



# POPULATION AND DEVELOPMENT IN LAO PDR

Understanding Opportunities, Challenges and Policy Options  
for Socio-Economic Development



Delivering a world where every pregnancy is wanted,  
every childbirth is safe, and  
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# **POPULATION AND DEVELOPMENT IN LAO PDR**

WITH SPECIAL REFERENCE  
TO THE 8TH NATIONAL SOCIO-ECONOMIC DEVELOPMENT PLAN PERIOD, 2016-2020

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## Foreword

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Awareness of the implications of population on socio-economic development has been increased as acknowledged in the 6th and 7th National Socio-Economic Development Plan (NSEDP). This report in particular is produced based on the request from the Ministry of Planning and Investment to ensure that the 8th NSEDP could address population dynamics, taking into account the changes of population that needs to be considered in the 5-year period in order to achieve socio-economic goals.

The report indicates that Lao population will continue to grow despite a decline in fertility. The changing age structure of Laos population is leading to what is referred to as the “demographic bonus” or “population window of opportunity”, which will last over 30 more years and can contribute significantly to the economic growth and prosperity and long-term sustainable development of the country. However, this can only be achieved if the needs of young people are addressed today, i.e. ensuring young people are educated, healthy, skilled, and employed.

Population dynamics should continue to receive much more attention in Lao PDR, as this report makes the interlinkage between population and socio-economic development clearer. The changing of population structure of Lao PDR will provide both opportunities and challenges to the Government, communities and families. It is important for planners to monitor closely the population trends, including the fertility patterns, in order to modify policies or interventions that can maximize the benefits and mitigate the challenges posed by population changes.

It is our hope that this analysis and its recommendations raise understanding and stimulates actions and policy development around population dynamics in the 8th National Socio-Economic Development Plan, as well as the sectoral plans. This will maximize the benefits of Demographic Bonus for fast and sustainable economic development of Lao PDR.



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## EXECUTIVE SUMMARY

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- Lao PDR is facing considerable population growth. The official population projections show an increase of between 1.71 and 1.91 million between 2015 and 2030, and a population of between 10.25 and 10.72 million by 2050.
- Growth of different age groups within the population will vary sharply. Over the 8th National Socio-Economic Development (NSEDP) Plan period, the number of school-aged children (5-14) is projected to decrease by 3.7%, while the working-age population is expected to increase by 10.6% and the elderly population by 10.1%.
- Laos has not yet completed its first demographic transition - the decline of both mortality and fertility rates to low levels, though it has been moving in this direction. The under-5 mortality rate had fallen to 79 per 1,000 live births in 2010-11, and should be able to meet its MDG target of 70, but it is less likely that the infant mortality target will be met. The total fertility rate of 3.2 (in 2008-11) was still more than 50% above replacement level. It is estimated that TFR of Lao PDR would reach the replacement level of 2.1 in the next 30 years. However, effective family planning programmes could help bring the TFR to this level faster and allow women to participate productively in economic and social development.
- Because the age structure still reflects the high fertility of the past, there are successively large cohorts moving up through the age pyramid. This leads to growth through "population momentum" - meaning that population will keep increasing long after fertility falls to replacement level.
- The changing age structure of Laos's population is leading to what is referred to as the "demographic bonus", meaning that the proportion of the population in the working age groups will increase, so that there are fewer dependants for any one worker. Whereas in 2015 the dependency ratio will be down to 0.62, by 2030 it will have fallen to 0.51 and by 2045 even lower (0.43). It will start to rise slowly after 2050.
- Ageing of the population is not yet an issue for Lao PDR. The proportion of elderly is still very low (3.8%), and will only begin to rise rapidly after 2020. Even in 2050, the proportion of elderly in Laos will be lower than in Thailand today.
- Laos has a low population density (the lowest in ASEAN), but for good reason: much of the land is mountainous and cannot be cultivated. There appears to be roughly 1.1 hectare of arable land per household, or about 1.7 hectare of cultivable land per rural family; the latter will not decrease very much with population growth, as the population depending on agriculture is expected to remain roughly constant with increasing migration to the towns.
- International migration is a "black box" in the Laotian statistics. No effective



estimate of either outflows or inflows is available. However, it is known that there is considerable movement across Laos's borders, much of it undocumented. It is likely that such movement will increase (and perhaps be somewhat easier to document) with the building of more bridges and transport linkages to other countries.

- The share of the agricultural sector in total employment is slowly declining, and that of the industry and services sectors increasing. There are enormous differences in product per worker in the different sectors: almost 8 times as high in industry as in agriculture, and almost 5 times as high in services as in agriculture.
- Female labour force participation rates are very high, including in urban areas, even though fertility rates are higher than in other ASEAN countries. Very little of this employment is in the formal sector, making it easier for women to combine working with childrearing.
- Raising labour productivity levels through a shift in economic structure towards more productive sectors is crucial. The approach should be two-pronged: (a) raising productivity in the agricultural sector and (b) fostering a growing, employment-generating non-farm sector which can absorb workers released from agriculture. A key challenge will be to raise the levels of education and training of those already in, or entering, the workforce.
- In the 20-year period to 2005, Vientiane Capital received by far the greatest

number of migrants from other parts of Laos. The majority of these migrants were from the northern highland provinces and from Vientiane Province. In the south, migrants were more likely to go to Thailand.

- Laos has been urbanizing rapidly, and this process is expected to continue. The population could reach 50% urban as early as 2030. This would imply no increase in the rural population. Vientiane's population could be close to 2 million in that year, and some of the other main cities could also grow very rapidly, particularly those with developing transport connections to other countries, thus serving to make Laos a land-linked rather than a landlocked country.
- The need to raise the educational level of the workforce is crucial for Laos as it becomes a more urbanized country, with growing international trade linkages. Laos is lagging the rest of ASEAN in enrolment ratios in primary and secondary education, in the completion rate in primary school, which is only 67%, and in levels of literacy of the school-going and adult population. Improving the quality of education is a pressing need.
- Besides the implications for labour productivity, raising educational levels would have valuable spin-offs in lowering mortality and morbidity, raising the age at marriage, reducing the amount of child labour, and numerous other areas.
- Reproductive health issues are important for Laos' development. The level of unmet need for family planning is still



quite high at 20%, even though it has fallen rapidly since 2000 (when it was 40%) and less rapidly since 2005 (when it was 27%). Meeting unmet need with the strengthening and expansion of family planning programmes would have a positive influence in lowering infant and maternal death rates, in enabling women to play a more prominent role in the workforce, and in bringing family size in line with what people want.

