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**IMPROVING THE ELECTORAL ROLL AND VOTER IDENTIFICATION
IN PAPUA NEW GUINEA**

July 2010



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The National Research Institute**

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**IMPROVING THE ELECTORAL ROLL AND VOTER IDENTIFICATION IN
PAPUA NEW GUINEA**

by

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**NRI
National Research Institute**

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ACRONYMS

AFIS	Automated Fingerprint Identification System
AusAID	Australian Agency for International Development
EAC	Election Advisory Committee
EM	Electoral Manager
ESP	Electoral Support Program
ICR	Intelligent Character Recognition
IDEA	Institute for Democracy and Electoral Assistance
IDEC	Inter-departmental Committee on Elections
ID	Identification
LLG	Local-level Government
LPV	Limited Preferential Voting
NEC	National Executive Council
NGO	Non-government Organisation
NRI	National Research Institute
OMR	Optical Mark Recognition
OSCE	Organisation for Security and Cooperation in Europe
PNG	Papua New Guinea
PNGEC	Papua New Guinea Electoral Commission
TIPNG	Transparency International Papua New Guinea
UDHR	Universal Declaration on Human Rights
UN	United Nations
UPNG	University of Papua New Guinea

PREFACE AND ACKNOWLEDGEMENTS

It is of course not correct to blame the conduct of elections for all problems in a political system — the causes are much deeper. But sometimes, electoral processes and systems may be direct or contributory causes of the problems and even of violence. In mid-April of 2010, the looming example is in Sudan, where bad voter registration and inadequate systems for ensuring fairness generally herald controversy and ongoing violence. There are many such examples across the last few years, including the violence in early 2008 that followed the failure of the Kenyan Election Commission to deliver fair and transparent processes. Indeed, the scale of election-related conflict is such that the Institute for Democratic and Electoral Administration (IDEA) is about to launch a major new report on comparative lessons learned, risk-assessments and problem-solving for the conduct of elections and the management of conflict.

Papua New Guinea had its own particularly dramatic example of widespread election violence in 2002 in the Highlands Region. A host of changes followed preparing for the 2007 General Election, including the introduction of the Limited Preferential Voting system (LPV), the compilation of an entirely new electoral roll, and many legal and system improvements.

But even if the scale of the 2002 violence was not replicated in the 2007 National General Election, and accepting the value of the improvements, the evidence suggests that in relation to the electoral roll and voter identification on polling day, the underlying problems of 2002 remain.

This report summarises the evidence of the problems in PNG. We recommend perspectives and options to address the issues. The roll and voter identification are obviously only part of elections generally, hence the recommendations are relevant to all aspects of elections. Still, the issues are hard and no one (certainly not us) should suggest there are simple ‘solutions’.

We have been assisted in formulating our views by the openness of the Papua New Guinea Electoral Commission (PNGEC), the wealth of inside reports and independent observer material on elections in PNG (a remarkable archive), and in personal terms by participants and stakeholders in PNG, experts and commentators locally and internationally, anonymous reviewers and friends and colleagues — all of whom are humbly thanked and absolved of responsibility for the result.

We also thank the NRI project team led by Dr. Ray Anere and Kate When who were appropriately demanding, thought-provoking and efficient — and a great pleasure to work with.

Ole Holtved, Solomon Kantha, and Andrew Ladley
June 2010

EXECUTIVE SUMMARY

There are no quick fixes for improving the electoral roll and voter identification in Papua New Guinea. The employment of technological options, including photo identification and/or fingerprint systems, has only worked well in other countries where there are strong — sometimes authoritarian — systems. To be ready to use this technology, there is much groundwork to be done.

Good management systems, enrolment, verification and updating procedures that can be depended on and, significantly, the support of the people when registering to vote and on polling day are all needed first. This requires a holistic approach to improving the electoral roll. This report outlines the key target areas that will help to achieve this kind of approach.

This report, commissioned by the National Research Institute (NRI), begins by outlining the extent of the problem. In two recent assessments of the current electoral roll — by Oberdorf (2006) and Wicks (2006) — it is clear that the roll does not provide a credible link between eligible electors and the votes counted during an election. The spectrum ranges from crisis proportions in the Highlands Region (where about one third of the population lives) to manageable levels in the New Guinea Islands Region, and with variations in between.

This report then argues that the current system does not meet our definition of ‘sustainability’, that is, the institutional capacity in PNG to maintain a system over time. There are no solid systems to keep the roll from further deterioration. It is not clear that there are working verification and roll-cleaning systems, and roll updating is delayed and neglected in many provinces in the Highlands Region. The system of voter identification on polling day remains particularly weak. Under-performing Election Managers and partisan Ward Councillors play a major role in this dysfunction. This is accompanied by insufficient resources to undertake adequate verification of the roll. On election day, these rolls are used despite obvious inflations.

The impact of these problems is not limited to poorly managed elections. Instead, this dysfunction infuses political processes, creating an ‘election crisis spiral’. A bad roll leads to unfair elections and increases the potential for the election of bad leaders. Under poor leadership, government budgets get reallocated to assure political survival, thereby reducing funds available for core services.

In light of the seriousness of the problem, this report examines what, realistically, can and should be done to improve the electoral roll and voter registration between now and the 2012 National General Election, and over the longer term.

The Papua New Guinea Electoral Commission (PNGEC) has made a very important step in the right direction — which is that they have made the electoral roll their highest priority. However the responsibility falls to the PNGEC to bring not just commitment, but a credible roll management and improvement plan to the people of PNG.

