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## CHAPTER 2. DYNAMICS IN PRIMARY EDUCATION: 2000-2004

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### Introduction

Madagascar has low primary school enrollment and completion rates, even compared to other African countries, as only 60% of the urban children and 12% of the rural children complete primary school (Banque Mondiale, 2002). The government of Madagascar has therefore made education reform one of its policy priorities as for example stated in the Poverty Reduction Strategy Paper.

To improve the enrollments and completion rates as well as the quality of education, the government – supported by the donor community – has substantially increased investments in the education sector in recent years.<sup>1</sup> It committed itself to the Education For All (EFA) initiative and started to pay for tuition fees and school kits for all students in primary schools. The government also distributed text books, financed the building of extra class rooms and hired a considerable number of new teachers.

To evaluate the impact of the policy changes on primary education, a survey was organized in October/November/December 2004 in 300 communes.<sup>2</sup> In each commune, a focus group, representative of the population of the commune, was gathered and interviewed. Two public primary schools were surveyed in each commune: one in the center of the commune and one ‘remote’ school that was at least 3 km away from the center.

Given the size of the population in cities, these were treated differently. In Antananarivo, 12 primary schools in the public as well as in the private sector were surveyed. In the provincial capitals, these numbers were reduced to 6 schools in both sectors.

Table 1 gives an overview of the sample. 652 schools were visited in total. They overwhelmingly include public schools (92% of the sample). 13% and 87% of the schools were located in urban and rural areas respectively.

The stratified sampling frame was set up in such a way to be representative of the situation at the regional level.<sup>3</sup> The methodology was similar to the post-crisis survey of 2002 (Ilo program, 2002, 2003) and allowed therefore for the comparison of the situation between these two years. In total, 207 public primary schools of the sample of 2002 were revisited (Table 1). These schools are all situated in rural areas.

Table 1: Structure of the sample

Type	Number	Province	Number	Panel
Public	600	Antananarivo	158	38
Private conf.	32	Fianarantsoa	147	36
Private	20	Toamasina	111	44
Rural	568	Mahajanga	74	21
Urban	84	Toliara	104	34
		Antsiranana	58	34
Total	652	Total	652	207

Source: Commune survey, 2004

This chapter discusses the state of primary education in 2004 as well as dynamics between 2000 and 2004. Given the set-up of the sample, we will present statistics for the overall sample, as well as at the level of the panel schools as this will allow us to look at longer period dynamics. We will discuss the evolution of the performance indicators, the changes in the supply and the demand factors and the perceptions of the local communities on the situation and the problems in primary education. We finish with the conclusions.

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<sup>1</sup> The share of the budget allocated to education raised from about 2% of GDP in 1997 to slightly more than 3% of GDP in 2004 (Banque Mondiale, 2005).

<sup>2</sup> Out of 1600 communes in total, i.e. around 20% of all communes.

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<sup>3</sup> To ensure geographical coverage, all fivondronana in the country were visited. The number of communes that were visited within a fivondronana was dependent on the relative importance of the rural population in that fivondronana. However, a lower bound was fixed of two communes per fivondronana. The communes were randomly chosen except for about 130 panel communes that were visited in 2002.

## 1. Performance indicators and perceived reasons for their change

### 1.1. Number of students

a. *The number of students in primary schools increased by 7% in 2004/2005 compared to the previous school year.*

As in the two previous years, the number of students in the school year 2004/2005 was again higher than one year earlier and was significantly higher than population growth. However, it seems that the growth in enrollment rates has become slower than before. It is unclear if this is because government policies have less effect or because most children of primary school age are now already in school (see Glick *et al.*, 2004 for a discussion on enrollment rates).

The number of students increased especially in rural public schools (Table 2). Little change was noticed in urban schools and in the private sector. The provinces of Mahajanga (+15%) and Toliara (+13%) in particular still showed an important increase in enrollments between 2004/2005 and 2003/2004 (Map 3).

Table 2: The number of students per school

Unit		2003- 2004	2004- 2005	Change (%)
<b>Madagascar*</b>	<b>Mean</b>	<b>333</b>	<b>355</b>	<b>+7</b>
	<b>Median</b>	<b>262</b>	<b>283</b>	<b>+8</b>
Urban*	Mean	613	632	+3
	Median	565	579	+2
Rural*	Mean	306	328	+7
	Median	252	273	+8
Private	Mean	332	335	+1
	Median	234	226	-3
Public*	Mean	333	355	+7
	Median	262	283	+8
Antananarivo*	Mean	379	390	+3
	Median	289	301	+4
Fianarantsoa*	Mean	301	316	+5
	Median	225	240	+7
Toamasina*	Mean	381	400	+5
	Median	281	298	+6
Mahajanga*	Mean	322	369	+15
	Median	269	312	+16
Toliara*	Mean	283	321	+13
	Median	218	265	+22
Antsiranana*	Mean	314	335	+7
	Median	270	283	+5

Source: Commune survey, 2004; \* Public schools only.

b. *The number of students at the national level was 35% higher at the start of the new school year (2004-2005) compared to the same period three years earlier. The highest increase was noticed in the province of Toliara where the number of students increased by 79% over that period.*

Table 3 shows how the number of enrollments changed during the last three years based on the analysis of the data of the panel schools. The average number of enrollments at the national level increased by 35%. Given that we

do not account for the construction of new schools, this is even an underestimate of the evolution of enrollment of children of primary school age.

The highest increase is noticed in the province of Toliara where a change of 79% is observed. This compares to an increase of 24% in the province of Antananarivo, the lowest of all provinces. This is probably so because overall enrollments in this province were already high to start with (Glick and Razakamanantsoa, 2002). The median number of enrollments at the national level increased by even more (+52%) than the average, implying that smaller schools grew relatively more.

Table 3: The number of students – Panel schools

Unit		2001- 2002	2002- 2003	2003- 2004	2004- 2005	Change (%)*
<b>Madagascar</b>	<b>Mean</b>	<b>252</b>	<b>297</b>	<b>322</b>	<b>341</b>	<b>+35</b>
	<b>Median</b>	<b>183</b>	<b>212</b>	<b>262</b>	<b>278</b>	<b>+52</b>
Antananarivo	Mean	293	328	362	363	+24
	Median	232	241	272	273	+18
Fianarantsoa	Mean	243	282	316	329	+35
	Median	187	198	239	255	+36
Toamasina	Mean	273	317	340	347	+27
	Median	177	224	235	250	+41
Mahajanga	Mean	259	418	337	390	+51
	Median	217	270	290	328	+51
Toliara	Mean	146	169	225	261	+79
	Median	97	117	158	220	+127
Antsiranana	Mean	291	310	347	372	+29
	Median	270	239	305	336	+24

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004; \* Change between 2001/2002 and 2004/2005.

c. *Especially the remote and poorer areas seem to have benefited from the education reforms. They show higher increases in enrollments.*

To evaluate the effect of the location of schools, fivondronana were divided in terciles of remoteness (see Stifel and Minten, 2004). The data show that schools that are most remote show a larger increase than schools that are closer by (Table 4).