- Timely and accurate data is essential for effective planning and monitoring of development programs. Official population projections are about to be released, and the government needs to insist that these be used by all government agencies to ensure consistency of approach. However, official projections need to be produced for each province. A beginning needs to be made in improving the registration of vital events so that these become an effective tool for planning.

## INTRODUCTION

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This discussion paper examines the expected trends in population in Lao PDR, their implications for development, and some policy issues that arise. The emphasis is on the 8th Plan period, although this is a relatively short period in relation to demographic trends, and must necessarily be discussed in relation to a longer “perspective” period. There are two key aspects of population that are relevant for planning:

changes in the quantity of population (including its age structure and geographical distribution); and aspects of the quality of human resources, prominent among which are the health and education of the population. The basis for the discussion of population trends is the official set of population projections that have been recently prepared.

## THE QUANTITY OF POPULATION

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### **Lao PDR's population will increase substantially, whatever policy is adopted.**

The recent set of population projections for Lao PDR, prepared after results from the 2011-12 Social Indicator Survey (LSIS) became available, indicate that the population will increase from 6.2 million in 2010 to between 10.3 and 10.7 million in 2050, i.e. an increase of between 4.0 million and 4.5 million, or between 65% and 72%.

The fertility assumptions used in this set of projections were based on estimates of when the fertility rate would reach replacement level (i.e. a Total Fertility Rate (TFR) of 2.1). This was assumed to happen in 2040 in the high projection, 2035 in the medium projection and 2030 in the low projection.

The medium projection in the official projections for Lao PDR is very close to the medium projection of the United Nations, which shows a 2050 figure of 10.6 million. However, the United Nations projections use a much wider band for possible fertility trends, and consequently their projected population for 2050 ranges from 9.1

million in the case of the low projection to 12.2 million in the high projection.

It must be stressed that the future trend of fertility in Lao PDR is uncertain. International experience indicates that having reached a level comparable to that reached in Lao PDR, fertility normally keeps declining toward replacement level, though in some countries there is a stalling of the fertility decline for some time. Fertility in Lao PDR has already reached replacement level in urban areas, among those with post-secondary education, and among those in the richest wealth quintile, and can be expected to continue its decline as the population becomes more urbanized, better educated and more prosperous.

In the official Lao PDR projections, the number of years assumed for the TFR to decline from 3.2 to replacement level (2.1) is as follows:

High projection	-	30 years
Medium projection	-	25 years
Low projection	-	20 years

The 2011-12 Lao Social Indicator Survey (LSIS) showed that TFR in Laos had taken only about 12 years to decline from 5.0 to 3.2. The assumed decline from 3.2 to 2.1 in the official projections (20-30 years) is much slower.

How many years did it take for a number of other countries to reach replacement level (2.1) after their fertility declined to 3.2?

Vietnam, Iran	5-6 years
Tunisia	8 years
Thailand	10 years
Brazil	16 years
Morocco, Algeria	32 years
Indonesia	32 years
Cambodia	40 years

There was clearly a very wide range in the time taken for TFR to decline from 3.2 to 2.1 in these countries. This, as well as the fact that the official projections for Laos assume a deceleration in the speed of decline in fertility, serves to highlight the need for planners in Lao PDR to keep a careful watch on fertility trends, to detect whether fertility is following the path assumed in the official projections. If fertility decline were to follow a path similar to the very rapid pace of decline of countries such as Vietnam and Thailand, the projections would need early modification, whereas if they were to follow the much slower pace of decline in some other countries, this would

be consistent with the projections as they stand.

### **Unmet need for contraception and its relation to fertility**

It is clear that the desired family size has fallen considerably in Laos. In the 2011-12 LSIS, only 12 per cent of women with 3 children wanted any more, while 5 per cent were undecided. Even among women with 2 children, only 32% wanted more, while 7 per cent were undecided.

Unmet need for contraception is relatively high in Laos. Unmet need refers to fecund women who are not using any method of contraception, but who wish to postpone the next birth (spacing) or who wish to cease childbearing altogether (limiting). In the 2005 DHS, 27% of reproductive age women were found to have an unmet need. This proportion fell somewhat in the 2011-12 survey, to 19.9 per cent (8.2 per cent for spacing and 11.8 per cent for limiting). Contraceptive practice rose between the two surveys – from 38 per cent in 2005 to 49.8 per cent in 2011-12. The fact that unmet need did not fall very much while contraceptive use increased considerably is evidence that a growing proportion of couples in Laos want to control the number of children they have. If a substantial part of the unmet need for contraception were met – say, half of the unmet need for contraception evident in the 2011-12 Survey, this would lead to a significant decline in fertility, a decline probably more rapid than assumed in the official projections.