The answer is not a new roll for 2012. The systems are not in place to ensure the new roll will overcome some of the problems that have featured in the past. Rather the answer is a long term roll management and improvement program, ideally funded as a stand alone, multi-year program by the PNG Government. Under this plan strategic re-enrolment in key electorates will be a better way of trialling new systems and procedures in controlled pilots,

rather than a nationwide re-enrolment. This is also where there could be some productive, small scale, testing of new technologies.

This program will need to get the management of the roll right around the country and will need to get systems and procedures working. It will also need a whole new approach, and a redoubled effort to community engagement, the focus of which should be to reshape the incentives for voters, candidates and supporters to play fair during elections.

It is here that this report makes a range of findings on what this plan would need to address.

We identify the following four areas as essential. These findings are then supported by a series of specific recommendations.

1. Get the Resources and Political Support in Place

Roll improvement begins with political support. In practical terms, one immediate measure of this support would be commitments by governments, to make sufficient resources available from the recurrent budget throughout the election cycle. The Constitution obliges the government to fund ‘genuine elections’. This report includes recommendations on how this can be achieved.

In addition to government support and resources, the PNGEC has made it clear that, ultimately, it is up to the people of Papua New Guinea to take ownership of ‘genuine elections’. The PNGEC can foster this ownership by communicating and maintaining clear strategies and by demonstrating effective and popularly-trusted management of all aspects of elections. The process of building a constituency for ‘genuine elections’ would see the PNGEC engaging more closely with political parties, candidates, elected leaders, civil society and voters.

2. Get the Electoral Incentives Right

In seeking more support for ‘genuine elections’ this report emphasises the essential need to realign the incentives for fair play during elections. This draws on the findings of our related report, titled *Realigning Electoral Incentives* (Ladley *et al.*, 2010). In that report we examine the incentives that drive electoral behaviour, especially in relation to enrolment and voter identification on polling day. Our suggestion is that it is possible to create stronger incentives to follow the rules, than to cheat. The primary emphasis should not be on coercion (more security and more prosecutions), important though such matters are. The primary emphasis should be on education and working with communities to create the conditions for fair elections. In this process, the PNGEC has to do more than be an effective ‘administrator’ of elections. It must engage with political parties, candidates and communities to cultivate support for accurate enrolment and voter identification — as well as all other aspects of polling.

The PNGEC has already developed an excellent civil society network. The next step is to implement an intensive community engagement program, involving the active negotiation of consent and cooperation, supported by a legal framework that allows the PNGEC to delay elections.

3. Get the Appropriate Roll Management Systems in Place

An appropriate management system for the electoral roll must be in place within the PNGEC. This must be a combination of centralised and decentralised control.

We understand that there is considerable interest in devolving roll management to the lowest level of government — the ward. This is a concern, given the fact that under-performing provincial Election Managers and partisan Ward Councillors feature prominently (in some cases, predominantly) in creating inflated rolls. Roll management needs to be configured so that any re-enrolment, updating and verification is conducted with centralised oversight, auditing and controls. Whilst this report agrees that there is a need for strong participation at the ward level, it does not support ward-based management of the roll uniformly across the country. The key is to adapt systems to deal with problems, not to assume that the same processes will work in all places in PNG.

Our recommendations involve getting specific technical assistance in place: a dedicated roll management unit within the PNGEC headquarters, supported by the government as a specific program, constituency-based technical support to PNGEC staff especially in the Highlands Region, with director-level PNGEC staff based in a Highlands headquarters.

There would also need to be transparent recruitment and performance management and regular auditing of province-, district- and ward-based staff. One excellent step would be for political parties to sign a code of conduct that (amongst other things) respects these processes for making appointments.

4. Tested Enrolment, Verification and Identification Procedures in Place

Getting the procedures right should be a major focus before 2012. This is particularly important for verification, roll-cleaning, recruitment, and — in key areas — enrolment. By targeting identified problem areas, it should be possible to trial procedures and refine approaches in the lead-up to 2012. Trials could address making improvements to enrolment (using registration centres) and verification (using ward-based public readings).

Across these four focus areas, a series of more specific recommendations have been made. These are outlined below.

RECOMMENDATIONS

1. Establish mechanisms to ensure that the Government of PNG meets its constitutional obligations to provide appropriate resources to hold genuine elections

This could be achieved through the Interdepartmental Elections Committee or through establishing other parliamentary committee mechanisms. Strong advocacy on behalf of these mechanisms, with political support, is essential to ensure that the government provides reasonable and predictable funding sufficient to achieve ‘genuine elections’.

This secure funding would of course have to be based on realistic and sound planning and budgeting on behalf of the PNGEC.

2. Convene a national working group for the re-alignment of electoral incentives

This working group should consult nationally and especially throughout the Highlands Region on whether there is consensus to conduct a program seeking to realign incentives, based on techniques of conflict management and resolution. This working group would then be responsible for identifying necessary structural changes to the PNGEC, any necessary legal reforms, specific technical support in conflict management, and ultimately the development of a strategic plan for targeted interventions in key constituencies before the 2012 National General Election.

3. Establish a roll management unit

This roll management unit would have as its objective a steady multi-year program of roll improvement and reform. It should be funded as a separate budget allocation within the PNGEC. The unit should be particularly focused on localised, constituency-based support for Election Managers with strong performance monitoring and auditing, as well as implementing a range of roll improvement activities, of which a number of suggestions are made below.

4. Re-enrol key constituencies strategically before 2012, tailoring pilot options to different places

These could be identified as those with certain quotas of over- and/or under-enrolment, and would especially involve some key constituencies in the Highlands Region. These should be done as pilot exercises trialling low and high technology and cost interventions, as described in Recommendation 5 below.