Table 4: Enrollment rates by remoteness – Public schools

Unit		2001- 2002	2002- 2003	2003- 2004	2004- 2005	Change (%)*
Capital of province	Mean			712	729	+2
	Median			627	646	+3
Close to capital	Mean <sup>o</sup>	246	315	303	322	+31
	Median <sup>o</sup>	176	216	270	266	+51
Medium dist. to capital	Mean <sup>o</sup>	278	319	345	364	+31
	Median <sup>o</sup>	224	250	270	299	+33
Far distance from capital	Mean <sup>o</sup>	230	257	317	338	+47
	Median <sup>o</sup>	156	176	240	258	+65

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004; <sup>o</sup> Panel schools; \* Change between 2001/2002 and 2004/2005 for panel schools.

This seems to be explained by two factors: remote areas are poorer (Razafindravonona *et al.*, 2001) and poorer people are more responsive to price changes in schooling costs (Glick *et al.*, 2000). These results might indicate that education reforms have been an effective pro-poor policy, although household

level data analysis seems to be called for to confirm this.

*d. The major reasons for the increase in enrollments this year compared to last year are perceived - by school personnel - to be the distribution of the school kits, the efforts of the government to explain the utility of schooling to the parents and the reduction in school fees.*

To have more insights in the reasons for the change in number of students during the school year 2004/2005 compared to 2003/2004, a perception question was asked to the staff of the school why they thought the change occurred. The major stated reason for the increase is the distribution of the school kits (39% of the schools that noticed an increase). Part of the President's Education For All initiative introduced in 2003 was the goal of providing free books and school supplies to all primary students. It seems that this has improved primary school enrollments.

The extra efforts to explain the utility of schooling to the local population (23%) and the reduction of the schooling costs (18%) were also mentioned as important reasons for the increase in enrollments (Table 5). During the last school year, the government put considerable effort in promoting the awareness of the parents on the education of their children. There are isolated cases where this went even further than just providing explanations. In some communes a local *Dina* was put in place whereby parents actually had to pay a fine in case they did not send their children to school.

Table 5: Perceived reasons for the decline/increase (as stated by staff of the public primary school)

	Number	%
<i>If decline, most important reason for decline in enrollments</i>		
Lack of teachers	13	9
Parents unable to pay for schooling costs	8	6
Parents unable to pay for supplies	10	7
Parents unable to pay for food	26	18
Children have to work	14	10
Strike	2	1
Other	69	49
Total	142	100
<i>If increase, most important reason for increase in enrollments</i>		
Lower transport costs	4	1
More teachers	12	3
Reduction schooling costs	76	18
Distribution of 'kits scolaires'	166	39
Construction of a school restaurant	5	1
Awareness of parents	99	23
Other	64	15
Total	426	100

Source: Commune survey, 2004

However, still about one quarter of the schools noticed a reduction in enrollment compared to a year earlier. School personnel mostly link this to the increase in poverty (as parents are unable to pay for food and children have to work) (Table 5). Almost half of the schools

link it however to other reasons. More research is needed to determine the exact reasons why.

## 1.2. Grade repetition

*a. The incidence of grade repetition declined significantly during the last three years.*

Grade repetition has traditionally been a major problem in primary education in Madagascar (Banque Mondiale, 2002). The percentage of repeaters in a specific grade (we will refer to this as grade repetition rates although it is defined differently usually) in 2004 show an important decline in public schools compared to four years ago as well as compared to the numbers of the 90s (Table 6). Based on our sample of panel schools, they were as high as 38% in the 11<sup>th</sup> grade in 2001 but have now declined to 18% in 2004. The large declines in incidences of grade repetition are especially noticeable in the 11<sup>th</sup> and 8<sup>th</sup> grade. We also note some large regional differences (Map 2).

Table 6: Percentage of repeaters per class – public primary schools

Grade	1992 <sup>a</sup>	1998 <sup>a</sup>	2001 <sup>b</sup>	2002 <sup>b</sup>	2003 <sup>b</sup>	2004 <sup>b</sup>
11 <sup>th</sup>	47	42	38	36	28	18
10 <sup>th</sup>	33	33	33	32	32	26
9 <sup>th</sup>	34	35	35	34	34	30
8 <sup>th</sup>	27	28	26	29	23	12
7 <sup>th</sup>	35	34	32	31	27	23

Source: <sup>a</sup> World Bank, 2002, based on data from MINESEB; <sup>b</sup> Panel schools: Post-crisis survey, Cornell University, 2002 and Commune survey, 2004

*b. The reduction in grade repetition is due to changes in policies and not in student quality.*

It seems that a large part of the decline in grade repetition is due to the new policy of 'passage automatique' (Banque Mondiale, 2004a,b). This policy was implemented as a way to solve the high grade repetition rates and their negative consequences on the primary education enrollments. Under this new policy, primary education is reorganized in three cycles (two years per cycle except for the 9<sup>th</sup> grade) and repetition is prohibited within each cycle. This implies that students automatically pass the 11<sup>th</sup> and 8<sup>th</sup> grade.

The policy was officially implemented last school year (2003/2004) in the whole country. A recent evaluation of the reorganization showed that only 80% of the primary schools had implemented the new policy by December 2004 (Banque Mondiale, 2004b). Nevertheless, the policy is clearly reflected in the decline of passing rates in the 11<sup>th</sup> and 8<sup>th</sup> grade. Moreover, there is evidence that the new policy has also been adopted in the other grades as a response to an overload of students.

The widespread adoption of the new policy is not only visible by statistics on grade

repetition but is further confirmed by the statistics on enrollments by grade (Table 7). When we compare this school year with the last one, the highest increase in the number of enrollments is noticed in the 10<sup>th</sup> grade. The same dramatic increase in enrollments is noticed in the 7<sup>th</sup> grade.

On the other hand, the 11<sup>th</sup> grade even shows a decline in enrollments compared to the same period last year. The average number of enrollments declined by 15% compared to last year. However, first enrollments still improved compared to four years ago (+12%), i.e. about the rate of population growth over that period. It seems therefore that the recent policies of the government have attracted a significant number of new students over the last three years but that the dramatic increases in first year enrollments in primary schools have now come to a halt.

Table 7: Enrollment by grade – Public schools

	Unit	2001-2002	2002-2003	2003-2004	2004-2005	Change (%)*
11 <sup>th</sup> grade	Mean			114	97	-15
	Median			98	78	-20
	Mean <sup>o</sup>	83	99	112	93	+12
	Median <sup>o</sup>	65	78	90	71	+9
10 <sup>th</sup> grade	Mean			73	96	+32
	Median			57	79	+39
	Mean <sup>o</sup>	59	64	74	96	+63
	Median <sup>o</sup>	45	51	60	78	+73
9 <sup>th</sup> grade	Mean			64	69	+8
	Median			46	52	+13
	Mean <sup>o</sup>	55	61	67	71	+29
	Median <sup>o</sup>	43	47	50	54	+26
8 <sup>th</sup> grade	Mean			47	48	+2
	Median			33	33	+0
	Mean <sup>o</sup>	39	44	47	48	+23
	Median <sup>o</sup>	31	34	37	35	+13
7 <sup>th</sup> grade	Mean			39	48	+23
	Median			23	32	+39
	Mean <sup>o</sup>	29	34	38	48	+66
	Median <sup>o</sup>	21	24	25	36	+71

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004; <sup>o</sup> Panel schools; \* Change between 2001/2002 and 2004/2005 for panel schools.

