haouz region

✓ Provision of dormitories

Of 52 secondary schools that responded, 13 schools have dormitories on site, while 38 counterparts operate them off site. In addition to the project's school buildings and dining halls, Morocco's initiative to provide dormitories has significantly contributed to enhance access to secondary education in the rural areas. (Notably, on-site dormitories generally offer separate facilities for boys and girls. According to the responses from 12 of the 13 schools with on-site dormitories, they accommodate total users of 616 girls and 1,115 boys (with an average of 51 girls and 93 boys at each school).



Dormitory for girl students at Azla school in Tanger Tetouan region

✓ Provision of upper secondary schools

Of the 52 schools responded, 10 schools have lower and upper secondary schools on the

same site. In Morocco, the access to upper secondary school is even more limited compared to the lower secondary school. MENFP states locating lower and upper secondary schools on the same site is particularly important for continuation of girls' schooling. In the interviews during the school visit, nearly all the students stated they wished to continue their schooling at the upper secondary level and that they were studying for examinations to obtain a graduation certificate of lower secondary education (required for admission to upper secondary school). AREF and Provincial Delegations are considering locating upper secondary schools at the target secondary school sites.

✓ Access to the Internet and portable water

Of the 52 schools responded, 12 schools had access to the Internet. The interview results indicate that the students and teachers have the high demand of the Internet access as a tool of obtaining various information in rural areas. As for portable water, although there were no schools without access, 8 out of the 52 schools pointed out inadequate supply. The task that some schools are confronted now is ensuring a reliable water supply throughout the year.

3.2.2 Qualitative Effects

The expected qualitative effects were broader secondary education coverage in the five target regions and more equitable opportunities for secondary schooling (by redressing urban-rural and gender disparities) through construction of 101 secondary schools in the country's rural areas. These should turn out to be of impact to the project, and therefore the evaluation will be discussed in the "Impact" section below.

3.3 Impact

3.3.1 Intended Impacts

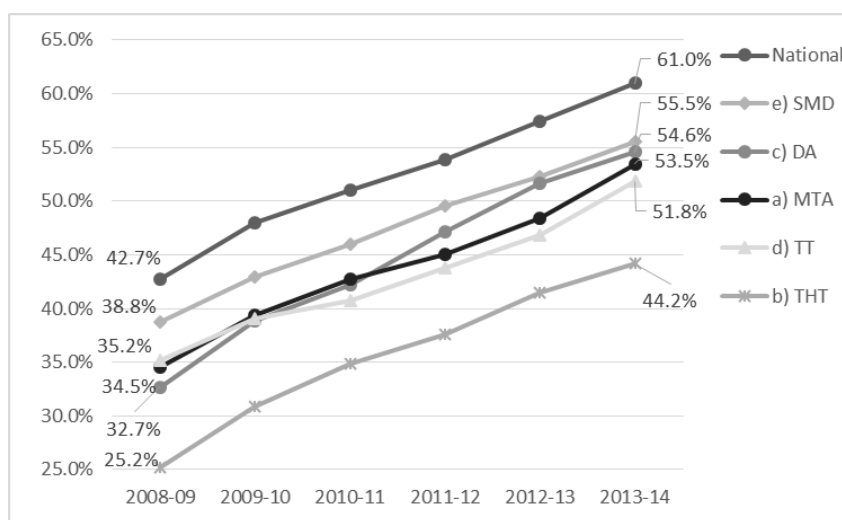
The project intended such impact that broader secondary education coverage in rural areas would ultimately raise the living standards of people in the localities. It is actually difficult, however, to accurately assess the project's contribution to such long-term goal in two years after its completion. Thus, the ex-post evaluation will review the following aspects as assessable impacts: (i) the net enrollment rates of secondary schools in the five target regions, (ii) the net intake rates of secondary schools in the five target regions, and (iii) a positive change in the number of students and teachers at the target schools.

(1) Net enrollment rates of secondary school in the five target regions (public and private institutions)

Figure 2 illustrates the national net enrollment rates and rates of each of the five target regions from 2008/09 through 2012/13. While the 12-to-14-year-old enrollment rates in the aforementioned Table 1 are calculated for those students enrolled in primary or secondary school, the net enrollment rates of secondary schools only target the school age children

between 12-to-14-years-old enrolled in secondary schools. This is one of the indicators to confirm secondary education coverage of the five target regions.

Figure 2 indicates that the share of 12-to-14-year-old students enrolled in secondary school have significantly increased for the last five years in all of the five target regions, steadily broadening their secondary education coverage. By comparing the regions at the 2008/09 measurement, however, interregional disparities in the net enrollment rates have been significant. This is affecting, even at the ex-post evaluation phase, the progress of equalizing educational opportunities among the regions (by redressing urban-rural and gender disparities).