5. Plan and implement a series of pilots in both ‘problem’ and relatively stable constituencies

These pilots should address the following options, (amongst other possibilities):

- centre-based voter registration by aligning of enrolment centres with polling sites;
- adding receipts or issuing enrolment certificates; and
- piloting a photo roll in a controlled context.

6. Build, publicise and implement an accountable system of roll display and verification

Ward-based roll verification should be piloted in key constituencies, and include public readings of the roll, in order to ultimately develop a system of verification that would follow any enrolment exercise.

7. Consult widely with relevant agencies to develop a strategy for disciplinary action against electoral fraud

This recommendation is based on the need for a clear picture of disciplinary interventions that can effectively be made by law enforcement before, during and after the election period. A strategy of collaboration with law enforcement agencies to collect evidence and facilitate a number of prosecutions could also strategically assist the ‘realignment of incentives’ of electoral conduct.

8. Allocate special constituency-based resources for the Highlands Region

This could involve a Highlands Region headquarters, permanent locally-based Highlands Region operations centres, and co-located technical support, temporarily or permanently based in electorates in the Highlands Region. Regardless of the structure, the focus is a long term physical presence of high-level operational support and capacity development in the Highlands Region, and ongoing dialogue with key political figures in the region.

9. Diversification of donor support inputs

The existing donor support reflects strong relationships and funding. It may assist all concerned, however, if the PNGEC could enhance this with a broader range of appropriate donor support inputs, including focused technical support (via the Australian Electoral Commission or other networks) with ongoing capacity building.

10. Focus on internal systems improvement within the PNGEC

This would include:

- development of roll cleaning systems — auditable mechanisms to encourage backup, software checks, groundwork, and management interventions for non-completion of tasks;
- training and updating of manuals (that is; outlining processes for updating the roll, etc.); and
- keeping abreast of ward designations and clearing up inconsistencies.

11. Use indelible ink properly

The failures of indelible ink lie with the systems and personnel. A greater focus on awareness, and focused attention on the proper use of ink (application to the whole finger tip), in pilots is necessary.

12. Integrate voter awareness and education with registration, verification and other major electoral events and with efforts to ‘realign incentives’

Almost all recommendations above imply a redoubled focus on electoral awareness and civic engagement. This needs to cover all electoral events as well as to accompany any new changes to procedure (e.g. centre based enrolments).

‘Realigning incentives’ also implies a role for civil society as an active negotiator in ensuring good electoral conduct. This also implies an understanding of civil engagement in elections that goes beyond simply communicating key messages.

To prevent any changes backfiring it is essential that voters’ expectations closely align with voters’ experience of election planning and administration on polling day.

13. Make sure any technological solutions are implemented ONLY when certain conditions are in place

These conditions would be:

- effective management systems;
- ongoing technical operating capacity is assured;
- ensuring voter, community, and candidate consent to genuine elections and the use of technology is reasonably widespread;
- all systems are adequately tested; and
- the full costs of purchasing, operating and maintaining systems are reliably established.

14. Establish mechanisms for the PNGEC to cooperate actively with any processes for developing a National ID card and/or civil registry, to share lessons and establish the feasibility of building reliable systems for unique personal identification

This would involve building a mechanism for ongoing dialogue between key agencies involved.

SECTION 1: INTRODUCTION

For candidates and their supporters, elections involve trying to win. This requires getting more votes than their opponents, just as soccer players try to score more goals than their opponents. A key factor everywhere is whether candidates or 'players' compete according to agreed and fair rules, along with fair officials and 'referees' to police those rules. Putting aside the soccer comparison, the evidence from elections in Papua New Guinea is that there are significant problems with electoral 'fair play' in many parts of the country. This report focuses on one key aspect essential to the integrity of elections, namely the electoral roll and voter identification.

Put simply, the integrity of elections essentially involves being able to answer reliably two related questions: 'who votes?' and 'for whom do they vote?' The first is answered by election authorities and the public cooperating to prepare lists of eligible voters (the electoral roll) in advance for each electoral area. On polling day, *only* people identified as being on the relevant lists should vote (once). The second question ('for whom?') is answered when the ballots are taken from boxes, properly counted, and a result declared. Obviously, if the first question cannot be answered reliably, the counting and allocation of votes (and hence the result) also become suspect – results should reflect the properly counted, valid choices, of *eligible voters*.

For those who cheat elections, the goal is to subvert the reliability of one or both questions in ways that are completely interconnected. 'Who votes?' is subverted by falsely maximising the number of supporters on the lists and/or minimising the number of those likely to support opponents. An inaccurate electoral roll allows invalid votes to be cast, and prevents eligible people from voting. Also, cheaters look for ways to ensure that voter identification on polling day works in their favour (by allowing invalid votes, but preventing potentially valid votes). The same applies to the systems that are supposed to ensure a secret ballot and proper counting. Always, the purpose is to maximise a candidate's votes and minimise those of opponents. Common examples include invalid voting (e.g. by children), multiple voting, ballot stuffing, preventing rivals from voting, destroying ballot boxes from rival areas, falsifying figures in the counting, and allocating ballots to the wrong people.

This research on the electoral roll and on voter identification was commissioned by the National Research Institute (NRI) to bring evidence to problem identification and proposals for solutions. The issue, simply put, is that for some decades, most election studies have identified voter registration and identification as being at the heart of difficulties in PNG elections. From the evidence our view is indeed that 'who votes?' cannot be reliably answered in much of the country. The spectrum ranges from crisis proportions in the Highlands Region (where about one third of the population lives) to manageable levels in the New Guinea Islands Region, and with variations in between. The report examines what, realistically, can and should be done between now and the 2012 National General Election, and over the longer term.