### 1.3. Primary school completion rates

*a. The passing rate of the official exam at the end of primary school (CEPE) declined significantly during the year of the political crisis (2002), but has bounced back to its previous levels since.*

The passing rate at the end of the school year declined significantly in the year of the political crisis (2001/2002) due to different supply and demand problems (Fafchamps and Minten, 2003). For example, the rate declined by 12% in public rural schools (Table 8). However, the rate was back to its previous level in 2002/2003. While public schools perform significantly worse, especially in rural areas, there are signs of improvement. In public urban and rural schools, the passing rate

increased by 4% and 2% respectively in 2003/2004 compared to one year earlier.

Table 8: Passing rate for CEPE

	2002-2003		2003-2004			
	Public urban	Private urban	Public rural	Public urban	Private urban	Public rural
<b>Madagascar</b>	<b>74</b>	<b>85</b>	<b>55</b>	<b>78</b>	<b>85</b>	<b>57</b>
Antananarivo	81	77	49	87	78	52
Fianarantsoa	79	90	53	81	97	67
Toamasina	73	90	62	73	82	50
Mahajanga	66	76	51	70	75	57
Toliara	63	100	60	68	99	68
Antsiranana	88	97	60	94	96	45
	2000/01 <sup>o</sup>	2001/02 <sup>o</sup>	2002/03 <sup>o</sup>	2003/04 <sup>o</sup>		
<b>Madagascar</b>	<b>62</b>	<b>50</b>	<b>62</b>	<b>63</b>		

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004; <sup>o</sup> Panel schools

The personnel of the school were asked why these changes occurred. Most of the schools relate the increase in passing rate to more courses (18%), more school supplies (18%), better concentration of the students (17%) or other reasons (44%) (Table 9).

There are significant differences in the passing rate by province (Table 8; Map 1). The biggest increase is noticed in the province of Fianarantsoa. On the other hand, the provinces of Toamasina and Antsiranana show a decline in passing rates. The main reasons mentioned for the decline in these provinces are a lack of courses and concentration because of an overload of students.

Table 9: Perceived reasons for the increase in passing rate

	% of schools
Less students per teacher – more courses	18
Less students per teacher – better concentration	17
More space/more class rooms	1
Construction of a school restaurant	2
More school supplies (school kits)	18
Other	44
<b>Total</b>	<b>100</b>

Source: Commune survey, 2004

## 2. Changes on the supply side

To explain the changes in performance of the primary education sector, we will look at the supply and the demand side. We start with the supply side and we discuss changes in school access, availability of teachers, teaching load per teacher, school supplies and monitoring and evaluation of schools.

### 2.1. School access

*a. The availability of new school buildings increased considerably over the last three years. 40% of the communes mention the construction of at least one new school within their boundaries.*

Within the Education For All initiative, the government decided to finance the construction of 2200 classrooms (Banque Mondiale, 2004a). The data reveal that – compared to three years ago – the total number of public and private schools increased by 5% and 18% respectively. At the national level, 40% of the communes report an increase in the number of schools within their boundaries (Table 10). In the provinces of Antananarivo and Toamasina even more than half of the communes mention a rise.<sup>4</sup>

Table 10: % of communes with at least one new school within their boundaries during the last three years

Antananarivo	52
Fianarantsoa	45
Toamasina	52
Mahajanga	20
Toliara	12
Antsiranana	48
<b>Madagascar</b>	<b>40</b>

Source: Commune survey, 2004

*b. The number of schools that refused students declined over the last four years.*

In 2001-2002 and 2002-2003, approximately 20% of the public schools reported that they refused students due to a lack of teachers or class rooms. Students that did not have an official birth certificate were also often denied access to public schools (Ilo Program, 2002, 2003). This percentage was especially high in the province of Mahajanga.

During the last two school years the percentage of students that were refused declined as ‘only’ 9% of the public primary schools refused students (Table 11).<sup>5</sup> The decline is particularly remarkable (-9%) in the province of Toliara. On the other hand, still 15% of the schools refused students this school year in the province of Antsiranana.

Table 11: % of public schools that refused students due to lack of teachers or class rooms

	School year	
	2003-2004	2004-2005
Antananarivo	11	9
Fianarantsoa	3	7
Toamasina	7	11
Mahajanga	8	9
Toliara	16	7
Antsiranana	11	15
<b>Madagascar</b>	<b>9</b>	<b>9</b>

Source: Commune survey, 2004

<sup>4</sup> The cyclones Gafilo and Elita destroyed a number of schools in some parts of the country. Reports of the focus groups indicate that the World Bank financed project FID performed well in helping to rebuild the schools after these disasters.

<sup>5</sup> The number of students refused reaches sometimes very high levels. 19 primary schools in our data report that they refused 50 or more students.

## 2.2. Availability of teachers

*a. The number of teachers per school increased significantly over the last four years.*

One of the policy changes in education was the hiring of new teachers. It was estimated that in 2004 alone, the government recruited 1500 new teachers (Banque Mondiale, 2004b). Moreover, the government decided to pay the salaries of all FRAM teachers, i.e. teachers paid by the organization of the parents of the students, from this school year on. However, while the government lived up to this promise, there was considerable delay in the payments of the salary of these teachers (Banque Mondiale, 2004b).

Table 12 shows that the average number of teachers per school increased during the last four years from 5,3 to 6,1. The provinces of Mahajanga and Fianarantsoa show the highest increase. Moreover, the number of teachers paid by the government rose slightly, but the number of teachers hired by the FRAM rose significantly, mainly between 2002/2003 and 2003/2004. This reflected the urgent need for more teachers after the explosion in enrollments caused by the increased government investments in primary education.

Table 12: Average number of teachers per school

	2001/02	2002/03	2003/04	2004/05
<b>Madagascar</b>	<b>5,3</b>	<b>5,3</b>	<b>6,0</b>	<b>6,1</b>
<i>By employer</i>				
Government	4,7	4,7	4,6	4,8
FRAM	0,6	0,7	1,5	1,5
<i>By province</i>				
Antananarivo	7,3	7,4	7,3	7,4
Fianarantsoa	6,3	6,3	7,4	7,6
Toamasina	5,7	5,2	6,4	6,4
Mahajanga	4,7	4,7	5,9	6,1
Toliara	3,8	4,0	4,4	4,6
Antsiranana	3,6	3,6	4,1	4,3

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004 (Panel schools)

*b. However, as the number of students increased even faster, the student/teacher load has worsened over the last four years.*

Despite the efforts that were done to increase the number of teachers, the student load per teacher as measured by the ratio of students over teachers increased significantly during the last four years (+23% compared to 2001/2002; +5% compared to last school year). This has probably led to reduced quality in teaching for students.

Moreover, this student load is not distributed evenly over the country (Map 4). Table 13 shows that teacher allocation is biased towards urban areas. The student load is worst in rural areas in Antsiranana with an average of 91 students per teacher. The increase in the student/teacher ratio during the last four years

is the highest in Toliara (+92%), leading to an average of 75 students per teacher.

