

# Education

---

## Public Expenditure and Service Delivery in Papua New Guinea

### Contents

Expenditure Tracking and Service Delivery in the Education Sector in PNG, .....	1
Concept Note, October 26 2001.....	1
Goals and expected outputs .....	1
Issues.....	2
Methods.....	2
Scope and timeline.....	3
Funds flow chart for the education sector in PNG (Draft).....	4
Terms of Reference for Public Expenditure and Service Delivery activity in Papua New Guinea, February 25, 2002 .....	5
1. Finalizing the survey design .....	5
2. Finalizing the instruments.....	6
3. Data collection .....	7
4. Reporting.....	8
5. Milestones/timeline.....	8

### **Expenditure Tracking and Service Delivery in the Education Sector in PNG, Concept Note, October 26 2001**

#### *Goals and expected outputs*

In Papua New Guinea, little is known about how public expenditures flow through the budget system – across levels of government – and are translated into services actually delivered. Specifically, there is general agreement that funds allocated at the national level for education and distributed to schools – either to schools directly or to schools through the provincial and/or local levels – do not reach the school level effectively. The goal of the Expenditure Tracking and Service Delivery (ETSD) exercise is to generate new knowledge on how resources flow through the administrative and budgetary system; what the magnitudes of those resources are; and how those resources are combined with other inputs at the facility level to generate education outcomes. In order to limit the study, it will focus on the primary level where the main focus of PNG’s effort on improving services lies and which constitutes the largest part of the education budget. The results of the survey will contribute to the Government of PNG’s understanding of resource flows, as well as the relationship between resources and outcomes in the education sector.

The main output of the activity would be a two-part report. First, an analysis of the expenditure tracking data with an emphasis on the lessons learned that are relevant to other sectors. Second, an analysis of resources available to schools and the how these resources translate into learning

achievement – as well as education system indicators such as attrition rates or graduation rates. It is expected that the activity will generate databases – unprecedented in PNG – on expenditure flows as well as on the characteristics and outputs of facilities that could be used in follow-up studies on the determinants of the quantity and quality of service delivery. An additional output is the creation of baseline data against which the benefits of future investments or interventions could be compared with a re-fielding of the survey.

### *Issues*

The issues addressed by the ETSD are not unique to PNG. In countries with low per-capita GNP there is a frequently only a weak relationship between public spending on social services and human development outcomes—but a stronger link between the quantity and quality of services actually delivered and outcomes (an observation not limited to low per-capita income countries). Public Expenditure Tracking surveys and quantitative Service Delivery surveys are two tools for collecting information in a particular country to better understand (1) the flow of funds from the government to the facility level and (2) the characteristics and determinants of good facilities. Together, they help illuminate to what extent, and what determines the degree to which, a government is able to transform public spending on social services into better outcomes.

The results of this type of assessment can be quite revealing and powerful, especially in countries where the knowledge base is low. For example, an expenditure tracking survey in Uganda in the mid-1990s found that of non-wage funds allocated to education, only 30% actually reached the school. This finding was highly publicized and a proactive information campaign was implemented. By the end of the 1990s a follow-up survey found that over 90% of the intended funds were reaching schools.

There are at least three activities that the ETSD activity will contribute to – or at least be complementary to. First, a Functional Expenditure Review (FER) of the education sector to which the ETSD results will potentially contribute and will certainly complement. The FER does not plan to track funds to the school level, nor does it propose to assess functioning at the facility. Second, a Service Improvement Program (SIP) that is currently in implementation phase. The ETSD will contribute to forming a baseline for assessing the impact of that implementation, and can potentially help shape the interventions that are implemented. Third, a Participatory Poverty Assessment, carried out under the lead of the Asian Development Bank will focus on service delivery issues with an emphasis on the user's perspective.

### *Methods*

The approach described here is consistent with that which has been used in similar studies in other parts of the world (predominantly Latin America and Sub-Saharan Africa) and much of the background material is available at [www.publicspending.org](http://www.publicspending.org). The methodology of the Expenditure Tracking survey is fairly straightforward. This consists first of a thorough charting of the budget flows through various government levels (in PNG this includes the national, provincial, and district and/or local level government). Next, a series of quantitative assessments, using pre-designed survey instruments, of budgets flows in and out these levels of government is carried out. The goal is to explicitly track funds that are allocated to education

down to the level of the school. Next schools are surveyed about the amount of public financial support they receive. These amounts can then be matched and compared to allocated and distributed amounts. At each point, the survey needs to be done with care so as to minimize the possibility of overlooking inflows and outflows of funds. Since a large share of public funding of the education sector is through the payment of teacher salaries – in PNG this has been estimated at 95% of recurrent spending – these expenditures must be tracked as well.