Of course the problems are not new, either to PNG or around the world. In PNG, they were very well documented across the 1990s and leading up to the crisis of the 2002 General Election. In 2006, the PNGEC abandoned the 2002 roll and ordered a completely fresh roll for the 2007 National General Election. This made improvements, reducing the number of names on the roll from 5.3 million to 3,938,839 (Commonwealth-Pacific Islands Forum

Election Assessment Team, 2007). But as this report shows, such improvements did not address the root causes, especially in the Highlands Region. Hence major problems remain.

This point was also recently made in the NRI's own analysis, recommending an urgent study of the options for remedying the situation (Anere and Wheen, 2009:9). In the 2007 elections, domestic observers documented problems with the roll in 19 electorates around the country (Haley and Anere, 2009). The issues can be summarised as over- and under-enrolment, underage voting, voters assigned to wrong wards, multiple voting, allocating ballot papers without reference to the roll, and 'bloc voting' (multiple ballots being filled in by a candidate's supporters irrespective of individual voter preference, identity or numbers). Unsurprisingly, the PNGEC acknowledges frankly that deep problems remain, and that the roll is its 'highest priority' in preparations for the 2012 National General Election (*ibid.*, 2009; AusAID, 2003; Ketan, 2005).

In a very practical sense, the preparation of this report was greatly assisted by two earlier reports on problems and options for the PNG roll leading up to the 2007 National General Election, from Oberdorf (2006) and Wicks (2006). Their analyses were appropriately focused for the Electoral Support Program (ESP) and the PNGEC regarding the immediacy of management and technical issues before the 2007 National General Election. In this report, we were able to stretch wider and further afield. To broaden the conceptual and practical analysis, we drew on the valuable and continually updated archive of election observer reports about PNG elections, the substantial body of comparative material relating to the roll and voter identification around the world and the literature on public policy (especially regulatory theory) and conflict resolution as it might apply to PNG. We also had the advantage of being able to consider how the PNGEC's preparations heading for 2007 National General Election had worked out in practice. The material has thus included observation reports of the 2007 elections, the PNGEC's own assessment of the issues and priorities attached to the roll for 2012, and one carefully-observed by-election in 2009. At various points in the research process we discussed the issues with some of the important stakeholders and drafts were sent widely for comment. All those discussions and comments contributed to this report, and quotes (mostly referenced, but sometimes anonymised) are used to illustrate key points.

We believe that the result is a solid evidence-based assessment of the problems and the options heading for the 2012 National General Election. In some measure, building a list of eligible voters and checking voters against that list on polling day involves technical, administrative, management and human issues: budgets, computer technology, enumerators, training, voter identification systems, polling staff, and so on. But the issues go much wider. Elections are part of the people and societies concerned. More fundamentally, the constitutional foundation of the state of Papua New Guinea is the will of its people based on 'genuine' elections. To vote, every person must be on the electoral roll. Breaking the working links between the roll, fair elections and representative government undermines constitutional legality and political legitimacy.

This report outlines the legal framework, the problems and the options for addressing these, including drawing on perspectives from public policy and conflict management in seeking solutions. The range of options covered in this discussion includes mechanisms to:

- ensure adequate and timely financing;
- re-shape incentives to comply with elections rules;

- make improvements to the current systems; and
- prepare for longer term and more complex options.

The various options are then assessed against key criteria of relevance to PNG and the 2012 National General Election.

SECTION 2: THE LEGAL FRAMEWORK

2.1 Constitutional Foundations

The legal framework is the Constitution of the Independent State of Papua New Guinea (the Constitution), the Organic Law on National and Local Level Government Elections (the Organic Law on Elections), the *Electoral Law (National Elections) Regulation Act 2007* (the Regulations) and relevant case law.¹

The Constitution expects much from its people and leadership. It requires that political representation and government be based on the will of the people, measured in rights of citizens to vote and be elected to public office in ‘genuine, periodic and free elections’ (a.50; also *Preamble*). The Preamble also states: “We the people of Papua New Guinea... assert... that all power belongs to the people — acting through their duly elected representatives...”.

The *will of the people* creates the modern state of PNG, and explicitly links it with the aspirations of the United Nations Charter, the Universal Declaration of Human Rights and other major conventions of rights, democracy and the duties of government (a.39(3)). Alongside the foundation of government being based on the will of the people, the Constitution also gives ongoing recognition to the traditions, customs and laws of the communities of PNG. It balances every statement of rights with the qualification that such rights are "subject to respect for the rights and freedoms of others and for the legitimate public interest" and may be subject to limitations that are "reasonably justifiable in a democratic society having a proper respect for the rights and dignity of mankind" (a.5,38,39,50).

As regards elections, the Constitution provides (a.50) that (unless disqualified):

- (1)... every citizen who is of full capacity and has reached voting age...has the right, and shall be given a reasonable opportunity —
 - (c) to take part in the conduct of public affairs, either directly or through freely chosen representatives; and
 - (d) to vote for, and to be elected to, elective public office at genuine, periodic, free elections; and
 - (e) to hold public office and to exercise public functions.
- (2) The exercise of those rights may be regulated by a law that is reasonably justifiable for the purpose in a democratic society that has a proper regard for the rights and dignity of mankind.

Interestingly, there is no constitutional definition of some key terms, including ‘freely chosen’, ‘genuine’ and ‘free’ elections, though the Constitution itself requires that its terms be construed with reference to the international documents, such as the 1948 Universal Declaration on Human Rights (UDHR).

The UDHR Article 21states:

¹ For consistency we refer to the various legal provisions as *articles* of the Constitution (a.), *sections* of the Organic Law (s.) and *regulations* (r.). The only case law we discuss here is the occasional reference to election petitions.

(1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives. (2) Everyone has the right of equal access to public service in his country. (3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.