### **Key findings of the population projections**

Many of the findings of the Lao population projections have very important implica-

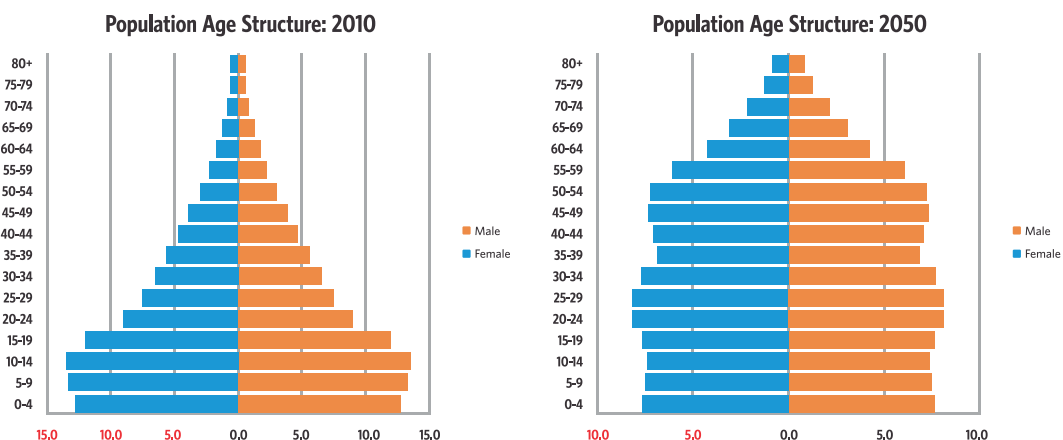
tions for development planning. These can be summarized first, before elaborating on each in turn.

1. Population growth will be substantial, whichever projection is followed. Over the 20-year period from 2015 to 2035, absolute population growth will be between 2.2 million and 2.5 million, or an increase of between 33% and 37%. Over the 35-year period 2015-2050, the absolute growth will be between 3.5 million and 4.0 million, an increase of between 52% and 59%.
2. The size of the school-age population will fluctuate a little, but in general, it will not be increasing. This has import-

ant implications for educational planning, which will be discussed in more detail below.

3. It is population momentum that will be leading to the overall population growth. While the school-age population will not be increasing, the working-age population will be increasing rapidly and the elderly population somewhat less rapidly. This can be observed in the changing shape of the population pyramid – from a stupa-shaped pyramid to a more cylindrical shape (see Figure 1).

## Population age structure 2010 and 2050



<sup>1</sup>Actually, the trends in the 0-4 age group in the early years of the projection are surprising. In the medium projection, the numbers aged 0-4 decrease by 5.5% between 2010 and 2015, despite an increase of 17% in the fertile-age female population (15-44). Then between 2015 and 2020, the numbers aged 0-4 increase by 10%, consistent with an increase of 12.6% in the fertile-age female population. The apparent discrepancy between the trend in number of young children and the trend in childbearing age females in the 2010-15 period could be due to a number of different factors, including undercount of young children in the base population or age misstatement of adult women. Whatever the reason, it would be wise for planners to consider the possibility that there may not actually have been a decline in number of young children in the 2010-2015 period.

4. Lao PDR will be benefiting from a demographic dividend – a rising share of the working-age population in the total population – over the entire 45-year period between now and 2050.
5. The proportion of the elderly – those aged 65+ – in the total population is very small in Lao PDR – the lowest of any ASEAN country. Ageing is not an issue yet; the proportion of elderly will only begin to rise after 2020. Although it will more than double between then and 2050, in that year, the proportion of elderly in Laos will be lower than it is today in Thailand

### **Costs and benefits of Laos's population increase**

Whatever assumptions are used, the population of Laos will increase steadily, probably to 10 million by 2045. It can certainly be argued that Laos will benefit in various ways from a larger population. A larger and denser population may give a rationale for providing the infrastructure needed for development – for example, for improving the road network. Whether it would provide the resources, however, is less certain. Would the faster population growth lead to more rapid economic growth? This would depend on many factors, in particular whether the economy can find productive employment for its rapidly growing workforce. If it can, growing domestic purchasing power should enable some economies of scale to be realized. However, faster population growth would not provide an additional argument for “thickening” the network of schools, and thus making schools accessible to a higher proportion of the population. This is because as already

shown, the number of children of school-age will not change very much. The arguments for providing more schools – many of them with quite small numbers of pupils – would have to be weighed against the arguments for moving isolated children closer to available schools through transportation or boarding arrangements.

### **Laos's demographic dividend**

Laos will benefit from a demographic dividend over the coming four decades. The concept of a demographic dividend is simply that the working-age population will be increasing more rapidly than the “dependant” population (i.e. the child population and the elderly population), mainly as a result of the decline in fertility, which reduces the share of the child population in the total population. Thus the product of, say, ten working-age persons needs to support fewer dependants than before. This is a very simple concept, correct in essence but needing qualification in a number of ways. First, not all working-age people are working; some are not available for work, and others cannot find work. Moreover, some of the “dependant” population are actually working; out-of-school children and many old people, especially in rural areas, who continue working as long as they are able. Second, an improvement in the ratio of potential workers to dependants is valuable for development only if the country is able to at least maintain, and ideally raise, the productivity of those entering the labour market, through suitable educational and training policies and through widening the opportunities for productive employment.

Having noted these qualifications, however,

there is no doubt that the trends in dependency ratios (the numbers aged 0-14 and 65+ divided by those aged 15-64) do have very favourable implications for development in Laos. The trend in the ratio in the medium population projection is as follows:

Year	Youth dependency	Old age dependency	TOTAL DEPENDENCY
2010	0.69	0.07	<b>0.75</b>
2015	0.56	0.06	<b>0.62</b>
2020	0.49	0.06	<b>0.55</b>
2025	0.46	0.06	<b>0.52</b>
2030	0.44	0.07	<b>0.51</b>
2035	0.40	0.08	<b>0.49</b>
2040	0.36	0.09	<b>0.45</b>
2045	0.33	0.10	<b>0.43</b>
2050	0.31	0.12	<b>0.43</b>

The trends in the high and low projections are not very different. For example, in the high projection, the dependency ratios in 2040 are slightly higher (0.38, 0.09 and 0.47 respectively) and in the low projec-

tion slightly lower (0.35, 0.09 and 0.44 respectively).

Focusing on the medium projection, between 2010 and 2015, the dependency ratio has fallen sharply; after 2015, it is expected to fall by a further 30%. Provided that suitable investments are made in education and training, and employment opportunities widened, the demographic dividend will contribute substantially to more rapid increases in per capita production and income.