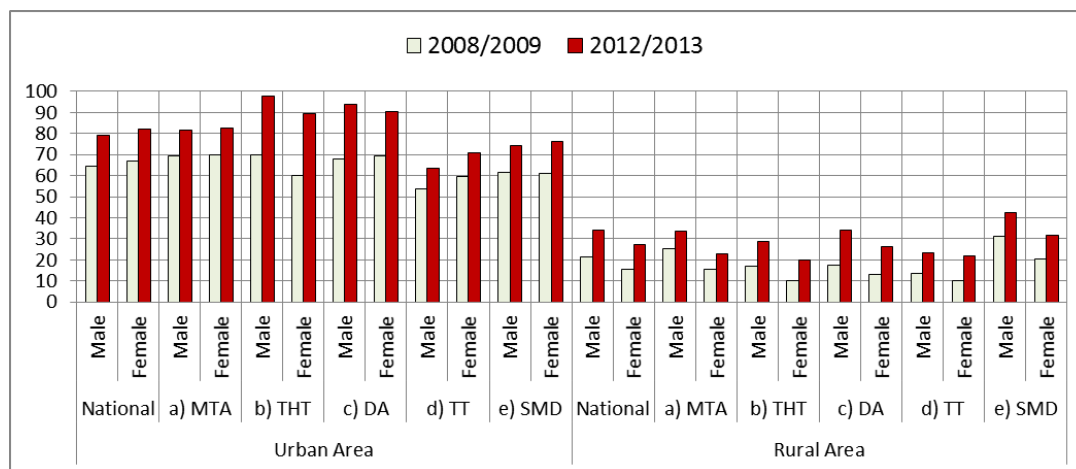
Source: MENFP data (provided in February 2014)

Note: a) MTA: Marrakech Tensift Al haouz, b) THT: Taza Al hoceima Taounate
c) DA : Doukala Abda, d) TT : Tanger Tetouan, e) SMD: Souss Massa Draa

Figure 2: Net Enrollment Rates of Secondary School in the Five Target Regions (from 2008/09 through 2012/13)

Figure 3 illustrates comparisons of the net enrollment rates, which are disaggregated for the urban and rural areas within the five target areas for 2008/09 and 2012/13, to show their disparities. It indicates an increase of the net enrollment rates both in the urban and rural areas for the last five years. In terms of the urban-rural comparisons, however, the rural areas have generally the lower rates than the urban counterparts. In particular, whereas the urban net enrollment rate in Taza Al hoceima Taounate is 97.6% for boys and 89.6% for girls, both higher than the national urban average, the rural counterpart is 28.8% for boys and 20.1% for girls, remained lower than the national rural average. MENFP points out one of the reasons that the large part of the mountainous terrains in Taza Al hoceima Taounate has an underdeveloped core infrastructure. Consequently, parents in such areas are more likely to enroll their children in urban secondary school. This has led to an unusual disparity in the net

enrollment rates between the urban and rural areas.



Source: MENFP data (provided in February 2014)

Note: a) MTA: Marrakech Tensift Al haouz, b) THT: Taza Al hoceima Taounate

c) DA : Doukala Abda, d) TT : Tanger Tetouan, e) SMD: Souss Massa Draa

Figure 3: Net Enrollment Rates of Urban and Rural Secondary School Located in the Five Target Regions (public and private institutions) (%) (2008/09 and 2012/13)

Besides the lowest net enrollment rate among the five target regions, Taza Al hoceima Taounate has also the lowest urbanization rate as illustrated in Table 10. Its nominal GDP ranks 13th among 14 regions, putting people under severe socio-economic environment. Such socio-economic and geographical disadvantages should not hinder access to education for children in the future, and further efforts are required to broaden equal educational opportunities.

Table 10: Population (2011), Urbanization Rates (2011) and Economic Scale (shares and ranking of GDP) by Region

Target Region	Population (million)	Urbanization Rate (%)	GDP (%) by Region (Ranking)		
			2004	2007	2011
a) Marrakech Tensift Al haouz	3,315	44.3	7.4 (5th)	8.9 (3rd)	8.9 (3rd)
b) Taza Al hoceima Taounate	1,865	26.6	3.3 (12th)	3.0 (13th)	3.0 (13th)
c) Doukala Abda	2,075	38.2	6.3 (6th)	6.4 (6th)	6.8 (7th)
d) Tanger Tetouan	2,985	60.4	7.5 (4th)	8.8 (4th)	8.0 (4th)
e) Souss Massa Draa	3,491	44.3	8.2 (3rd)	8.0 (5th)	7.7 (5th)
«Reference» National total	32,245	58.3			
Grand Casablanca	3,910	91.9	23.7 (1st)	21.3 (1st)	19.2 (1st)

Source: Annual Statistics of Morocco (2006, 2009, 2012)

(2) Net intake rates of secondary school in the five target regions

Table 11 shows the net intake rates for boys and girls in 2008/09 and 2012/13. These rates represent the share of new entrants as first-year students in secondary school among the total 12-years old population of the school age.