The details of "one enrolled voter, one vote *per identified voter* (emphasis added), in private" are spelled out in the Organic Law on Elections (ss.123–138).

In addition to the Constitution and the Organic Law on Elections, court decisions have stressed the obligations of the state and PNGEC to protect the 'integrity' of each vote in the electoral process (Papua New Guinea National Court, 2009, paragraph 252).

Section 50 creates a heavy responsibility and onus on the Independent State of Papua New Guinea, through the PNGEC, to ensure that the right to vote is meaningful such that the vote of every citizen has a meaning and effect on the result of an election. If the PNGEC and the State fails in its duty to guarantee the integrity of the poll and all votes cast, then it is clearly in breach of its constitutional responsibilities.

The Constitution establishes an independent electoral commission to run elections ("not subject to direction or control by any authority") and provides that the details of elections may be in an organic law (a.126). It is an explicit constitutional "duty of the National Government and all other governmental bodies" to ensure that all reasonable facilities are provided to the PNGEC and to other constitutional institutions (a.225): Article 225, Provision of Facilities, etc., states that:

Without limiting the generality of any other provision of this Constitution, it is the duty of the National Government and of all other governmental bodies, and of all public office-holders and institutions, to ensure, as far as is within their respective legal powers, that all arrangements are made, staff and facilities provided and steps taken to enable and facilitate, as far as may reasonably be, the proper and convenient performance of the functions of all constitutional institutions and of the offices of all constitutional office-holders.

For this report, we summarise these basic requirements in the notion that elections in PNG are constitutionally required to be 'genuine'. This term is used hereafter.

2.2 Compulsory Enrolment

The Organic Law on Elections makes it compulsory for eligible persons to enrol to vote and to advise the PNGEC when they change residence (s.57). To enable citizens to meet these legal obligations the PNGEC must have in place accessible processes for registration (ss.46, 60).

2.3 The Law Regarding the Roll and Voting

The Organic Law sets out requirements for the compilation of the roll and for its use as part of the detailed processes of the polling itself. All qualified persons are entitled to be on the roll and to vote in the relevant electorate (s.52), but are only entitled to vote if their

identity is established (ss.133, 134), and to vote once (s.134), in private (s.138). Whilst these details must be adhered to as best as possible, the legislation has constant reminders that variations might have to deal with contingencies (s.141). Returning Officers in each electorate are responsible for compiling and updating the rolls (s.48A) but do so according to instructions from the Commissioner (rr.3, 15). A new roll can be prepared when the PNGEC considers it necessary and in such form as it thinks appropriate (s.46A) including transferring or not transferring some or all names on existing rolls. The PNGEC may engage any persons or agents to assist in compiling any rolls and all persons are required to assist the PNGEC in the process by the provision of relevant information (rr.18, 20). There are penalties for breaches of all the duties of proper enrolment (r.50) and the PNGEC has authority to reject any claim for enrolment if it is “not a genuine claim or not in contravention of any law” (r.33). The PNGEC has discretion to prosecute in its own right, or refer matters to the public prosecutor (r.96).

Rolls are supposed to be printed and made publicly available for challenge and correction (ss.50, 66, 67; r.17).

Whilst the roll can be made up in any geographical formula, the attempt is to match local government geography of wards and provinces. Hence each open electorate roll is made up of ward rolls and the provincial electorate is made up of open electorate rolls (s.44; r.15). In 2007, reasonably comprehensive ward rolls were produced for the first time. The idea was that this would be more manageable for polling officials. However the specification meant that a ‘master electorate roll’ was not available at each polling station in an electorate for reference where people may have been enrolled in the wrong wards, giving rise to many problems of identification on polling day (Commonwealth - Pacific Islands Forum Elections Assessment Team, 2007:7).

Importantly, both the Organic Law on Elections and the Regulations give very wide discretion to the PNGEC to use any form of technology for the roll and identification, including biometric information (s.71B; rr.68, 73, 80).

2.4 Flexibility and Discretion for the Electoral Commission

Up to 2006, the electoral law essentially set out requirements that the PNGEC had to follow in all cases, although there were some exceptions for immediate emergencies. But changes were made in the Organic Law on Elections and Regulations leading up to 2007 to grant much wider discretion to the PNGEC itself to take control of and, if necessary, vary electoral processes (Nonggorr 2006:11). Thus, the Organic Law on Elections and Regulations confer full powers in all electoral matters to the Chief Electoral Commissioner, and all officials who have specified roles and functions undertake their duties subject to the Chief Electoral Commissioner’s powers to give directions or take decisions personally (r.3). Also, although the expectation is that all elections will be commenced on a designated day, and all writs returned on another designated day, the PNGEC has authority under special circumstances to vary all the schedules (s.81) and indeed to adopt special procedures for any election in terms of polling, voting and scrutiny (s.82A; r.90). Any such special procedures must ensure “democratic elections”, be “within the spirit of this Law” and be “used only when special circumstances so require” (s.82A(3)).

In any electorate, the range of special procedures may include (but is not limited to) finger-printing to establish identity and entitlement to vote, ID cards, and alteration of polling and counting processes (s.82A(3)(b); r.73ff).

Even more dramatically, the PNGEC (“acting only on the advice of the Electoral Advisory Committee” — see below) may advise the Head of State to cancel any election and withdraw the writ “if the circumstances prevailing in an electorate are such that a proper conduct of elections in that electorate is not practicable” (s.96A). Importantly, s.96A(3) provides that:

Where a writ is withdrawn under this section, a supplementary election shall be held as soon as the circumstances resulting in the withdrawal of writ have changed and, in the opinion of the Electoral Commission, it is practical to conduct an election.