After 2050, the dependency ratio will gradually increase, as the rise in the old age dependency ratio gains pace. By that time, Lao PDR should be a much wealthier country, and therefore will have the resources to deal with the challenges of an ageing population.

## THE LABOUR FORCE

### Female LFPR is very high – almost as high as male.

Both male and female labour force participation rates in Lao PDR are very high. The female rate is only slightly lower than that of males. In some ways, this is surprising, since the fertility rate is higher in Laos than in any other ASEAN country except the Philippines, and it might therefore have

been expected that many women would have to withdraw from the labour force to mind children. However, the data no doubt reflect the fact that the main component of the Lao economy is subsistence agriculture, and in subsistence agricultural communities, both men and women typically work, at

<sup>2</sup> The 2005 Population Census gives a slightly lower figure for this age group – around 80 per cent.

least part time. Whether the productivity of women is very high when they are combining child rearing with agricultural work is another question.

However, the high female LFPR is not only in subsistence agriculture. In urban areas, although the female LFPR is not quite as high as in rural areas, it is around 90 per cent across the entire age range from 25-29 to 45-49 (Labour Force Survey 2012, Figure 7.4). This is extremely high in comparison with other Asian countries, and with other ASEAN countries. In assessing this figure, the structure of female employment in urban areas needs to be examined. It is noteworthy that even in urban areas, more than one third of employed females (37%) worked in agriculture, while 15% worked in industry and almost half in various service activities, in particular (28%) in wholesale and retail trade and repair. Even in the occupational category "service workers and shop and market sales workers" the great majority of female workers (82%) were either self-employed or unpaid family workers; among craft and related trades workers, and plant and machine operators (the main categories for employment in manufacturing), 51% were either self employed or unpaid family workers. (These figures are for the whole country, not just for urban areas).

Throughout Laos, then, and even in urban areas, female employment is predominantly in the informal sector, as self employed or unpaid family workers. Although the average working hours were quite long, this kind of employment probably gives women more flexibility to combine child rearing with employment.

Unemployment rates in Laos are quite low (1.9% in 2010), but this does not necessarily reflect a well-functioning economy, but could rather reflect the irrelevance of the concept of unemployment in an economy where employment is dominated by subsistence agriculture and self-employment, even in the towns. Unemployment rates in urban areas do have more meaning than in rural areas, and these show an urban unemployment rate of 3.2%. As in most countries, the urban unemployment rate is highest in the 15-19 and 20-24 age groups (6.6% and 7.0 per cent respectively), the ages at which young people are trying to establish themselves in work, and the rate is much lower by age 25-29 (2.7%) (Labour Force Survey, 2010: 101-110).

While it can therefore be said that Laos is fully utilizing its human resource potential in the sense that almost all potential workers are employed, the problem lies in the low productivity of much of the work they do. Raising productivity levels through a shift in economic structure towards more productive sectors, and through raising the levels of education and training of those already in, or entering, the workforce, are the key challenges.



## Productivity of employment in agriculture is far behind other sectors.

Of Laos's total labour force, 71% work in the agricultural sector, 8% in industry and 20% in services. A rough estimate of the overall productivity of each sector can be obtained by comparing the distribution of Gross Domestic Product originating in each sector with the distribution of the workforce across sectors. The table below shows a remarkable difference in product

per worker in the different sectors: almost 8 times as high in industry as in agriculture, and almost 5 times as high in services as in agriculture. One way to increase productivity in the economy would be to draw workers from agriculture into the other sectors; but as agriculture employs by far the largest share of the workforce, this can only happen very slowly.

### Proportion of the GDP and of employment in each sector, 2010

Sector	Employment ('000)	GDP (billion kip)	Production per worker (million Kip)
Agriculture*	2,155	16,056	7.5
Industry**	251	14,657	58.4
Services	610	22,227	36.4
<b>TOTAL</b>	<b>3,016</b>	<b>52,940</b>	<b>17.6</b>

\*including forestry and fishing

\*\*including mining and construction

The reasonably high rate of economic growth over the past decade appears to have led to a shift in the sectoral shares of employment, with agriculture's share dropping from 78.5% according to the 2005 Population Census to 71% in 2010, industry's share rising from 4.8% to 8.3%, and service's share rising from 16.7% to 20.2% over the same period. Nevertheless, agriculture will continue to employ over half the labour force for at least another decade, and probably two decades; therefore in order to sustain Laos's rapid economic growth, it remains crucial to raise productivity in agriculture, both in commercial and subsistence agriculture.

### Lao PDR has the sparsest population in ASEAN.

Population is sparse for a reason. The population density does not appear so low when population is related to the area of arable land. Laos has 1.62 million hectares of agricultural land (only 7 per cent of its total area) including 1.43 million hectares of arable land, some 86 per cent of which was used for cultivation of seasonal crops in 2010-11. (MDG Report, p. 11). There is therefore 1.1 hectare of arable land per household (using a mean household size of 5.2), though somewhat more – about 1.7 hectares – if the urban population is excluded from the calculation.

The map in the 7th 5-year plan, p. 20, shows that over most of the country, especially in the highland and more remote areas, there is less than 1 hectare of arable land per household. [This estimate might not have yet taken into account areas suffering from unexploded ordinance (UXOS). The government has resettled nearly 900 villages in the past 10 years, including one in every five upland villages (MDG Report, p. 31). Would further resettlement of people from mountainous and isolated areas face problems of lack of unoccupied cultivable areas? Additionally, there could be land tenure and land registration issues, and other problems mentioned in the MDG report (p. 31).

The rural population has almost ceased to grow, and if the United Nations projections

of urbanization (United Nations Population Division, 2014) are correct, it cannot be expected to grow further. In other words, the total natural increase of the rural population (which is still very considerable) is expected to move into urban areas.

How large a population could Laos support? This question is impossible to answer definitively, because once agriculture no longer provides the main support for the population, a very wide range of populations are potentially supportable (as the case of Singapore, for example, shows). Laos, however, is not well placed to compete internationally in manufacturing and other non-agricultural products, and this serves to underline the need for it to invest heavily in education and training if it is to sustain a largely urban-based economy in the future.