The Table 11 indicates that the number of students enrolled in public secondary school at the age of 12 have been increasing in the five target regions. The secondary school coverage for school age children has been therefore expanded both in the rural and urban areas. Although the national net enrollment rates show distinctive urban-rural disparities, the gender disparity within the rural areas is minimal, averaging 20.5% for boys and 20.3% for girls.

Notably, four of the five target regions have higher net intake rates in the urban areas for girls than for boys. According to MENFP, such trends are observed in recent years, as more parents in the rural areas enroll their girl children in urban secondary school, preferably at the relevant school age, in order to ensure their safety in school commuting, as mentioned earlier.

Table 11: Net Intake Rates of Secondary School (Public institutions) (%)

National Total and Region (AREF)	Sex	Urban		Rural	
		2008/09	2012/13	2008/09	2012/13
National Total	Male	37.5%	58.0%	11.0%	20.5%
	Female	42.4%	65.2%	9.6%	20.3%
a) Marrakech Tensift Al haouz	Male	37.1%	54.7%	10.6%	18.8%
	Female	41.7%	63.6%	8.2%	17.0%
b) Taza Al hoceima Taounate	Male	32.5%	53.4%	6.9%	24.8%
	Female	29.7%	62.3%	5.7%	23.4%
c) Doukala Abda	Male	34.7%	66.1%	8.9%	18.4%
	Female	38.6%	66.1%	8.2%	15.8%
d) Tanger Tetouan	Male	30.8%	72.4%	5.7%	20.6%
	Female	36.6%	74.5%	5.2%	19.3%
e) Souss Massa Draa	Male	38.6%	44.1%	16.6%	13.4%
	Female	42.0%	54.1%	13.2%	14.8%

Source: MENFP data (provided in February 2014)

Given these net enrollment rates and net intake rates of secondary school in 2008/09 and 2012/13, the secondary education coverage has been expanded in the five target areas and across the country, while achieving more equitable educational opportunities. It is thus projected that the number of secondary school graduates will increase in the future. On the other hand, urban-rural and gender disparities in these rates remain a challenge at the ex-post evaluation phase. It should be noted that rural girls may choose urban secondary school for safety reasons in commuting. Thus, the available statistics does not necessarily capture disparities in access to education for rural girls.

(3) Changes in the number of students and teachers at the target schools

As mentioned in the “Effectiveness” section, MENFP’s various programs to promote rural children’s enrollment have facilitated their entrance into and commuting to the target schools. In addition, the number of teachers at the target schools, as shown in Table 12, have reached about 2,000 at the time of the ex-post evaluation, exceeding an initial target of 1,700. The number of students rose to 48,105 in 2013/14, a 7% increase compared to the preceding year. The target schools have been trying to ensure the quality of education, coping with the increase in the number of students by allocating more teachers¹⁷. This has consequently given positive effects on the enrollment and intake rates.

Table 12: Number of Students and Teachers at the Target Schools (in persons)

Target Region	2012/13		2013/14	
	Number of Students	Number of Teachers	Number of Students	Number of Teachers
a) Marrakech Tensift Al haouz	14,113	313	14,763	355
b) Taza Al hoceima Taounate	2,310	217	2,530	232
c) Doukala Abda	5,515	102	5,941	113
d) Tanger Tetouan	7,097	594	8,059	603
e) Souss Massa Draa	15,960	740	16,812	752
Total	44,995	1,966	48,105	2,055

Source: MENFP document (provided in February 2014)

As discussed above, the net enrollment rates and net intake rates of secondary school are both increasing in the five target regions. Given that the target schools account for 23% of the total secondary schools in these areas, the project has contributed to the improvement of these rates to a certain extent. On the other hand, redressing urban-rural disparities in access to secondary education remains a challenge. The target schools have been trying to ensure the quality of education, coping with the increase in students by allocating more teachers. This has consequently given positive effects on the enrollment and intake rates.

¹⁷ The project’s appraisal set student-to-teacher ratio as one of the monitoring targets to ensure the quality of education.