Similarly, if an election fails because no candidate is nominated or returned, a supplementary election has to be held “as soon as practicable” (s.97).

In the conduct of polling and counting, the PNGEC has powers to extend the times set (s.177), decide on any electronic method of counting, and even if a particular ballot box or paper will be counted (ss.153A, 172; r.90).

Strong penalties back these powers, including “disqualification from nominating for an elective public office” for any person contributing to the situation resulting in the withdrawal of a writ (s.96B; r.102).

To advise on these very wide discretionary powers, the Organic Law on Elections establishes an Election Advisory Committee (EAC) appointed by the Head of State to provide “recommendations and advice” to the PNGEC, comprised of the Chief Ombudsman (or his nominee), a person nominated by the Board of Transparency International (TIPNG), and a retired judge or person qualified to be a judge (s.96C). Although this committee was appointed before the 2007 National General Election, it has thus far not been used by the PNGEC.

Sitting behind the powers of the PNGEC and the factual conduct of any election, is the jurisdiction of the National Court sitting to hear complaints. It is the sole (s.206) and final (s.220) place for legal disputes over elections. The court has wide discretion in regard to remedies, including voiding an election (s.212). It is guided “by the substantial merits and good conscience of each case without regard to legal forms or technicalities” (s.217).

The legal provisions and discretions, of course, play out in the real world of election-day pressures, and subsequent confusion of facts and allegations. Having discretion requires careful training of officials, including in the requirement to document reasons for exercising discretion adequately. Once the matters come to the National Court, any allegation that might have affected a result will be subject to exhaustive scrutiny, often in the face of contradictory evidence as to what happened. Importantly any act of discretion must be exercised personally based on good reasons and good documentation, subject only to the directions of the PNGEC (Papua New Guinea National Court, 2008).

2.5 Summary of the Legal Framework

For our purposes, we can summarise the legal framework as follows:

- the ‘will of the people’ is the constitutional foundation of government;
- that will must be measured by genuine elections for geographic representation based on electorates, and hence on an electoral roll in which only those identified as being on the roll vote (*once* and in private, unless assistance is required);
- the rights to vote and to stand for public office are qualified by the requirements that the rights of other voters must be respected, and that the elections must be genuine;
- the PNGEC has the sole authority to conduct elections, including building the roll or engaging others to do so on its behalf — those elections must be genuine or the Constitution is breached;
- the PNG National Government (and all persons exercising public authority) have the constitutional duty to provide adequate resources and other assistance to enable the PNGEC to carry out its functions;
- whilst the PNGEC is obliged to compile a roll and to make available mechanisms for enrolling, *citizens* have an active obligation to get their names on the roll and to make corrective changes or provide corrective information;
- whilst detailed rules are prescribed, the PNGEC has discretion as to how to go about all aspects of its activity, including conducting elections (or withdrawing them), polling in particular manners and procedures, refusing to count unlawful ballots or boxes of ballots, and in choosing the details of any form of electronic support systems, and so on. This discretion is not without limits: it must be exercised reasonably in the spirit of *genuine democratic* elections;
- on any matter, but particularly in the exercise of its discretion, the PNGEC may be advised by an independent Election Advisory Committee;
- the law creates offences for breaches of the core rules that may be prosecuted by the PNGEC, the police, or the Office of the Public Prosecutor; and
- the National Court supervises all elections by way of election petitions to hear disputes, correct illegality and do substantive justice.

Before examining the problems in practice, we reiterate three key features in this framework to which we return later in this report:

- firstly, the Constitution requires genuine elections;
- secondly, the PNGEC has authority and considerable flexibility to establish the conditions for genuine elections; and
- thirdly, there is a constitutional obligation to fund the PNGEC appropriately.

SECTION 3: EXAMINING THE PROBLEMS

3.1 The Way the Roll Should Work

Members of Parliament represent defined constituencies and provinces. A roll lists the people eligible to vote in a particular electoral district and only those on the list vote on polling day (López-Pintor & Fischer, 2006:34). Having no roll, or no identification system, effectively destroys geographic representation and hence ‘genuine’ elections: any person could vote anywhere. The roll is therefore the base of the electoral process — and roll numbers shape all work and planning of the PNGEC. Data contained in the roll is an essential management tool for election officials to calculate the required number of ballot papers, ballot boxes, voting compartments and stationery they need to conduct voting in each electorate or ward. In open electorates the separate ward rolls combine to create the roll for that constituency. For provincial electorates the roll bundles together the relevant open electorates. On polling day, those wanting to vote are supposed to present themselves at a polling station, be identified on the roll as eligible voters, be marked with indelible ink on a finger to prevent repeat voting, and then vote personally or be assisted by a neutral polling official (ss.123-40).

The key ingredients are thus:

- *building* a comprehensive roll for an area; that is, voter enumeration, personal and other registration, and on-going management of the roll; and
- *connecting* voters to the roll reliably on polling day so that only voters on the list can vote, once. This requires voter identification on polling day and some system for preventing attempts at multiple voting.

Like a handshake, these two key ingredients must work with reasonable accuracy — or the system fails. If anyone can vote regardless of whether her or his name is on the roll, or if people can cast multiple votes, then the effort that goes into creating the entire roll is a complete waste of resources. Furthermore, this threatens the entire constitutional basis of government, based on the ‘will of the people’ because the elections cannot reliably measure either ‘will’ or ‘people’.

3.2 The Way the Roll Currently Works

When the handshake works reasonably (and it does, in places), there is of course no problem. But as we show below, both building the roll and connecting voters to it on polling day fail in many parts of PNG.