## POPULATION TRENDS AND THE QUALITY OF HUMAN RESOURCES

### **Education – universal primary school education is still far from being attained, if measured by whether all children complete the level and end up functionally literate.**

Lao PDR is lagging behind other ASEAN countries in achieving universal primary school education if measured by the proportion of children completing primary school. Both the Lao Social Indicators Survey 2011-12 (Table ED.4) and the MOE statistics show quite a high net primary school attendance ratio of 85 per cent, but many children do not complete primary school, and drop out without having achieved real functional literacy. The MOE statistics show that the survival rate to grade 5 of those entering primary school has improved from just 48 per cent in 1992 to 70 per cent in 2012. Despite the improvement, it is one of the lowest in the

region. The proportion graduating from grade 5 is slightly lower – 67%. The first year of school is the most critical, having the highest dropout rate. According to the MOE data, among children of primary school age, about 5 per cent never enrolled and never went to school, and about 10 per cent are enrolled but not attending school (MDG Progress Report, 2013, p. 57).

The survival rate to Grade 5 is lowest amongst children living in rural areas without road access, children in the poorest quintile and children of mothers with no education. The North region has the best survival rate and the South the lowest. As

far as learning outcomes are concerned, in mathematics a high proportion (73%) of grade 5 pupils had not reached the minimal level for functional purposes in Lao society, whereas only small proportions had not reached this level in Lao language and “World Around Us”.

The schools appear to have the capacity to accept all students who need to enrol. This is evident from the high gross enrolment ratios, swelled by student repetition of grades. What do the population projections imply about the growth in numbers at this

level if all children are to graduate from primary school? Projected numbers in the school-age population according to the official population projections will not change very much over the next 20 years (see table below). The medium projection shows an actual decline of 9% in numbers of school-aged children.

between 2010 and 2020, followed by an increase of 10% in the decade after that. During the 8th plan period (2016-2020), the medium projection shows a 3.7% decline in number of children aged 5-14.

### Projected numbers in population aged 5-14, 2010-2030

Year	Projection		
	High ('000)	Medium ('000)	Low ('000)
2010	1,645	1,645	1,645
2015	1,583	1,583	1,583
2020	1,504	1,499	1,490
2025	1,557	1,536	1,503
2030	1,698	1,656	1,592

The slight decline in numbers projected for the school-age population suggests that the 8th Plan period is the time for a “big push” in education, to ensure full completion of primary school, as well as raising the proportion continuing on to secondary education. By lowering repetition rates, it should be possible to achieve universal

completion of primary education, without greatly increasing the number of classrooms and teachers, though of course it will be necessary to build some new primary schools in order to bring the schools within reach of isolated populations, and train teachers to a higher level to raise the quality of education.

<sup>3</sup> Some of the Lao Social Indicator Survey data are difficult to interpret. The Survey volume states that Table ED.6 shows that 98 per cent of children entering the first grade of primary school eventually reach the last grade. However, Table ED.7 shows that if it is assumed that children repeating grades do not progress to the next grade, the survival rate changes drastically, and only 65 per cent (two thirds) of those who entered grade 1 reach grade 5. Interpreting the data is further complicated by Table ED.7, which shows the primary school completion rate: the ratio of the total number of students, regardless of age, entering the last grade of primary school for the first time, to the number of children of the primary graduation age at the beginning of the current (or most recent) school year. This figure is 94 per cent, ranging from 59% in Saravane province to 129% in Luangnamtha province. The figures are no doubt greatly influenced by grade repetition and late school entrance.

The transition rate from primary to secondary school has shown a significant rise, from around 60 per cent in the 1990s to 88 per cent in 2012. The net enrolment rate in secondary education has also increased from below 20% in the 1990s to 40% in 2010. Given that about 25% of secondary school-aged children were still attending primary school as over-aged children, this leaves about 30 per cent of secondary school age children who are not in school. Targets are currently under discussion for secondary enrolment ratios. The suggested “big push” would require a steady increase in these ratios, not only to produce the skilled workforce needed if Laos is to move up the value added chain, but more mundanely, to ensure minimal levels of literacy and mathematical skills among young workers.

The most worrying statistic relating to education is the literacy rate of young people, which does not appear to have increased in recent years (MDG Report, p. 63). Among respondents aged 15-24 years, only 73% were literate in 2011, and those who lacked functional literacy included many who had attended primary school, indeed some who had completed primary school. There were the expected differentials according to socio-economic status and place of residence – urban, villages with road access and villages without road access. Further evidence comes from the 2012 EGRA Report, which found that in the sampled schools, over 40% of students in Grade 5 had not achieved a basic level of reading fluency that allowed them to understand the text they read. As large schools were over-sampled and ethnic minority students under-sampled in this study, “the need for action to improve early grade read-

ing in Laos is more urgent than this sample can represent” (EGRA Report, p. 8).

The evidence on quality of education, then, is worrying. The effects of limited and poor quality schooling on adult literacy are evident in comparative international data on adult literacy. “Lao PDR adults’ literacy skills are significantly poorer than those of comparable countries such as Vietnam, Bolivia, Sri Lanka, and Yunnan province in China. .... Post-secondary graduates in Lao PDR performed almost on par with people with only primary schooling in Vietnam” (World Bank, 2014: 50).

If Laos is to move into a higher-value production economy, near-universal literacy rates are a must. This will require both completion of primary school by all children, as well as an improvement in the quality of the pedagogy, so that all those completing primary school will be functionally literate. A higher proportion of children moving through secondary school will ensure higher levels of literacy, but as the EGRA Report noted, many of the Primary school students tested would lack the ability to cope with a more difficult secondary school curriculum.