BOX 2: Findings from the Beneficiary Survey Targeting the Students

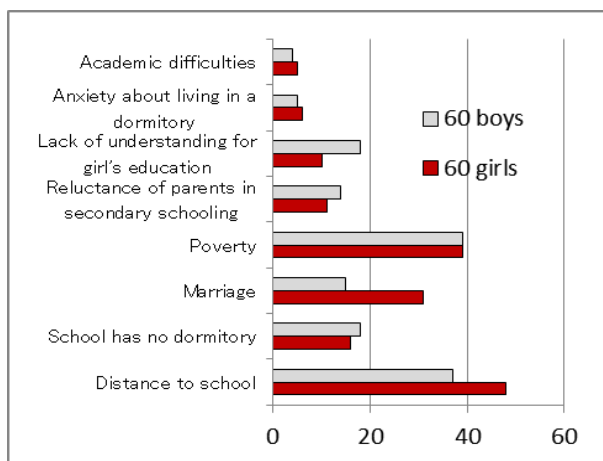
The ex-post evaluation conducted questionnaires targeting 60 boys and 60 girls that were third-year students enrolled in the target schools (Valid response: 120 students = 30 students per school (15 boys and 15 girls) x 4 schools). The summary of the responses is provided as below.

✓ Beneficiary satisfaction with the school facilities

86% of the students were satisfied with the school facilities provided. 96% of them were also satisfied with what they are learning.

✓ Entrance into secondary schools

For the question asking “Did any of your primary school classmates give up secondary schooling?” 90% of the students responded “Yes.” The figure below shows the reasons of giving up secondary schooling, including a long distance to school, poverty, marriage and lack of understanding for girl’s education. In particular, the students think the common barriers of girl’s education are marriage and lack of understanding for girls’ education, in addition to accessibility to secondary school and financial problems. Secondary education coverage and equitable educational opportunities in rural areas require enhancing understanding of the importance of secondary education as well as pursuing support programs for low-income households.



Causes of Non-enrollment in Secondary School in View of Primary School Graduates (Multiple responses)

✓ Students’ needs of facilities and educational equipment in secondary schools

For a multiple-response question asking “What are the facilities and educational equipment that you think are necessary for secondary school?” the most frequent answer was “Internet” (43% for girls and 48% for boys). Other answers include “school bus (40% for girls and 33% for boys),” “dormitory (37% for girls and 8% for boys),” and “upper secondary school (38% for girls and 30% for boys).” These responses were obtained from more girls than boys, indicating their immediate needs of access to school.

✓ Residence

For a question asking “Where do you commute from?” 60% of the students answered their home. The remaining forty percent of students commute from the residence of their relatives and dormitories. Of 24 girl students commuting from other than their home, 17 students use dormitories. For rural girl students to attend secondary school, dormitories must be provided adjacent to their schools so that their parents can ensure the safety of their children.

3.3.2 Other Positive and Negative Impacts

(1) Impacts on the Natural Environment

At the time of its appraisal, the project had targeted the human resource development sector which anticipated no particular impacts on the natural environment. Under the Moroccan laws, furthermore, school construction and equipment provision had not required a preliminary environmental assessment study.

In its inquiry related to any impacts on the natural environment, the ex-post evaluation confirmed that MENFP and AREF of each target region have observed no major problems caused by the project.

(2) Land Acquisition and Resettlement

Regarding a project site prepared for Moukhtar Soussi school in Tanger Tetouan, one of the common owners holding an undivided interest in the land had solely posed strong opposition to selling his share. Consequently, Provincial Delegation cancelled the construction project upon approval of AREF.

The project has obtained all the other land properties assigned for school sites in accordance with the Moroccan laws and MENFP's regulations, with provision of reasonable compensation.

The school construction involved no resettlement of local residents.

(3) Other Positive and Negative Impacts

Japan International Cooperation Volunteers (as instructors of physical education, science and music) have been assigned by JICA to the target regions. A Moroccan music teacher at Zaytoun school in Tanger Tetouan continues activities engaged by the Japanese music volunteer who had once served there. Specifically, working with music teachers of other schools, the teacher prepares song textbooks that partly cover traditional Tetouan music, and uses them regularly in music class. Given that rural secondary students have fewer opportunities to learn music, such facilitation of a music class has contributed to the quality education. The Zaytoun school and Provincial Delegation are seeking for cooperation to keep this kind of activity.

Besides, the target schools have panels indicating Japan funded the construction of school buildings. The interviews at some of these schools also revealed that the students and teachers recognized the Japanese cooperation enabled the school construction, showing their close interest in Japan.