The following section reviews the commentary (in the literature and in our consultation with stakeholders) on the extent of this failure. We note from the outset, however, that even without knowing the actual extent of failure, the very perception that the roll is inaccurate damages free and fair elections. This is well put by the PNGEC itself:

The electoral roll is the cornerstone of any election. If it is not accurate or is perceived not to be accurate, it greatly increases the prospect of the entire election being considered invalid. At the very least an inaccurate roll is viewed with a high level of suspicion by candidates, political parties and the public at large. It is therefore imperative that the roll be as accurate as possible (Trawen 2009).

This stresses the first ingredient: building the roll. As we show below, however, the real concern goes beyond this; that is, the failure of *both* aspects, meaning that the roll not only has to be accurate but must also identify voters on polling day.

This report outlines three ways of analysing and understanding the *problem* by:

- outlining the *effects* on elections when either the building or connecting (or a combination of both) fail;
- summarising the *mechanics* of exactly how the roll fails, and
- extracting from the evidence-base estimates of the *extent* of the problem and the uncertainties that currently exist about the roll.

All these interrelate, so some repetition is unavoidable. But each perspective highlights different aspects, which then help to make the case for proposals for dealing with the problems.

3.2.1 The Effects of Failure

The major effects of failure of the roll (whether in the building or connecting) are increased cheating, increased costs, poorer quality governance and reduced political legitimacy. These effects can compound upon each other in an election ‘crisis cycle’.

Increased Cheating

The most significant effect of real or perceived failure of the roll is that it increases the incentives to cheat. Cheating is deliberate and unlawful action to maximise votes for ‘my candidate’ and minimise votes for rivals.

The flow-on effects of cheating (discussed in greater detail below) in elections are that, it:

- increases costs to all concerned (including candidates and the PNGEC, through judicial petitions, by-elections, etc.);
- reduces the legitimacy of elections and hence of government and the state itself, and
- becomes part of a ‘crisis spiral’ of electoral competitiveness without regard to the law (hence increasing fraud, violence, poor government etc.).

In relation to the roll, opportunities for cheating come essentially in two categories depending on whether the roll under- or over-captures the eligible voters:

- if candidate supporters can be estimated in any geographic area, there can be huge electoral gain by contriving to reduce rival voters on the roll from a ‘rival area’ (fewer ballot papers are then sent, hence fewer voters can vote), and
- conversely, having more names than genuine eligible voters, increases the number of ballot papers sent to an area and gives real incentives to cast votes unlawfully (multiple voting by individuals, ballot stuffing, taking over polling stations, etc.).

Evidence exists that suggests all of the above is relevant to PNG elections, including in the most recent by-election in Kandep (see below).

Increased Costs

Exact figures detailing the costs of system failures should be the subject of much more detailed research (c.f. Ladley *et al*, 2004). But the key issues can be summarised.

For the PNGEC, a bad roll multiplies the personnel, equipment and technical costs of trying to compile, manage and correct the roll. Furthermore, many of the logistics of election-management are also based on an accurate roll: printing ballots, allocating human resources to polling stations based on the size of the ward roll, delivering and storing of electoral materials (boxes, ballots, polling booths, etc.), delivery, management of polling day pressures, counting, election-petitions, by-elections, and so on. In addition, the security costs (police, etc.) can multiply exponentially, especially if illegality and violence is fuelled by competition for significant amounts of excess ballots.

For the PNG National Government and Parliament, who are responsible for budgets, the costs are therefore huge, measured in expenses for elections and security.

For candidates too, costs increase dramatically as electioneering, legal challenges, and other interventions generally have to be paid for. One stakeholder said:

I was informed by two senior electoral officials, then based in the Southern Highlands (Province), that during the ... elections, one ... senior government minister paid (PNGEC) officials K500,000 to have his ballots accepted for counting and his rivals ballot boxes rejected (for being “tampered with”).

Anecdotally, stakeholders ranked candidate election expenses across the country as having a direct correlation with the most problematic areas. Hence there was common agreement that the most expensive seat to contest credibly in PNG is Mt. Hagen Open in the Western Highlands Province, with the rough estimate that ‘viable’ candidates needed to spend K1–2 million.

Poorer Quality Governance and Reduced Political Legitimacy

Other, less obvious, costs come from pressures from each elected MP to recoup the costs of getting elected, reward supporters, stay in office, and so on. With 109 MPs, this puts massive pressures on the national budget and on all state agencies trying to prevent corruption and maintain control of spending.

As regards political legitimacy, the risk is that governments formed by improperly elected people will not be regarded as legitimate. As one stakeholder consulted stated: “why should I vote if the process and candidates are corrupt?” This cynicism about government has the potential to make it much harder to get compliance with the law and with all government initiatives, because people stop believing in and cooperating with government. For example, community support is critical to policing success, just as it is to electoral integrity. And as tax authorities all over the world know, a measure of non-cooperation with the state is reduced state revenues.

Issues of legal and political legitimacy are often stated explicitly by Judges in election petitions. For example, Justice Lay remarked in a recent case (Papua New Guinea National Court, 2009: para 25):

... my view is that it is essential that the people of Kandep know that their elected leader was returned as elected, according to law and not because some people thought they were above the law or could outsmart the law. The integrity of the electoral process is of paramount importance in maintaining public confidence in it.

The overall point was emphasised by a number of stakeholders consulted, who said that they saw a clear link between increasingly problematic elections and what was perceived as a decline in Provincial and National Government capacities.

The Election 'Crisis Spiral'

One view is that there is no particular problem. As May (2008:6) stated:

Papua New Guinea remains one of the few post-colonial states with an unbroken record of national elections held on schedule and producing popularly accepted overall results. In 2007 the country maintained this record, successfully completing its seventh election and producing yet another broadly-based coalition government, under the continuing leadership of Sir Michael Somare.