We further find that the more remote the school within rural areas, the higher the number of students per teacher.<sup>6</sup> This pattern is consistent with the situation of previous years and confirms the challenge of the government in trying to attract teachers to live and stay in remote areas. To address this problem, the government revised the rates of hardship allowances on the basis of 4 'remoteness' zones in early 2003 and it started the construction of 110 houses for teachers in isolated areas (Banque Mondiale, 2005). However, it is clear that still a lot remains to be done.

Table 13: Evolution of the student-teacher ratio

	School year	Public rural <sup>o</sup>	Public urban	Private urban
Antananarivo	01/02*	46		
	02/03*	49		
	03/04**	51	41	49
	04/05**	50	42	51
Fianarantsoa	01/02*	41		
	02/03*	46		
	03/04**	47	38	27
	04/05**	46	37	33
Toamasina	01/02*	50		
	02/03*	62		
	03/04**	58	52	36
	04/05**	61	52	33
Mahajanga	01/02*	57		
	02/03*	67		
	03/04**	58	46	44
	04/05**	68	52	42
Toliara	01/02*	39		
	02/03*	47		
	03/04**	66	48	30
	04/05**	75	56	32
Antsiranana	01/02*	84		
	02/03*	87		
	03/04**	86	44	53
	04/05**	91	40	56
<b>Madagascar</b>	<b>01/02*</b>	<b>52</b>		
	<b>02/03*</b>	<b>59</b>		
	<b>03/04**</b>	<b>61</b>	<b>45</b>	<b>43</b>
	<b>04/05**</b>	<b>64</b>	<b>48</b>	<b>44</b>

Source: \*Post-Crisis Survey, Cornell University, 2002; \*\*Commune Survey, 2004; <sup>o</sup> Panel schools

*c. Teachers are on average absent for four days a month.*

Even if teachers are assigned to a school, they can still be absent for a variety of reasons. Primary school teachers in the public sector are estimated, on average, to be absent for four days a month: two days to get their salary – that is paid out in the chef-lieu of the fivondronana – and another two days because of other reasons (sickness, other activities, etc.) (Table 14). The majority (98%) is away at least one day per month for an activity unrelated to education.

<sup>6</sup> One extreme example illustrates this very well. In the remote commune of *Ambohimarina (EPP Migioko, Ambanja, Antsiranana)*, there is one teacher for a class of 354 students in the first grade.

Absenteeism of teachers is especially a major problem in the province of Toliara: teachers are on average absent for 6 days per month. The most extreme case we found in Toliara was where the teachers were absent for 10 days per month and this only to get their salary.<sup>7</sup>

Table 14: Absence of teachers (average number of days per month)

	Number of days per month a teacher is absent ...	
	... to get salary	... for other reasons
Antananarivo	1	2
Fianarantsoa	2	3
Toamasina	2	2
Mahajanga	2	2
Toliara	3	3
Antsiranana	1	3
<b>Madagascar</b>	<b>2</b>	<b>2</b>

Source: Commune survey, 2004

### 2.3. Teaching load per teacher

*a. During the last four years there was an increase in the number of hours taught per class.*

Lack of teachers often leads to a reduced number of hours of effective teaching. Due to the significant increase of the number of students, one could expect that schools were obliged to reduce teaching time per class. This does not seem to have happened in general. On the contrary, table 15 indicates how more than 80% of schools reported to teach more than 25 hours a week per class. This percentage increased for all grades compared to four years ago.

Table 15: Number of hours taught in public schools

Grade	Number of hours	2001/02 (%)*	2002/03 (%)*	2003/04 (%)*	2004/05 (%)*
11 <sup>th</sup>	<15	6	6	0	0
	15-25	31	32	19	18
	>25	63	62	81	82
10 <sup>th</sup>	<15	6	6	0	0
	15-25	34	34	19	19
	>25	60	60	81	81
9 <sup>th</sup>	<15	4	3	0	0
	15-25	29	28	17	17
	>25	67	69	83	83
8 <sup>th</sup>	<15	6	6	3	2
	15-25	19	19	12	13
	>25	75	75	85	85
7 <sup>th</sup>	<15	9	7	4	4
	15-25	13	14	7	7
	>25	78	79	89	89

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004; \* % of panel schools

*b. Given the higher number of students, the prevalence of the multi-grade system might be increasing.*

Approximately half of the schools (49%) had at least one multi-grade class last school year. This system exists especially in the smaller

<sup>7</sup> This reflects the bad state of infrastructure in the remote commune of *Ankavandra (Miandrivazo, Toliara)*.

and more remote schools. The percentage did not change this school year compared to the last one. Unfortunately our data do not allow comparing the existence of multi-grade classes over a longer period. Glick and Sahn (2004) show how the multi-grade system in particular in Madagascar leads to a bad performance of students.

#### 2.4. School supplies

*a. Access to supplies, potable water and other services to students significantly improved over the last four years.*

Table 16 shows how access to services and supplies changed during the last three years. First, we compare 2001/2002 with 2003/2004. Access to school restaurants ('cantines') declined a little bit, whereas access to potable water significantly increased. Especially the provinces of Fianarantsoa and Toamasina show an increase in access to potable water. The access increased by 36% and 27% respectively. In addition, the distribution of 'fer folate', vitamins and vermifuges continued and showed an increase last school year compared to three years ago. Access to books improved enormously, especially access to the 'Serie Vola'.<sup>8</sup> This increased from 11% to 73% of the public schools. On the other hand, the distribution of material directly coming from the district facility level (Cisco) stayed the same.

When we look at the numbers of 2004/2005, we see a significant worsening on supply delivery. As the survey was done between mid-October and mid-December, supplies had not yet arrived in most schools. Most of these supplies were expected in the coming months. In any case, as the school year started in September, this shows to what extent the provision of these supplies has to be better organized and this should be a priority for the government.

Table 16: Access to services and supplies in public schools

% of schools	2001/02	2003/04	2004/05*
School restaurant	10	8	7
Access to potable water	25	37	39
Distribution 'fer folate'	48	57	29
Distribution vitamins	23	48	29
Distribution 'vermifuges'	40	56	45
Material Cisco	61	62	17
Books 'Serie Vola'	11	73	13
Other books	26	84	27

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004 (Panel schools); \*These numbers should be handled with caution as the government is still distributing the supplies.

<sup>8</sup> Over the last 3 years, each primary school was supposed to have received textbooks - 1 textbook per student per subject - through the CRESEDII project or through regular government budgets.

*b. Overall access to school supplies increased.*

A perception question was asked to the school personnel on the evolution of school supplies for the students. They note in 2004/2005 a significant improvement compared to one year and three years earlier (Table 17). Only 16% of the schools note that it was worse this school year compared to last year and three years ago. The 'school kits' program seems therefore to have reached most public schools.