In light of the above, the project has mostly achieved its intended effects. Therefore its effectiveness and impact is high.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

The project implemented secondary school construction in the five regions, namely, a) Marrakech Tensift Al haouz, b) Taza Al hoceima Taounate, c) Doukala Abda, d) Tanger Tetouan, and e) Souss Massa Draa. As shown in Table 13, of 101 secondary schools planned, 100 sites launched their construction. As of the field study conducted in May 2014, 98 schools were completed and in operation.

One of the schools in Tanger Tetouan and two in Souss Massa Draa have not launched operation, and the current situations are as follows.

- One of the secondary schools in Tanger Tetouan: The construction was cancelled due to a problem of land acquisition. Subsequently, as a result of the strong request from residents in the target commune, a secondary school was constructed with MENFP's budget in 2009.
- Two schools in Souss Massa Draa: Both schools were planned in remote areas with very limited access to major cities, leading to a repeat of the unsuccessful tenders as no parties had responded. This has caused a significant delay in commencement of the construction work. As a result, one school is under construction, expecting its completion in 2014/15. Another, though completed 40 percent of the construction, has suspended the work due to poor concrete quality. After cancelling the project's contract in effect, AREF is considering entering into a new tendering procedure to complete the civil work of the school.

Table 13: Number of Target Schools Started Construction and Opened

Target Region	Number of Schools Planned	Actual (As of May 2014)	
		Number of Schools Started Construction	Number of Schools Opened
a) Marrakech Tensift Al haouz	29	29	29
b) Taza Al hoceima Taounate	7	7	7
c) Doukala Abda	11	11	11
d) Tanger Tetouan	13	12	12
e) Souss Massa Draa	41	41	39
Total	101	100	98

Source: JICA document

The project's scope of work is provided as below. While the number of constructed school buildings were reduced by three from 101 to 98, the equipment and facilities were procured as planned because 101 sets were ordered in a collective package¹⁸ for the purpose of cost

¹⁸ At the time of ex-post evaluation, three sets of equipment and facilities for those schools cancelled are under the management of Provincial Delegations.

saving. In terms of other provisions, the consulting services were appropriately provided without major problems in their competencies, according to MENFP.

Table 14: Scope of Work

Component	Plan	Actual
School Building Construction	101 schools in total 【Detailed type of school building】 66 schools for 10 classroom type 30 schools for 13 classroom type 5 schools for 19 classroom type 【Detailed school facilities】 Laboratory, special classroom, IT room, a dining hall and other facilities (multi-media room, locker room, lavatories (separate for boys and girls), office buildings, and playground)	98 schools in total: (Reduction of 3 schools) 【Detailed type of school building】 65 schools for 10 classroom type (Reduction of one school) 28 schools for 13 classroom type (Reduction of two schools) 5 schools for 19 classroom type 【Detailed school facilities】 Laboratory, special classroom, IT room, a dining hall and other facilities (multi-media room, locker room, lavatories (separate for boys and girls), office buildings, and playground)
Procurement of Equipment and Furniture	A set of equipment and furniture for 101 schools 【Items】 School furniture/equipment Educational equipment Library books Dining hall equipment and furniture IT equipment	A set of equipment and furniture for 101 schools: As planned 【Items】 School furniture/equipment Educational equipment Library books Dining hall equipment and furniture IT equipment
Consulting Services	A package of consulting services 【Detailed services】 Assistance in bidding Construction management Organizational capacity development of the executing agency First school-year actual condition survey	A package of consulting services: As planned 【Detailed services】 Assistance in bidding Construction management Organizational capacity development of the executing agency First school-year actual condition survey

Source: JICA document

As discussed above, except for three schools not opened, 98 out of the 101 schools planned have launched their operation, and the project has mostly achieved its effectiveness and impacts intended.

3.4.2 Project Inputs

3.4.2.1 Project Cost

As shown in Table 15, the planned project cost totaled 13,583 million yen, including 8,935 million yen of the ODA loan. The actual cost totaled 7,801 million yen, including 6,641 million yen of the ODA loan, which accounts for 57% of the planned total project cost.