### **Early marriage needs to be tackled. Lao PDR has the earliest marriage in ASEAN.**

The official minimum age at marriage in Lao PDR is 18 years, for both males and females (Family Law of Lao PDR No. 05/NA dated 26 July 2008, Chapter 2, Article 9). However, the 2011-12 Lao Social Indicators Survey found that among women aged 25-49, 37 per cent had been married by the age of 18, and 11 per cent had been married by age 15. There had not been much change in these

percentages over time; among women aged 20-24, 35 per cent had been married by age 18 and 9 per cent by age 15. These are by far the highest percentages in ASEAN countries, though they are still below the level measured in Bangladesh.

The legal minimum age of marriage in Lao PDR, then, clearly has little effect on the actual age at marriage.

Early marriage for girls is associated with rather high proportions marrying men considerably older than themselves: in 2011-12, of currently married women aged 15-24, about one in four was married to a man who was older by 5 to 9 years, and one in 10 was married to a man 10 or more years older. The highest incidence of wide age gaps was in urban areas. This partly reflects the tendency for young men in rural areas to marry very young. In Laos as a whole, 15% of men aged 20-49 had married before age 18, but this figure was 18% in rural areas (and 24% in rural areas without a road), compared with 7% in urban areas.

It is not only in Laos that legal minimum ages at marriage are ignored in reality. The same is true in Bangladesh, India and Indonesia. This suggests that enforcement of the legal minimum age at marriage is very difficult, and although strong efforts should be made to do so, other means need to be found to reduce the prevalence of child marriage.

The major problem appears to be that the cultural, social and economic incentives for early marriage are strong. Early marriage is most prevalent in rural areas, in northern provinces, among the Hmong-Mien and the Mon-Khmer ethno-linguistic groups, among

those with no or only primary school education, and among the lowest wealth groups (Social Indicators Survey, Table MS.4.1). Economic development (including some movement from shifting cultivation to more settled economic activities in which the labour value of children is less), expansion of education, urbanization and rising incomes, therefore, can be expected to lower the proportions who marry very early. However, specific interventions are needed rather than waiting for a gradual decline for these reasons.

Why are specific interventions needed? Because the costs of child marriage are great, both to the individuals concerned and to society. "Child marriage undermines nearly every Millennium Development Goal. It is an obstacle to eradicating poverty, achieving universal primary education, promoting gender equality, improving maternal and child health, and reducing HIV/AIDS. Child marriage also infringes on the rights of women and children by denying them access to an education, good health and freedom." (Hervish and Feldman-Jacobs, 2011: 2).

### **Child and maternal mortality rate issues**

Overall, the infant mortality rate in Laos has shown very substantial improvement, falling to a level of 68 per 1,000 live births in 2011. It is not certain, though, that the target of 45 per 1,000 in 2015 can be reached. The same can be said of the under-5 mortality rate, though it appears to be closer to reaching the target, and has been declining by 4 percentage points a year (MDG Report, p. 86). The observed increasing concentration of under-5 deaths in infancy in Laos is a typical pattern as countries develop. Reaching the targets for



infant and child mortality would require reaching the poorer sections of the population and those living in remote areas, because differentials in infant mortality remain substantial, and it seems that progress to date may be attributed to improvements in socio-economic conditions and mortality reductions among groups that are less poor, better educated and more receptive to interventions (MDG Report, p. 86).

The completion of the demographic transition – reaching low levels of both mortality and fertility – is likely to be heavily influenced by the success in lowering infant and child mortality. On the mortality side, this is obvious, because of the high ratio of child deaths to total deaths. But even on the fertility side, confidence that infants are unlikely to die is important in reaching replacement levels of fertility.

The maternal mortality ratio is estimated to have fallen from 796 per 100,000 live births in 1995 to 530 in 2000 and further to 357 in 2009. There is a wide band of uncertainty around these estimates. Still, the improvement is impressive, though a further substantial fall is needed to reach the MDG target of 260 by 2015.

Strong efforts are needed to address both child and maternal mortality. Both are hard to bring down in a country such as Lao PDR, for a number of interrelated reasons. One is the wide gap between the wealthier and the poorer sections of the community, which is showing signs of widening (MDG report, p. 86). Another is that the poorest groups in the country tend to be concentrated in more isolated areas, including villages without road access. This means that they lack timely access to health services, which is crucial for

lowering child and maternal mortality. Nevertheless, the progress made to date is encouraging. Further improvement in child mortality will depend heavily on progress in lowering neonatal mortality, which is the largest single contributor to under-5 mortality.

The causes of both child and maternal mortality are complex; structural, underlying and proximate causes can all be cited. In the case of maternal mortality, disparities in safe delivery between different socio-economic groups are extreme. Overall, facility-based delivery rates are still low (38%) despite significant progress, and the low quality of health services means that facility-based delivery will not cut the risk of maternal death as much as it should. Antenatal and postnatal care have both improved over time, and unmet need for family planning has fallen. However, further improvement is needed in all these indicators. Births by very young mothers also contribute disproportionately to the MMR, and are related to the very young ages at which many women are married.

Meeting unmet need for contraception should be a key objective of government policy in the health sector, quite aside from its effect on fertility rates. Unwanted births are hazardous to the health of both mothers and children. They contribute to the high maternal and infant mortality rates, because international studies have shown that the risks to health of both mother and child are greater in the case of unwanted births. Indeed, “family planning alone could cut maternal deaths by almost a third and is, therefore, one of the most cost-effective interventions to help reduce

maternal mortality.” (MDG Report, p. 98)

## Population and poverty

While Laos has made good progress in reducing the incidence of poverty by 40 % over a 15-year period from 1992/93 to 2007/08, almost 28% of the population remained poor at that time, and more than one third - 37% - if the \$1 PPP a day is used. Poverty is heavily concentrated in rural areas, especially those without road access. Poverty rates in 2007/08 were as follows:

Urban areas	-	17.4%
Rural with road	-	29.9%
Rural without road	-	42.6%

Further details are provided in the Millennium Development Goals Progress Report for the Lao PDR 2013. The report makes it clear that the very poorest groups tend to be those living in remote rural areas, to be ethnic minorities, having less education, few assets and less access to markets. As the MDG Report notes, “the lack of education perpetuates the intergenerational cycle of poverty since education has a significant positive impact on agricultural productivity, employment, access to credit, use of government services, health outcomes and can provide the poor with the means to move out of poverty.” It also notes that while the poverty headcount ratio declined and the poverty gap and the severity of poverty at the national level have lessened, the severity of poverty has actually increased in some geographically disadvantaged areas.