Table 17: Perceived evolution of school supplies in public primary schools

School supplies of students	
<i>Now compared to the same period last year</i>	
A lot better	2
Better	48
The same	34
Worse	16
A lot worse	0
<i>Now compared to 3 years ago</i>	
A lot better	14
Better	50
The same	20
Worse	15
A lot worse	1
Total	100

Source: Commune survey, 2004

#### 2.5. Monitoring & evaluation of the schools

*a. The number of inspections increased significantly. However, sanctions in case of problems are still rare.*

Better monitoring and evaluation seem necessary to increase the efficiency of public spending in the education sector in Madagascar (Francken *et al.*, 2005). Monitoring of the schools improved during the last four years. During the budget tracking survey at the end of the school year 2002/2003, a low 32% of the public primary schools stated that they received an inspection during that same year (Francken, 2003). This number increased: during last school year (2003/2004) a high 76% of the schools received an inspection and during this school year, already 44% did (Table 18).<sup>9</sup> However, sanctions taken in the case of problems are still rare. The majority of schools that encountered problems during an inspection only had to provide an explanation.

Posting in a public place of the grant received by the government to pay for the tuition fees is a necessary condition to receive that money. It seems that the improvement of the monitoring of the schools has had a positive impact on the incidence of posting. The number of schools posting the amount increased from 29% in

<sup>9</sup> Our findings are consistent with the results of a study by Glick *et al.* (2004) who show that the visits from the Cisco to the schools increased in the last school year (2003/2004) compared to the previous year.

2002/2003 (Francken, 2003) to 62% in 2003/2004.

Table 18: % of public schools that received an inspection

	School year	
	2003-2004	2004-2005*
Antananarivo	89	72
Fianarantsoa	68	39
Toamasina	82	35
Mahajanga	70	38
Toliara	82	30
Antsiranana	55	32
<b>Madagascar</b>	<b>76</b>	<b>44</b>

Source: Commune survey, 2004; \*These numbers should be handled with caution as the school year still continues.

### 3. Changes on the demand side

After the supply changes, we now look at a few important factors that might have changed the demand for schooling over recent years. They include the change in school fees, the required contribution of parents and the evolution in incomes of the population.

#### 3.1. School fees

*a. Tuition fees for public schools were abolished in 2002. The government would pay for these directly to the schools. However, during this school year 2004/2005 almost none of the public primary schools had received their funds by December 2004.*

During the beginning of this school year (2004/2005) the government gave increasing priority to the secondary education sector and, as a consequence, almost none of the primary schools (99%) received their funds at the time of the survey (Table 19). The government only started to distribute the grants by mid-December 2004. It seems that the budget procedures of the state do not allow the government to deliver on time, even though this should be a regular expense in their budget. It is clear that this hurts the functioning of the schools.

Table 19: % of the public schools that received the contribution of the government in December 2004

Antananarivo	2
Fianarantsoa	1
Toamasina	0
Mahajanga	0
Toliara	2
Antsiranana	2
<b>Madagascar</b>	<b>1</b>

Source: Commune survey, 2004

*b. A small percentage of the public schools asked the parents to pre-pay the tuition fees. It might be that most schools therefore have cash flow problems.*

Only 7% of the public schools asked the parents to pre-pay the tuition fees, with the promise of paying them back after the arrival of the governments' funds (Table 20). There

are strong provincial differences as in Toamasina only 1% of the schools asked the parents to pre-pay the tuition fees compared to 18% of the schools in Antsiranana.

Table 20: % of public schools that asked for a tuition fee

	School year
	2004-2005
Antananarivo	11
Fianarantsoa	6
Toamasina	1
Mahajanga	2
Toliara	5
Antsiranana	18
<b>Madagascar</b>	<b>7</b>

Source: Commune survey, 2004

#### 3.2. Contributions of the parents

*a. Over time, the contributions of the parents to the schools decreased slightly. However, there are strong regional differences.*

At the national level, the FRAM contributions of the parents to the schools decreased slightly during the last three years. About one fifth of the schools state that they did not receive a FRAM contribution (Table 21). The province of Toliara shows the biggest decrease (-37%). However, this implies that four fifths of the public schools still depend on the contribution of parents for their functioning.

This finding differs by province as the number of schools with FRAM contributions increased in the provinces of Toamasina and Mahajanga. There is also some anecdotal evidence that the parents are not willing to contribute anymore to the education of their children as they believe the government will then take care of it.

Table 21: % of public primary schools with FRAM contributions

	2001/02	2002/03	2003/04	2004/05
Antananarivo	97	89	97	95
Fianarantsoa	79	55	66	69
Toamasina	95	86	95	100
Mahajanga	79	84	84	89
Toliara	58	36	39	21
Antsiranana	97	97	94	94
<b>Madagascar</b>	<b>86</b>	<b>75</b>	<b>81</b>	<b>79</b>

Source: Post-crisis survey, Cornell University, 2002; Commune survey, 2004 (Panel schools)

#### 3.3. Overall income and purchasing power of the population in rural areas

*a. The majority of communes say that welfare indicators and purchasing power are now worse than one year and three years ago.*

The Malagasy economy had a turbulent year in 2004 due to climatic setbacks, international conditions (increases in oil and rice prices) and an exchange rate depreciation. We tried to get a sense of the extent of these changes on the welfare of the people through the use of qualitative questions.



A question was asked on how the focus group felt the purchasing power of the people in the commune evolved. They had to rank the evolution from 1 to 5, corresponding to a ranking of 'a lot higher' to 'a lot lower' (Chapter 1: Table 3). The results indicate the deteriorating situation in rural areas in Madagascar. 5% of the communes state that their purchasing power improved compared to last year. 14% estimate that it is about equal. Almost 81% thinks that it has gotten worse. The results are even worse when compared to the same period in 2001. It seems that the subsequent shocks in the last three years have taken a heavy toll on the welfare of the people in rural areas. This clearly might have influenced the demand for schooling.

*b. The perceived nutritional status of students worsened this year compared to last year and three years ago.*

The worsening of the welfare conditions has not been without impact on food intake for children. 73% of the schools estimate that the nutritional status of the children worsened compared to last year (Table 22). Only 7% of the schools think that the nutritional status improved. The majority of schools also believe the situation worsened compared to three years ago.

Table 22: Perceived evolution of nutritional status of students in public primary schools

Nutritional status	
<i>Now compared to the same period last year</i>	
A lot better	0
Better	7
The same	20
Worse	67
A lot worse	6
<i>Now compared to 3 years ago</i>	
A lot better	1
Better	9
The same	20
Worse	46
A lot worse	24
Total	100

Source: Commune survey, 2004

#### 4. Perceptions of the community on primary education

The analysis of the previous section relied on responses of school personnel. As there might be bias in their statements for a number of reasons, questions on the dynamics and on the quality of primary education were also asked to the focus groups that represented the community as a whole. However, this was only done for the rural communes. The results are presented below.

*a. Almost all rural communes state that more children are in school now compared to one and three years ago.*

The evolution in the education sector gets high marks by the communal focus groups. A high 94% of the rural communes believe that more children are now in school compared to three years ago (Table 23). This number is still 85% of the communes if the situation in 2004 is compared with 2003. This indicates how the investments in the education sector have led to higher enrollment rates and this despite the economic problems and the inherent drop in demand for school services.