The approach for the Service Delivery survey is somewhat different. Schools are treated like a firm and the survey attempts to measure inputs (including public funds), outputs and outcomes, as well as intermediating factors. The survey instruments can be tailored to diagnose and measure specific problems affecting service delivery. These include, for example, various types of inefficiency, quality, leakage of resources within the facility, capture of the benefits by particular communities, teacher shirking, and ghost workers (workers on the payroll who are never in schools), as well as the effectiveness of management and supervision systems. Preliminary discussions in PNG have identified teacher salaries, effort, and performance as a major issue the survey should address. A very large part of the delivery of education is carried out by the church sector in PNG (this has been estimated at 50%) with the public sector paying teacher salaries and allocating school subsidies (equal to those received by government run schools). The survey would need to include these schools.

A more ambitious program of work (perhaps to be considered for the future) could include complementary community and/or household surveys. These would help to investigate in more detail how the characteristics of the population that the facility aims to serve shapes the quantity and quality received, and even potentially community and household level outcomes.

### *Scope and timeline*

The precise sample-size and specific survey approach appropriate for PNG is still up for discussion. However, there needs to be a balancing between a limited number of locations studied – a “case-study” approach – versus a larger number studied from a wider set of areas – a “sample-survey” approach. The experience in other countries has been that a large part of the power of the results of the exercise – and hence the policy impact – can come from the fact that the sample was selected to be representative. Case-studies are frequently dismissed as non-relevant to the country as a whole. Assuming that a sample-survey based approach is used for this reason, one can nevertheless limit the locations to minimize costs and maintain supervision capacity. For example, a stratified approach could cover 5 provinces, 4 districts in each province, and 10 schools in each district for a total of 200 schools.

Table 1 gives an outline of the expected steps in the development of the exercise. The intent is for a draft report to be completed in May 2002. This schedule would imply fielding of the survey in March of 2002.

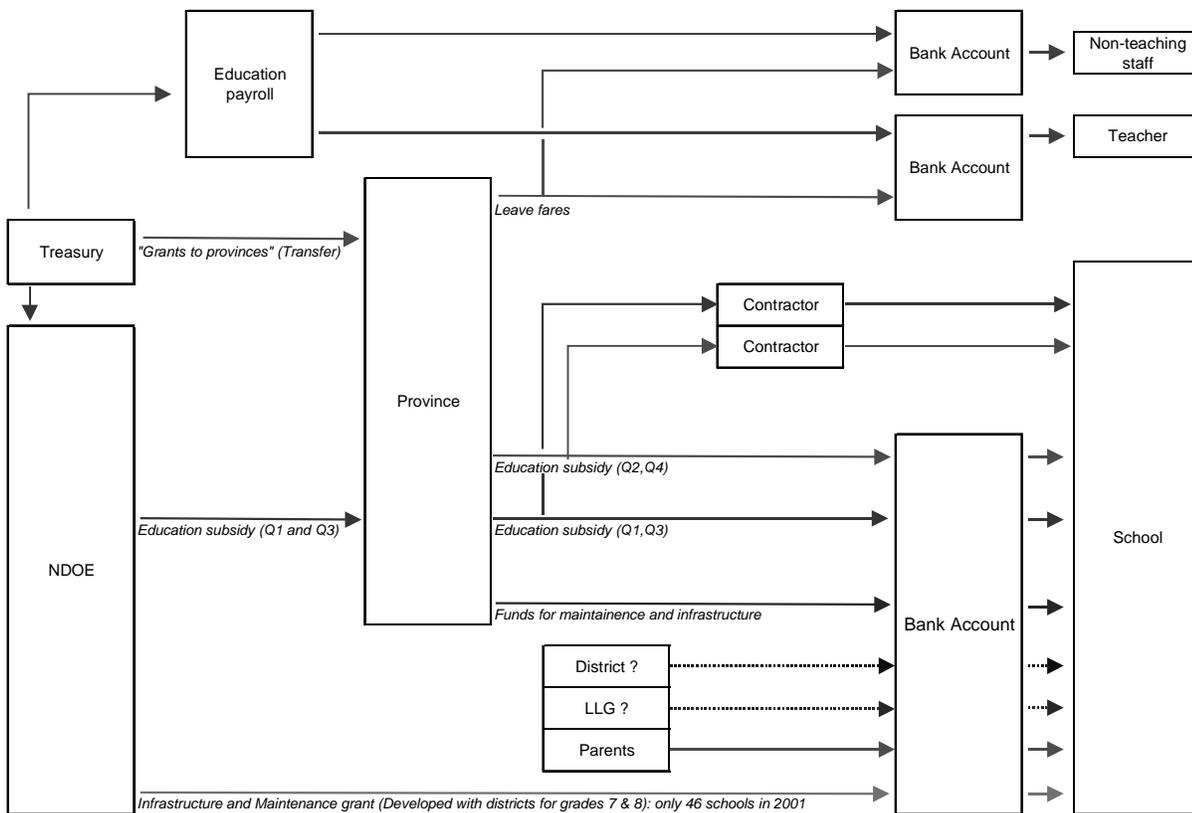
The development of the instruments, and further refining of the steps involved in the ETSD activity will be based on consultations of a working group convened for that purpose.