MENFP points to the reason for the significant reduction in the total project cost that initial

cost estimation of equipment was higher than the actual prices, and that its tender invitation for collective procurement of equipment to take advantage of scale merit substantially reduced the cost

Table 15: Comparison between the Planned and Actual Project Cost

Unit: Million yen

	Initial Cost Estimation (at the appraisal)			Actual Cost		
	Foreign currency	Local currency	Total	Foreign currency	Local currency	Total
ODA loan portion						
School Building Construction	0	7,099	7,099	0	5,732	5,732
Educational Equipment and Materials, and Furniture	0	1,508	1,508	0	686	686
Consulting Services	76	252	328	0	223	223
Sub-total	76	8,859	8,935	0	6,641	6,641
Inputs of the Government of Morocco						
Land acquisition	0	1,967	1,967	0	0	0
Taxes	0	1,539	1,539	0	0	0
Survey, Design, Construction Management Cost	0	710	710	0	722	722
Administration Cost	0	431	431	0	438	438
Sub-total	0	4,648	4,648	0	1,160	1,160
Total Project Cost	76	13,507	13,583	0	7,801	7,801

Source: MENFP document (provided in February 2014)

Note: The exchange rate effective as of the project appraisal in October 2003 was 1DH=JPY 12.1, and the actual rate applied was 1DH=JPY12.3 (on average).

3.4.2.2 Project Period

The project period significantly exceeded the plan. Though having expected 44 months from January 2004 through August 2007, the project started from March 2004, and actually took 119 months (270% of the planned period) to be concluded in January 2014. Besides, construction of the two schools in Souss Massa Draa is still in progress.

The major cause of the project's delay was frequent tender failures related to the school building construction. Some of the project sites, typically located in rural areas, had very limited access to major cities. Tenders repeated unsuccessful results, unable to select suppliers due to absence of bidders or bidding price higher than the asking price. According to an MENFP official in charge of tender procedures at that time, the factor behind this was that a growing construction boom in urban areas of the country had overlapped the construction phase of the project.

3.4.3 Results of Calculations of Internal Rates of Return

Given the nature of the project, the ex-post evaluation does not provide a quantitative analysis of its financial and economic internal rates of return.

In light of the above, while the project cost was lower than planned, the project period was longer than planned. Therefore the efficiency of the project is fair.

3.5 Sustainability (Rating:③)

3.5.1 Institutional Aspects of Operation and Maintenance

Prior to 2000, MENFP, the executing agency of the project, had a dual structure consisting of central and provincial agencies. Under the decentralization policies of the Government, AREF was established as a regional agency operating between the central and provincial counterparts, and shifted to three-layered structures made up of the central, regional and provincial administrations after the fiscal year of 2002. Currently, MENFP allocates 16 AREF at the regional level and 71 Provincial Delegations at the provincial and prefectural level. Schools and training centers are under the jurisdiction of Provincial Delegations. The Government has promoted a transfer of authorities and budget to AREF, Provincial Delegations, and schools in respective regions to pursue educational administration (including the right of personnel management) previously concentrated at the central (ministerial) level. Specifically, to balance the number of staff at central and local agencies, AREF has been allocated with more personnel since 2006. Institutional strengthening is also under way at the local level, including a management training program for personnel managers at AREF and Provincial Delegations to enhance their managerial capacities of local public administration. To guide further reforms in the educational system, these initiatives are taken into PAMT, which is the education sector policy implemented at the time of the ex-post evaluation.

Ninety eight secondary schools constructed by the project were opened and in operation at the time of the ex-post evaluation. As expected in the appraisal, DPPEN and the target schools, under the supervision of AREF, have been working together for operation and maintenance of the facilities provided. AREF and Provincial Delegations have gained more human resources and strengthened their management basis, leading to improvement of school facility operation and maintenance compared to the appraisal phase. Furthermore, AREF and Provincial Delegations have defined roles for each other. The former assigns school districts and oversees construction and operation of educational facilities, while the latter provides assistance based on the school needs identified in its communication with school directors.

Given these circumstances, the ex-post evaluation has identified no major problems with the institutional aspects of operation and maintenance at the respective target schools.

3.5.2 Technical Aspects of Operation and Maintenance

Under MENFP's regulatory provisions, AREF in each region has a delegated authority to operate and maintain public educational facilities including the target schools. Each AREF has assigned one to three technicians responsible for facility maintenance. Working with Provincial Delegations, they prepare a maintenance plan annually and implement necessary measures, as appropriate. Given this practice, the target schools do not have particular technical problems in terms of their maintenance. At the school level, directors generally have solid experiences and knowledge of school administration, and thus the post-project management of the target schools has no major problems.

The site visit of 13 target schools during the ex-post evaluation revealed that they have appropriately maintained their facilities including classrooms, lavatories, and playgrounds. For their educational equipment such as books, science experiment kits, sporting goods, and personal computers, teachers undertake regular checkups and maintenance, as often requested by the school directors. Given their competencies, the provided equipment has no technical problems in terms of maintenance.