Table 23: Perceived evolution of school enrollment (in %; 100% = all communes)

	% of the communes that state that the situation in 2004				
	improved a lot	improved a bit	is the same	deteriorated a bit	deteriorated a lot
<i>Change in the enrollment of children in school in 2004</i>					
Compared to 2003	4	81	14	1	0
Compared to 2001	36	58	5	1	0

Source: Commune survey, 2004

A further question was then asked on why focus groups thought the situation changed compared to three years ago (Table 24). The majority (53%) believes that the change in schooling costs has been the driving force for the increase in enrollments over the last three years. 20% of the communes says enrollments changed because of the extra availability of schools. Both the change in personnel and the change in the quality of services are reported by 9% of the communes.

Table 24: Stated reasons for the change in enrollments compared to three years earlier (in %; 100% = all communes)

Reasons	%
Change in project	3
Change in availability of schools	20
Change in the quality of services	9
Change in personnel	9
Change in schooling costs	53
Other	6
Total	100

Source: Commune survey, 2004

*b. Focus groups also estimate that the quality of primary education in the commune improved compared to three years earlier.*

To further evaluate changes in the education sector, a question was asked to a focus group of the commune where the schools were located on how they perceived the evolution of the quality of primary education in the commune over the last three years (Table 25).

The results show that more than half of the communes (58%) currently perceive the quality of primary education as good to very good. Approximately three quarter of the communes (73%) estimate that the quality improved during the last three years.

Table 25: Quality of primary education in the commune (perception by communal focus groups)

	Now - Nov/Dec 2004		Evolution over the last 3 years
	%		%
Very good	5	A lot better	18
Good	53	Better	55
Average	30	The same	18
Bad	11	Worse	8
Very bad	1	A lot worse	1

Source: Commune survey, 2004

*c. The most important reasons why children do not go to primary school are the lack of interest by the parents in education and remoteness of the school. The main perceived problem is incentives for teachers.*

Although the education sector improved and the enrollment rates increased dramatically during the last three years, a high 86% of the communes confirm that there are still children who should, but do not go to primary school.

Table 26: Stated reasons why some children still do not go to primary school (in %; 100% = all communes)

Reasons	%
The school is too far away	20
The parents can not pay for the schooling costs	9
Classes are too difficult	1
The children are not interested in education	4
The parents are not interested in education	38
The schools are full/no space available	1
Lack of teachers	1
The children do not possess a birth certificate	5
The children have to work	15
Other	6
Total	100

Source: Commune survey, 2004

It was asked why these children do not go to school and what the problems are of the primary schools in the commune. The results in Table 26 and Map 5 show that in 38% of the communes the focus groups believe that the main reason is that the parents are not interested in education. Remoteness is also an important impediment. Moreover, 15% of the communal focus groups believe children do not go to school because they have to work.

Table 27: Stated problems of the primary schools in the commune (in %; 100% = all communes)

Problems	%
Lack of school furniture	20
The wages of the teachers are too low	24
The school budget is too small	8
Too many students in the school	8
Lack of school books	2
Lack of school tables and benches for students	3
Low teaching quality	2
Pedagogical equipment is inappropriate	3
Courses are inappropriate	2
Other	28
Total	100

Source: Commune survey, 2004

Table 27 and Map 6 illustrate the main problems of the primary education sector.

According to a quarter of the focus groups, the wages of the teachers are too low.<sup>10</sup> One fifth states that there is a lack of school furniture.

## 5. Conclusions

This chapter provides a short overview of the state of primary education in 2004 and on dynamics in this sector during the last four years. The results show that the situation in the primary education sector improved dramatically due to the efforts by the government and donors.

First, an important increase in the number of students in public primary schools is noticed. Enrollments in the schools that were surveyed increased in the school year 2004/2005 by 7% compared to last year and by 35% compared to four years ago. This is significantly above population growth rates. As we are unable to control for the effect of new schools, the change in the real enrollment rate of children of primary school age is even higher. However, the enrollments this year in the first grade of primary schools have come down to levels (after controlling for population growth) of four years ago. Second, primary school completion rates increased as well as more students participated and as the passing rates increased. Third, supply conditions improved. For example, more public primary schools have access to potable water and school supplies.

Despite all these improvements, there are however still important challenges ahead. We note the most important. First, the lack of teachers is still an important constraint, especially in the more remote areas, as the student-teacher ratio has been steadily on the increase over the last four years. It seems that the government has to devise an effective incentive system to attract more teachers overall but also teachers willing to live in more isolated areas. Second, budget reform is necessary as under the current conditions the government delivers supplies, budgets and salaries for FRAM teachers systematically too late. For example, at the time of the survey (that went until the middle of December), almost none of the schools had received the school fees for the current school year. This was the same, but to a lesser extent, for the supplies of books. Third, still about 9% of the primary schools refused students, for a variety of reasons. This is obviously difficult to justify and accept in the case of public schools.

<sup>10</sup> According to the budget tracking survey of 2003 (Francken, 2003), the salaries of FRAM teachers are below the minimum wage. In addition, they do not receive benefits such as health insurance or any other social or pension scheme.

Finally, while this type of survey allows us to have a quick overview of the state and of the dynamics of the primary education sector, there are however also clearly problems with this type of methodology. For the school surveys, we relied mostly on the explanations of personnel who manage the school. This might introduce bias in some of the answers. As we follow schools over time and not households, it is difficult to make exact statements on the evolution of enrollments and completion of primary education. However, the results are for sure indicative. Luckily, a national household survey is currently fielded by INSTAT. This survey should be a source of information that could provide more precise answers for some of these estimates.

Stifel, D., Minten, B., Isolation and Welfare, Cornell University, 2004, mimeo

## References

Banque Mondiale, Education et formation à Madagascar: vers une politique nouvelle pour la croissance économique et la réduction de la pauvreté, 2002

Banque Mondiale, International Development Association Program Document for a Proposed Credit, Report No. 29376-MAG, 2004a

Banque Mondiale, Aides Mémoires – Education, 2004b

Banque Mondiale, Madagascar Public Expenditure Review – The Challenge of Poverty Reduction, Draft Report, 2005

Fafchamps, M., Minten, B., Public Service Delivery, User Fees and Political Turmoil, Mimeo, Oxford University, Centre for the Studies of African Economies, 2003

Francken, N., Service Delivery in Public Primary Schools in Madagascar: Results of a Budget Tracking Survey, Banque Mondiale, 2003

Francken, N., Minten, B., Swinnen, J., Listen to the Radio! Monitoring, Media, and Capture of Public Funds in Madagascar, LICOS Working Paper, 2005

Glick, P., Razafindravonona, J., Randretsa, I., Services d'éducation et de santé à Madagascar: l'utilisation et les déterminants de la demande, INSTAT, 2000

Glick, P., Razakamanantsoa, M., The Distribution of Social Services in Madagascar: 1993-99, Cornell Food and Nutrition Policy Program, Working Paper Nr. 128, Cornell University, 2002

Glick, P., Sahn, D., The Demand for Primary Schooling in Madagascar: Price, Quality and the Choice between Public and Private Providers, Cornell University, SAGA working paper, July 2004