**Table 1. Steps for Expenditure Tracking and Service Delivery in PNG**

Nov 12-16	Rapid field assessment
Nov 12 / Nov 30	Identification of survey agency
Nov 12 / Jan 30	Survey instrument development Expenditure tracking survey Facility survey
Nov 12 / Jan 30	Survey design
Early Feb (after school opening)	Field test
Mid Feb	Revision of instruments
Late Feb	Field test / training of trainers
March	Fielding of survey
April	Data entry
April/May	Analysis and report writing

**Funds flow chart for the education sector in PNG (Draft)**

Flow of recurrent expenditures for community and primary schools



## **Terms of Reference for Public Expenditure and Service Delivery activity in Papua New Guinea, February 25, 2002**

Consultations between the Government of PNG, The World Bank and AusAid have identified an analysis of Public Expenditure and Service Delivery (PESD) in the education sector as a timely and useful exercise. More details on the concept, and results of initial discussions, are described in Annex 1. This Terms of Reference (TOR) describes the activities and expected deliverables for a consultant or consulting firm (referred to hereafter as “the consultant”) who generally be responsible for the data collection and initial reporting of results. If a consulting firm is selected, a task team leader will be appointed and will have primary responsibility for quality control, keeping the activity on schedule, and coordinating with the World Bank team.

The consultant will carry out the following tasks in close consultation with the World Bank and the PESD working group which has representation from various branches of the Government of PNG, AusAid, and private actors in the education sector. At various points of the activity (e.g. finalizing instrument, training workshop for data collectors, reporting) member(s) of the World Bank might join the consultant to facilitate decision making and ensuring that the parties are in agreement.

Tasks and deliverables, described below, are organized into: (1) finalizing the survey design (2) finalizing the instruments (3) data collection (4) reporting (5) milestones/timeline.

### **1. Finalizing the survey design**

The selection of schools will be done on the basis of a combination of purposive (at the province level) and random (at the district and school level) sampling. Schools in two provinces from each region will be sampled. These are:

- Papuan: Gulf; NCD
- Highlands: Enga; Eastern Highlands
- Momase: Sandaun; Morobe
- New Guinea Islands: West New Britain; East New Britain

The consultant will carry out district selection as follows. Gulf and West New Britain only have two districts each, and NCD has no districts so in those provinces schools from all districts/areas will be included. For the remaining provinces, *three* districts will be selected from each. The method for sampling will be random sampling of districts, with “Probability Proportional to Size” (PPS). “Size” will be determined by the number of schools in a districts. If those data are not available, then the size of the population of primary school age, or population as a whole can be used as proxies.

Once districts have been identified, the consultant will compile an inventory of all primary and community schools in selected districts. In each district *ten* schools will be randomly selected from this inventory (in NCD *30* schools will be selected). Table 2 summarizes the selection of schools.

**Table 2. Selection of Schools**

<i>Province</i>	<i>Number of districts sampled and method of selection</i>	<i>Number of schools sampled per district and method of selection</i>	<i>Total number of schools surveyed</i>
Gulf	2 no choice	10 random	20
NCD	-	30 random	30
Enga	3 random PPS	10 random	30
Eastern Highlands	3 random PPS	10 random	30
Sandaun	3 random PPS	10 random	30
Morobe	3 random PPS	10 random	30
West New Britain	2 no choice	10 random	20
East New Britain	3 random PPS	10 random	30
<i>Total</i>			<i>220</i>

No initial exclusion of schools will be made on account of extreme remoteness. (The constraints imposed by remoteness are an area where the study would be useful in shedding light.) A random sample will be drawn and the cost and logistical implications of covering all schools in the sample will be considered. If there is an unmanageably large number of extremely remote schools in the sample, then either (a) the overall sample size will be reduced in order to manage total costs and time, or (b) a criterion of extreme remoteness will be used to reduce the number of extremely remote schools in the sample. Potential replacement districts and schools will be allowed for at the sampling stage.