The 7th development plan mentioned (p. 49) that a majority of poor households are large and that having smaller household size is critical to poverty reduction. It mentioned studies showing that in the 47 priority districts, between 1992-93 and 1997-98, poverty increased at the same rate as the increase of large-sized households, but between then and 2002-03, the poverty rate reduced and so did the number of large-sized households. What the plan document does not provide is evidence of trends in poverty according to household size.

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## International migration may play a key role in Laos’s future.

In the official population projections, net international migration is assumed to be zero - not because this is the likely outcome, but because there is very limited data about migration flows. With its very long land boundary with five neighbouring countries, and widely differing levels of development in these countries, considerable movement is likely between Lao PDR and some of these countries, and to some



extent, through these countries to the rest of the world. Rough estimates of the number of Laotians living in Thailand are available: a registration of Lao migrant workers in Thailand in 2004 counted 180,000, and other estimates are in the 200,000-300,000 range (Phouxay, 2010: 32, 94). Thailand is likely to remain the main destination for Laotian migrants, because of its high level of economic development and higher wages, its language commonality and the greater geographical accessibility to Thailand than to other countries for most of the Laotian population.

the extent that migration is documented, the flows can be monitored, but much of the flow is likely to be undocumented. Strict enforcement of migration regulations may stem the flow of undocumented migration to some extent, but cannot possibly stop it. Policy should be directed to minimizing the more problematic aspects of undocumented migration, in particular human trafficking.

The development policy of Lao PDR stresses the need to change the nature of Lao PDR from a “landlocked” country to a “land-linked” country. Given that development policy stresses the benefits of opening more transport routes to other countries, such as a highway to Vietnam, a railway to China and more bridges to Thailand across the Mekong to add to the four already built, such developments need to be linked with greater ease of border crossing. Thus increased movement across Laos’s borders can be seen as beneficial to development. At the same time, it will inevitably increase the flow of people both into and out of Laos.

## Internal migration and urbanization

Internal migration in Laos PDR has been little studied, though it has clearly been significant in altering the pattern of population distribution and in enabling people to seek better economic opportunities (Rigg, 2007). In the 20-year period to 2005, Vientiane Capital received by far the greatest number of migrants from other parts of Laos. The majority of these migrants were from the northern highland provinces and from Vientiane Province. In contrast, few migrants come to Vientiane Capital from the southern provinces, because young people from these provinces are more likely to move to Thailand in search of work (Phouxay, 2010: 31).

Though the Lao PDR population remains predominantly rural, the proportion living in urban areas has been increasing quite rapidly and this trend is expected to continue. United Nations projections indicate that the growth of the rural population has almost ceased, with a growth rate of 0.15% in the 2010-15 period, and that the rural population in 2030 will be exactly the same as in 2014.

Lao PDR does not have any large cities. Even Vientiane is not large by international standards. Thus the country will not face megacity issues. The issue will be how to spur the growth of regional cities as growth centres for their respective regions, so that the fruits of development can be more widely spread.

Recent data on urban populations do not seem to be available. In 2005, the Census enumerated the populations of the largest cities. If we assume that these cities have

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<sup>4</sup> Agricultural wages in Thailand are higher even than those in Laos’ non-farm sector, and more than double those in Laos’ agricultural sector. Non-agricultural wages in Thailand are still higher (World Bank, 2014: 37).

grown by 5.3% per annum since then (which is the rate of growth of the urban population of Lao PDR for the period assumed by the United Nations Population Division), the 2014 populations would be as

shown in the following table. Of course, the numbers are only indicative, as it is unlikely that each of the cities grew at exactly the same rate.

City	2005 population	2014 population, assuming 5.3% annual growth
Vientiane capital*	569,729	907,000
Kaysone Phomvihane	81,401	130,000
Pakse	57,669	92,000
Luang Prabang	55,027	88,000
Thakhek	38,130	61,000
Pek	37,893	60,000

\*The United Nations Population Division estimate for Vientiane in 2014 is 946,000.

The United Nations' assumption of very rapid growth of the urban population is consistent with much international experience, which shows that after reaching a proportion of around 30%, the increase in percentage urban tends to accelerate until it reaches around 50% of the population. Of course, the experience of any individual country can differ widely from this trend, but in the case of Lao PDR, it may well be the path followed. According to the 2005 Population Census, the percentage urban in that year was 27.1 per cent, which is roughly the level from which an acceleration in urbanization can be expected. The United Nations predicts that the level of urbanization in Lao PDR will increase as follows:

2010	33.1
2015	38.6
2020	43.5
2025	47.7
2030	50.9
2035	53.4
2040	55.9

The projection of an urban proportion of 50.9% in 2030 – only 15 years ahead – is quite startling. It implies an increase in the urban population to about 4.36 million, more than a doubling of the 2010 urban population of about 2.08 million. It is likely that Vientiane's population will be approaching 2 million in that year, if it retains its current share of the urban population. Vientiane is a "primate city" in the Laotian context, due to its strategic location

and relatively fertile hinterland. Lao PDR's 5-city primacy index (the population of the largest city divided by the combined populations of the next four largest cities) was 2.45 in 2005, quite a high figure.

Depending on the path of development Laos will follow, Vientiane's primacy level could either be strengthened or eroded somewhat. Though Vientiane's location is strategic, Laos's elongated shape and the development of strong cross-border linkages focusing on other cities, such as Kaysone Phomvihane and Pakse, could certainly strengthen the relative importance of these cities.