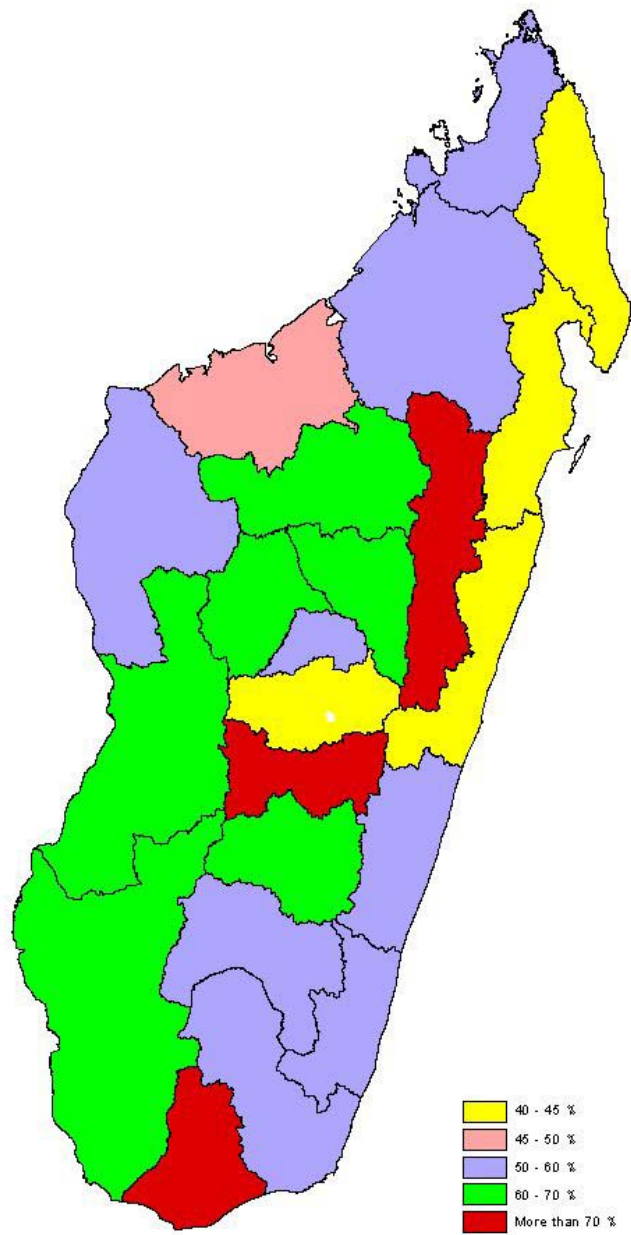
Glick, P., Rajemison, H., Ravelo, A., Raveloarison, Y., Razakamanantsoa, M., Sahn, D.E., The Progression through School and Academic Performance in Madagascar Study: Preliminary Descriptive Results, 2004

Ilo Program, Etude de l'impact de la crise politique sur le secteur de l'éducation de base, Cornell University, 2002

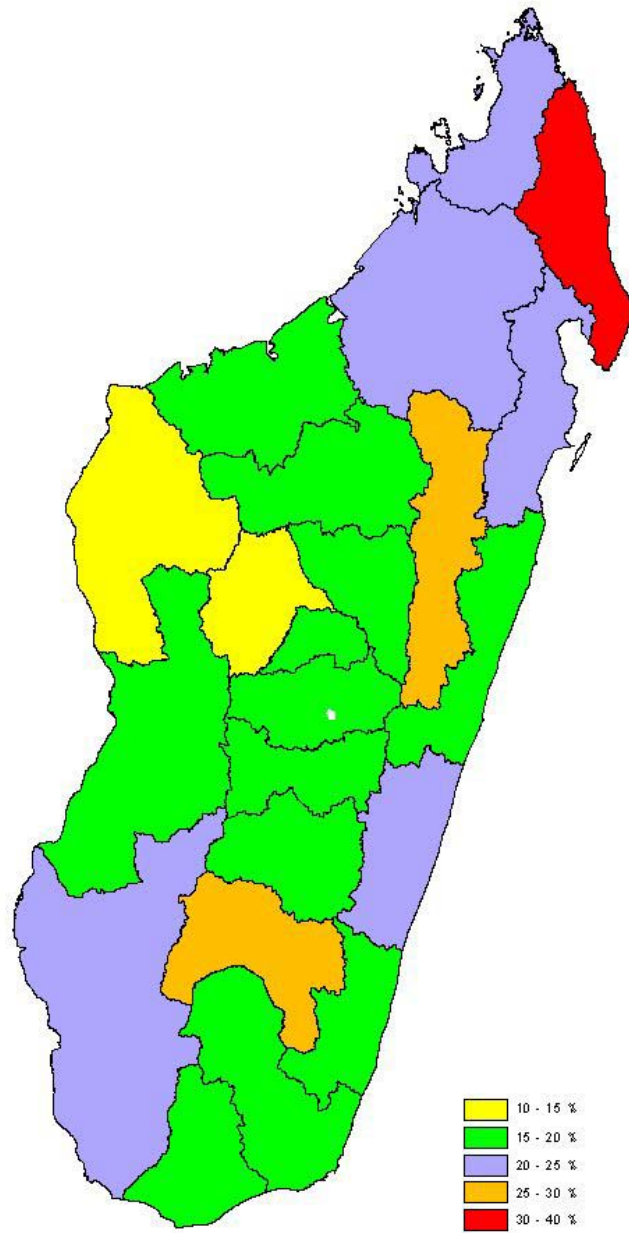
Ilo Program, Monitoring of the Education Sector Post-Crisis: Impact of the Abolishment of the Public School Tuition Policy, Policy Brief Nr. 5, Cornell University, 2003

Razafindravonona, J., Stifel, D., Paternostro, S., Evolution de la pauvreté à Madagascar: 1993-1999, INSTAT, 2001