*Deliverables:*

- List of selected districts (with description of selection mechanism used)
- Inventory of schools from selected districts
- List of selected schools with basic descriptors (name, address)

## 2. Finalizing the instruments

There are three main survey instruments:

- School level instrument covering among other topics
  - school finances and sources of support
  - physical characteristics of schools
  - teacher characteristics
  - student characteristics
  - personnel management
  - organization of instruction
  - roles and responsibilities in education decision-making (administered to Head-teacher, a teacher, and a parent from the PNC).

A draft of this “School level instrument” is attached to these TOR and will be revised and finalized by the consultant.

- An instrument designed to collect information on roles and responsibilities in education decision making. This instrument will be administered as a part of the school instrument to the head-teacher and other teachers. In addition, the instrument will be administered to

- Provincial Education Advisor,
- Provincial level church agency representative,
- District education officer,
- The chair of the school’s Board of Management (or other available person if the chair is unavailable)

A draft of this “Roles and Responsibilities instrument” is attached to these TOR and will be revised and finalized by the consultant.

- A set of instruments designed to “track” funding flows through the education system. The goal of this set of instruments is to track funds released at the central level down to the school. The figure in Annex 2 shows a “map” of funds flows through the system that could be tracked. The areas of focus for this exercise are:
  - Payroll
  - Education subsidy
  - Grants to provinces

The idea behind this tracking is to capture both how much money leaves one level and enters another, as well as delays in disbursements. School level data will be collected as a part of the school level instrument and therefore instruments need to collect budget data (inflows and outflows) for

- The Central level
- The Provincial level
- The District and Local Level Governments

This set of instruments (“Tracking instruments”) will be developed by the consultant.

Finalizing the instruments will involve both thorough review of the questions, as well as field-testing to ensure that the questions are understandable to interviewees. The results of an initial pre-test of a few schools will be presented and discussed with the working group. A subsequent field test of on the order of 5 to 10 schools will then be required to finalize the school level instrument.

*Deliverables:*

- Draft final “school level instrument”
- Draft final “tracking instruments”
- Draft final “roles and responsibilities instrument”

**3. Data collection**

The consultant will undertake the data collection with careful attention to interview techniques and data quality.

Maintaining the highest quality standards for the data collected, it is expected that the consultant will, among other activities:

- Assemble a team of data collectors of sufficient size and quality to implement the data collection in the given timeframe. It is expected that teams of two data-collectors will visit each school. The team may consist of a relatively senior person and a junior person. The framework of 35-day field operation (22 person

in 11 teams; each team covering 2 districts - i.e. 20 schools at an average rate of 1.5 days per school; 3 days for training and 2 days for wrap-up) would be acceptable as a working framework.

- Appoint supervisors (one per region, or one per province) who will monitor the quality of data as it is collected (in order to enable follow up interviews if necessary). These supervisors will most likely need to travel to the district level and accompany data collectors to schools when possible.
- Require a centrally organized workshop to train the selected data collectors
- Develop an interview manual that describes standard responses to issues raised by the survey. This manual will also include all the location codes used in the instrument.

*Deliverables:*

- Interview manual
- Clean data set with documentation. The consultant will produce a data set in a format readable with commercially available statistical or database software (e.g. Stata, SPSS, Dbase, Access). The documentation will describe:
  - Sampling
  - Data collection process
  - Difficulties in data collection
  - Key features of the data
  - Key problems with the data (e.g. schools with inconsistent data that could not be resolved through follow-up visits or investigation)
- Completed questionnaires

#### **4. Reporting**

Report with descriptive statistics and initial analysis. The consultant will produce an initial report of descriptive statistics as well as an initial description of the flow of funds through the system.

The descriptive statistics will cover the major areas of the school questionnaire described in item (1) of this TOR. There will be a focus on how the averages and variability in responses differ by region and/or province.

In addition to a narrative description of the descriptive statistics, the initial analysis will explore the issue of the flow of funds focusing on *payroll* and *education subsidies*. Major issues concern the magnitudes of the funds available at each level (central ministries, province, district/LLG, schools) as well as delays in disbursements.

#### **5. Milestones/timeline**

The following timeline outlines documents or activities that will be reported to the World Bank team with dates on which they will be reported, or over which they will be carried out.

Documents related to sampling	February 28, 2002
Field-test	March 25-27, 2002
Finalized instruments, interviewer manual	March 30, 2002
Training	April 8-10, 2002
Field operation	April 15-May 18, 2002
Data sets + documentation	June 7, 2002
First draft report	June 28, 2002
Final draft report	End-July 2002

The full set of deliverables is:

- documents related to sampling;
- finalized instruments, interview manual;
- datasets and documentation;
- completed questionnaire forms;
- first draft report;
- final report.

The various deliverables will be submitted to the Bank in fulfillment of the contract. The deliverables are considered property of the Bank, and would be eligible for publication and dissemination subject to Bank approval.