However, the target schools do not have a common manual for regular-checkup and maintenance applicable nationwide. The maintenance method is currently subject to the discretion of respective Provincial Delegations and school directors. MENFP has recognized the needs of preparing such manual to minimize varied understanding and method of maintenance operation among the schools.

3.5.3 Financial Aspects of Operation and Maintenance

Despite Morocco's financial difficulties, MENFP's budget for the 2014 fiscal year increased by 8.5% to 46 billion MAD (Moroccan Dirham) from 43 billion MAD in 2013.

MENFP is also undertaking decentralization in terms of its budget allocated for operation and maintenance work, which had been formerly concentrated at the central government level. In the 2009 fiscal year, the share of budget spending was 32% for the central agencies and 68% for the local counterparts. MENFP's local agencies, namely AREF and Provincial Delegations, are authorized to execute their budget in accordance with an ordinance from the Ministry of Finance. AREF's revenue in each region consists of subsidies and grants received from the national budget. In particular, the budget allocated for operation and maintenance of school facilities is funded with the subsidies. AREF appropriates part of this budget to Provincial Delegations and schools.

The action plans outlined in PAMT, currently implemented as the country's education policy, provides rationales for MENFP's budget request. PAMT also calls for further expansion of school facilities, improvement of the learning environment, and promotion of enrollment. In addition to school facility building, a range of continuous commitment is

proposed including provision of school meals and dormitories, a dropout prevention program, and electricity and water supply in schools. These programs support rural areas, particularly to redress their unequal school education coverage compared to the urban areas. It is expected that the Government will continue its facilitation of children's enrollment for the target schools.

In addition, according to the interviews with AREF, Provincial Delegations and the target schools, the current budget amount covers maintenance cost for the school facilities. In the process of the country's decentralization, on the other hand, schools are required to gain more financial independence. Economic inequalities among the regions should not negatively affect the maintenance work in terms of sustainability. In addition to financial support from parents association and communities, the schools in rural areas should be covered with relevant programs proposed under PAMT so that they can reduce their financial burden.

It should be noted that the ex-post evaluation has been unable to obtain financial information from MENFP it had requested, concerning the budget of the central and regional governments. For this reason, the evaluation has not included the analysis of data from the recent and past years. Nonetheless, given the afore-mentioned assessment of the facility operation and maintenance, it concludes the financial conditions have no major problems.

3.5.4 Current Status of Operation and Maintenance

The field survey visited respective AREF of the five target regions and sample 13 schools. It observed the current status of operation and maintenance of the school buildings, classrooms, lavatories, playgrounds, dining halls, and equipment. These were maintained very well and clean. As outside service providers were employed for cleaning, students did not participate in cleaning, but handled the facilities and equipment carefully as instructed.

The students were using the educational equipment provided by the project such as books, science experiment kits, sporting goods, and personal computers. There has been no case in which these were in disuse due to malfunction or damage. The schools have purchased supplies, though at minimum, including reagents for science experiments and other materials necessary to conduct a lesson. However, in many of the schools, their personal computers have not been fully utilized as they are not connected to the Internet. It is expected that MENFP would work on increasing the Internet access.

Generally, the students and parents associations were not directly involved in operation and maintenance of the school facilities and educational equipment. In some cases, however, a parents association and local residents have cooperated for improvement of the students' learning environment through their financial contribution to purchase projectors and personal computers.

These survey findings therefore demonstrate that the school facilities and educational

equipment have been maintained to ensure an appropriate use for the sake of teachers and students.

In light of the above, no major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system. Therefore sustainability of the project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

Through construction of 101 secondary schools in the five regions in Morocco where most of their rural areas had higher poverty index, this project was intended to expand their secondary education coverage and facilitate efforts to redress urban-rural and gender disparities in access to education.

Both at the time of the project's appraisal and the ex-post evaluation, the Government has put broader access to secondary education in rural areas as a key development agenda. The project has been highly consistent with the country's development plan, development needs, as well as Japan's ODA policy. Therefore its relevance is high.

At the time of the ex-post evaluation, 98 secondary schools provided by the project are operated where approximately 48,000 students are enrolled. This accounts for 20% of the total number of students (about 240,000) who are enrolled in public secondary schools in rural areas of the five target regions.

Indicators measuring effectiveness of the project have mostly achieved the expected objectives in terms of its effectiveness. Namely, access to secondary education has been increased over the rural areas, the age specific enrollment rates among 12- to 14-year-olds improved, and the number of girl students enrolled in secondary schools also increased. Although urban-rural disparities in the enrollment rates remain, the expansion of secondary education in the five target regions will have a positive impact on equitable access to secondary schooling (by redressing urban-rural and gender disparities). Given that the project has mostly produced its effects as intended, its effectiveness and impact is high.