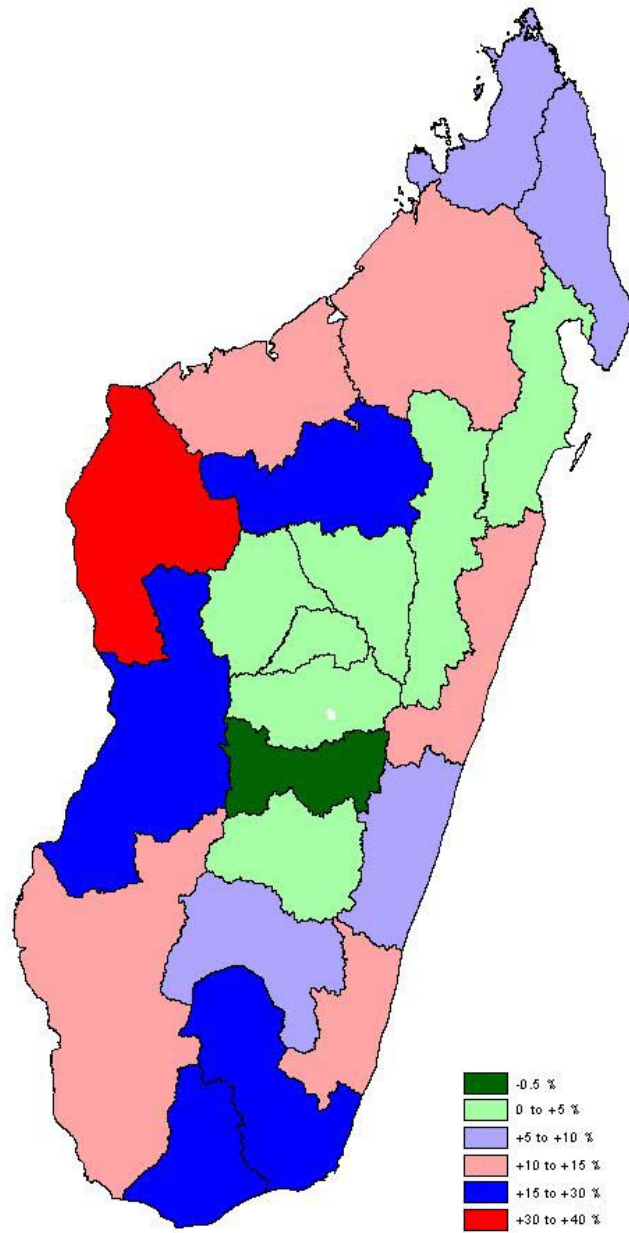
*Map 1 : CEPE PASSING RATES IN 2004*



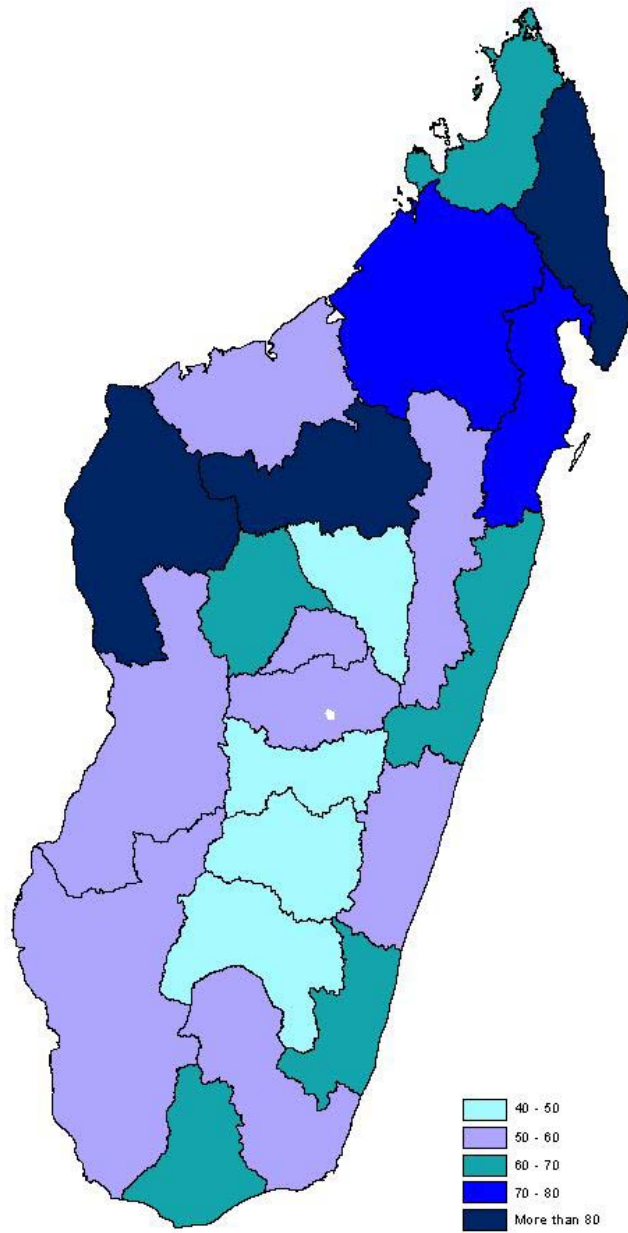
Map 2 : GRADE REPETITION RATES 2004-2005



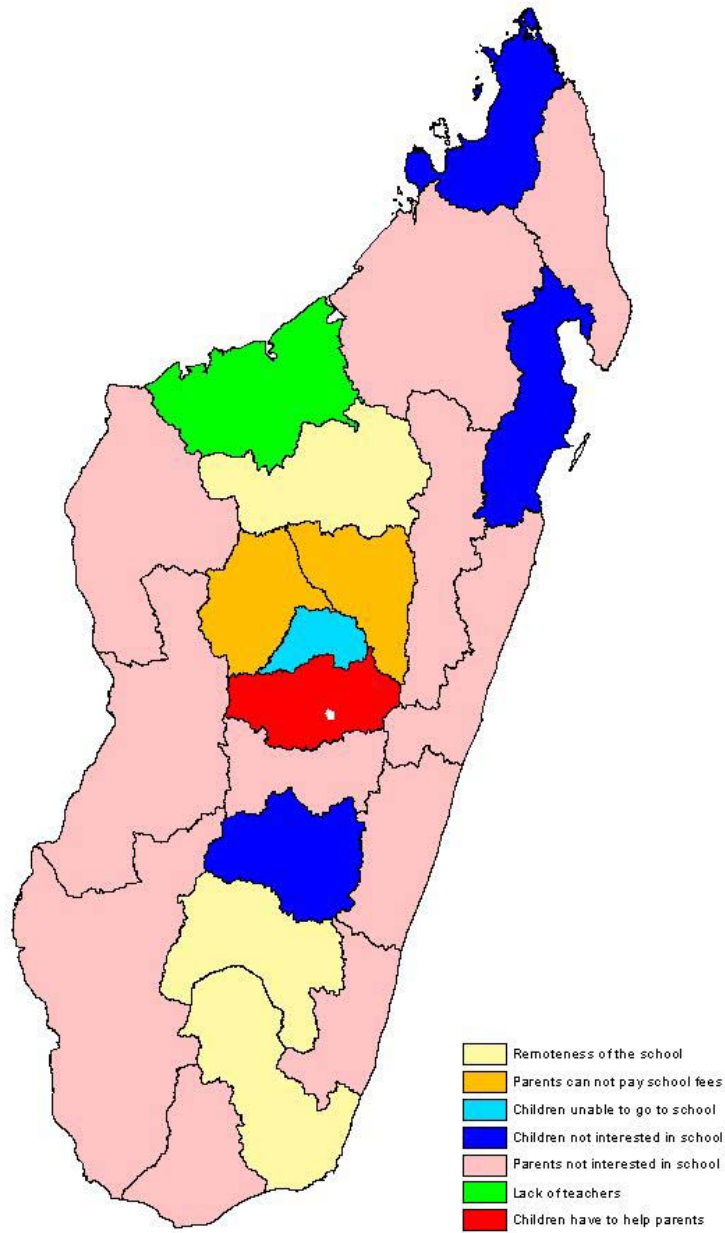
Map 3 : CHANGE ENROLMENT RATES 2004/2005 - 2003/2004



Map 4: STUDENT - TEACHER RATIO IN 2004 - 2005



**Map 5 : MOST IMPORTANT REASON WHY STUDENTS DO NOT GO TO PRIMARY SCHOOL**





**Map 6 : MOST IMPORTANT PROBLEM OF PRIMARY SCHOOL**