## DATA ISSUES

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Timely and accurate data is essential for effective planning and monitoring of development programs. The volume of population and labour force data has increased considerably in Laos over time, but there are important shortcomings. These become evident at a time such as this, when preparations are being made for the 2015 Population Census. The latest census data - for 2005 - is very much out of date, and the 2015 census data will not be available in time to assist in preparing the 8th Development Plan. Given the long interval between Population Censuses, the value of major surveys - labour force surveys, agriculture surveys, the Lao Expenditure and Consumption Surveys (LECS), the Social Indicator Survey and the Demographic and Health Surveys - is clear, not only in providing more frequent data points for some of the data collected by the Population Census, but also in providing different and more nuanced data on various issues. How-

ever, there are important issues of quality of some of the official data. For example, the lower labour force participation rate and unemployment rate measured by the 2010 Labour force survey than by the three LECS surveys is a cause for concern (World Bank, 2014: Annex 1).

Laos has a very low proportion of elderly, and this proportion will only begin to increase rapidly after 2020. Thus ageing is not something of immediate concern. However, after that point the elderly will increase much more rapidly than other age groups, so now is the time to begin planning ahead for appropriate policies towards an ageing population. One element of this planning should be to harness the savings potential of the "second demographic bonus", the tendency for savings rates to be high among those preparing for retirement.

Official population projections are about to be released, and the government needs to insist that these be used by all government agencies to ensure consistency of approach. However, official projections need to be produced for each province because they are greatly needed for provincial planning purposes. Even at the district level, population estimates are needed for targeting provision of services, and should be prepared using the ratio or other method.

In the longer run, accurate vital registration is essential in order to track year to year

changes in key population variables, as well as to meet civil registration needs. Beginning in 2015-16, the Ministry of Health is planning to improve registration of births and deaths by training staff in the health facilities at the province, district and village level. They will also be given training for better identification of cause of death.

However, many births and deaths continue to occur at home, and for such events, forms are to be filled in by the village head. The experience of other countries shows that it is not easy to upgrade a poorly functioning registration system, but the challenge should certainly be addressed.

## SOME POLICY RECOMMENDATIONS RELATED TO DEMOGRAPHIC TRENDS

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Policies related to demographic trends are sometimes categorized as population-responsive or population-influencing policies, though many policies have elements of both.

Among population-responsive policies, policies to provide educational and health services to the growing population can be included, as well as urban development policies to accommodate migrants from other parts of the country. Training programs to prepare the next cohort of workers for suitable employment are other examples. Educational policies, while they are certainly responding to the population in need of services, will at the same time influence population trends, because there is clear evidence that better educated people tend to have both lower fertility and lower mortality rates.

Population-influencing policies can perhaps best be categorized as those affecting fertility, mortality or migration. However, policies are rarely adopted simply to influence one of these demographic parameters. Reproductive health policies are a good example. An effective reproductive health policy is likely to lead to some reduction in fertility, because it will meet the contraceptive needs of some women who have an

unmet need for family planning. However, the aims of a reproductive health program are broader – meeting women’s health needs, and the program should have effects in lowering maternal and infant mortality as well.

For the 8<sup>th</sup> plan period, the analysis in this report suggests a number of policy recommendations. Among others, they are:

1. The overall population growth rate is slowing, though the population is expected to increase by at least two thirds before it levels off. With appropriate development policies, Laos can certainly sustain such an increase in population. There is no need to set a target for the population growth rate. This is trending downward. The trend should be monitored over time, and if growth diverts too much from the expected trend, the implications of such a divergence should be studied, and policy to modify the trend adopted if necessary.
2. Efforts should be made to meet the unmet need for family planning. This will lower the fertility rate, but more importantly, it will enable couples to realize their preferences for family size and

timing of births. It will also tend to lower both infant and maternal mortality rates.

3. Meeting the Millennium Development Goals for under-5 mortality and maternal mortality should be given high priority. Reducing mortality will have major welfare benefits, not only for those whose lives are saved but also for their family and community.
4. A number of policies should be adopted to maximize the benefits of the demographic bonus that Laos is experiencing. One of them is to raise educational enrolment ratios for Lao children. Actually, while this can be viewed as a way to benefit from the demographic bonus, it should also be seen as an absolute necessity, not only in order to raise children's individual chances for good employment in future but also because this will be essential to enable the Lao economy to move higher up the value chain. As the number of children is not expected to change very much, the 8th Plan is the ideal time to adopt the strategy of a "big push" in education, which will enable rapid progress to be made in raising enrolment ratios and improving educational quality.
5. Given the rapid increase in the workforce and the high proportion of workers in agriculture, a two-pronged approach towards development policy is essential: to raise productivity in the agricultural sector, and to create a more robust industry and service sector, capable of absorbing workers released from agriculture.
6. Given low average levels of education of the workforce, training of the existing workforce (whether on the job training or in training institutions) should be given high priority. Such training needs to be based on careful study of the likely trends in industrial development and technical skills needed, so that the content of technical education can be appropriately matched with needs.
7. Policy towards migration, employment and urbanization should work in tandem. Laos's economic growth will be raised if the share of subsistence agriculture can be lowered and workers moved into higher productivity sectors. This will tend to require relocation, and on the whole, industry and service sector jobs will be in the urban areas. Current bureaucratic barriers to movement from villages to cities undoubtedly restrict movement, and procedures should be simplified (World Bank, 2014: 35-37).
8. Urbanization policy should try to work with natural forces, not to oppose trends that are not necessarily undesirable. For example, although the urban structure shows a rather high level of primacy, there may be some agglomeration economies to be reaped if Vientiane grows larger, and its population will certainly not reach the scale at which significant diseconomies of scale are thought to operate. On the other hand, the rapid growth of other cities could have important developmental spin-offs for their regions, and this should be encouraged, for example through appropriate investment in transport and trade linkages with neighbouring countries.
9. Though ageing is being given strong

emphasis internationally, and for good reason, the special situation of Laos, where the proportion of elderly will remain very low until after 2020, means that it is premature to give priority to ageing policy yet in Laos. There are many other concerns that should receive higher priority in the 8<sup>th</sup> plan.

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