Although the project cost was within the plan, the implementation period significantly exceeded the plan. Therefore, the efficiency is evaluated to be fair. Under the supervision of AREF in each target region, Provincial Delegations and the target schools have developed in partnership an institutional setting for operation and maintenance of the project. No major problems have been thus observed in the institutional, technical and financial aspects associated with operation and maintenance. Therefore sustainability of the project effect is high.

In light of the above, this project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

- The two schools currently under construction are located in the remote rural communes with very limited access to local cities. For children residing in far-off areas, these two schools are essential to obtain secondary schooling. Provincial Delegations must supervise the contractors' works and the progress of the construction phase in order to open these schools at the earliest possible time. It is also recommended that AREF of Souss Massa Draa report to MENFP regularly regarding the construction progress of the two schools. MENFP would then have to submit a progress report to JICA Morocco Office to present advancement of the construction work.
- It is recommended that AREF of each target region explore the needs of locating dormitories and upper secondary schools adjacent to lower secondary schools, which will effectively facilitate enrollment of rural girls in the target schools. Development of school-commuting road infrastructure is also critical to increase access to secondary school, and thus it is important to consider taking actions in partnership with Ministry of Equipment and Transportation.
- To outline maintenance processes and procedures, a uniform nation-wide manual needs to be prepared to handle the school facilities and equipment and to avoid different practices among schools.

4.2.2 Recommendations to JICA

The ex-post evaluation suggests that JICA obtain the progress report regularly from MENFP concerning the two schools currently under construction and undertake the monitoring until their inauguration.

4.3 Lessons Learned

- Lessons learned for enrollment promotion targeting rural girls
A similar project currently implemented in Morocco (with a new ODA loan) is underpinned by this project's experiences with secondary school construction and a series of the Government's programs to broaden secondary schooling. More specifically, the ongoing project allocates secondary school sites adjacent to government-related facilities so that parents of rural girl children are assured of their safety. It also intends to include dormitories as a part of school facilities in order to increase enrollment in secondary school. This demonstrates a model case that the executing agency is committed to apply lessons learned from this project to its new operation, which expects an increase in share of girls enrolled. For all that, the secondary schooling of rural girls has several barriers, such as parental and social attitudes of reluctance to send them to

school from settlement other than home, under-served rural infrastructure (rural roads) and safety issues concerning school-commuting roads. Given in this context, the new ODA loan project under implementation would bring about the expected effects when it seeks for broader community understanding of the importance of schooling as well as a partnership with the basic infrastructure sector. Annual monitoring and evaluation of girls' share among new entrants would be also helpful to meet local needs concerning girls' schooling.

- Review of a timetable for school construction in rural areas with limited transportation access

The project experienced a significant delay in the construction of 98 secondary schools in the rural areas, with two sites still under construction. The project sites included remote areas with very limited access and sloping surface required enormous leveling work. These conditions resulted in unsuccessful tenders and a construction delay. Therefore, in a project to construct secondary schools in rural areas, it is essential that JICA, during its appraisal phase, explain to an executing agency that the latter must start preparing for a tender at its detailed design study stage, by setting out a feasible design, cost estimation and construction period which foresees technical difficulties including geographical conditions, and obtain mutual confirmation on the said matter.

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Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Output	<p>1. 101 secondary schools in total</p> <p>【Detailed types of school building】 66 schools for 10 classroom type 30 schools for 13 classroom type 5 schools for 19 classroom type</p> <p>【Detailed school facilities】 Laboratory, special classroom, IT room, a dining hall and other facilities</p> <p>2. Educational equipment and furniture School furniture/equipment Educational equipment Books Dining hall equipment and furniture IT equipment</p> <p>3. Consulting services</p>	<p>1. 98 secondary school in total</p> <p>【Detailed types of school building】 65 schools for 10 classroom type 28 schools for 13 classroom type As planned for 19 classroom type</p> <p>【Detailed school facilities】 As planned</p> <p>2. Educational equipment and furniture As planned</p> <p>3. Consulting services As planned</p>
2. Project Period	January 2004-August 2007 (44 months)	March 2004-January 2014 (119 months)
3. Project Cost		
Amount paid in foreign currency	76 million yen	0 yen
Amount paid in local currency	13,507 million yen (1,116 million DH)	7,801 million yen (667 million DH)
Total	13,583 million yen	7,801 million yen
Japanese ODA loan portion	8,935 million yen	6,641 million yen
Exchange rate	1DH = JPY12.1 (as of October 2003)	1DH = JPY12.3 (Average between March 2004 and September 2011)

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