In contrast, a long term analyst of the Highlands society and elections in PNG, Dr. Joe Ketan (2010) observes:

...the unbroken record is misleading because it conceals massive corrosion within the system. The decay is in the form of widespread electoral fraud and violence encountered during recent elections.

This is strongly supported by Standish (1996), who notes:

... the argument of Simbu political players is that not only does the lack of security and degree of electoral fraud affect the viability of the electoral process but, ultimately, they reduce the legitimacy of state structures in the country as a whole, with serious implications...

A decade later, he took this further (2007:135):

Some observers have taken the frenetic participation by Papua New Guinea's peoples in national elections and the country's smooth changes of prime ministers and transfers of governments to mean that the country has a robust and viable democracy... (but for many in PNG) 'the system' is not delivering... the state cannot control crime and the public are intensely cynical about politicians.

These effects of *the problem* all interlock in a competitive 'crisis-spiral'. Of course the picture is never uniform. But the risks are nevertheless clear, everywhere. Cheating breeds cheating, as candidates and their supporters scramble to compete: 'if my rivals are doing it, so must I'. Clearly, the costs of cheating are less than the costs of playing by the rules, and the value of potentially winning (access to constituency funds, access to cabinet office, other potential for gaining money and power) outweighs any costs, including financial costs, criminal risks, and election petitions. Similarly, in relation to political representation and government, cynicism breeds re-evaluation of boundaries of conduct.

In all democracies, political survival dominates calculation, especially getting into and maintaining executive office. But in a crisis-spiral, the risk is that illegality and corruption become more and more common — and accepted. As noted, government budgets get reallocated to manage the political-election processes, including political survival priorities, reducing funds available for core services. As the state crumbles, especially in provinces, political representatives dominate local governments, focused on rewarding their supporters. In the crisis spiral, violence becomes more ‘necessary’.

Arms races gather momentum, as do pressures to build private security forces to deter or to carry out armed action. In the process of amassing funds and assuring security, links are built with gangs, organised crime and ‘generous funders’ whether from PNG or abroad. Police forces and other regulatory agencies (like the Ombudsman’s Commission) therefore need more resources to deal with the problems. In a crisis-spiral, there is no single starting point in a cycle of bad roll, bad elections, bad government and so on — they are all interrelated. But there are many signs of the progression.

The key point here is that understanding the full effects of roll failure, linked to the ‘crisis cycle’, puts a very different perspective on the costs (in Kina terms) of the problems and the range of options for dealing with these. Once the effects of failure are understood to strike at the very heart of governance in PNG, then high cost options for solutions (e.g. major investments in the capacity of the PNGEC throughout the electoral cycle), if they are appropriate to a PNG context, may actually be more sustainable in the longer term than low cost interventions that let the slide continue.

Then there is the ever-present risk of escalating violence. As Fischer (2002:1) states:

An electoral process is an alternative to violence as... a means of achieving governance. It is when an electoral process is perceived as unfair, unresponsive, or corrupt, that its political legitimacy is compromised and stakeholders are motivated to go outside the established norms to achieve their objectives. Electoral conflict and violence become tactics in political competition.

3.2.2 The Mechanics of Failure

The following points summarise the different ways in which the roll fails. It describes the mechanics of how things go wrong. Of course things go wrong in different ways and to a different extent around the country. In some cases the evidence is strong, in other cases the evidence is anecdotal. Put simply, the evidence suggests that the present electoral roll is inaccurate, in varying degrees across the country. Also, connecting names to the roll on polling day mostly relies on people self-identifying their names (although in rural areas people may be known to everyone) and for a range of reasons this is often problematic. These issues are summarised briefly, drawing on Oberdorf (2006) and Wicks (2006), on detailed research in PNG (Ketan, 2005), and on observer reports.

Getting People on the Roll

The systems for people to either get themselves onto the roll, or to be put on the roll, are complicated, cumbersome, easily manipulated and/or sometimes just unavailable (Ketan, 2005:31).

For instance, the legal obligation on individuals to enrol themselves and to update their details if they move into a new area, appear to be very rarely fulfilled. This may be because even if people do seek to update their enrolment voluntarily (i.e. present themselves at electoral offices to register or change their details if they have moved), almost inevitably they will find nobody there or nobody willing to process an enrolment. Interestingly, a quick check of the roll to test this statement against a small pool of very well-informed election observers and researchers, including many quoted in this study, showed that remarkably few are on the roll in the areas where they reside; that is, Port Moresby. Apart from disengagement from the election process, their reasons were essentially that there was no simple way to get enrolled;

When enrolment is undertaken by the PNGEC or enumerators, the system works if eligible voters can be reliably identified and entered onto the roll — but enumerators often miss people (e.g. if they are at work when the house is visited, or if a village is simply not visited). Furthermore, there is no adequate monitoring of the well-documented manipulation by various officials including in provincial offices, districts and wards in charge of enrolling then managing the roll.

Finally, several very fundamental issues prevent effective enumeration. They include the fact that:

- capturing names, birth dates, families and other details accurately in written form is often problematic (e.g. spelling mistakes, mixing surnames and first names);
- other supporting personal identification documents such as drivers' licences, birth certificates or passports are not widely available, especially in rural areas. Furthermore, the Office of Civil Registry, managed by the Department for Community Development, is a long way off achieving full citizen birth and death registration, let alone ID cards. Despite a dedicated focus on achieving a 100 percent enrolment of births, the advice given to us in our consultations suggested that about 10–15 percent of births are currently captured, and
- even getting people into the right geographic area poses considerable technical challenges for enrolment, as there is not an agreed national list of wards and LLGs — and we are advised that dozens of wards have been added to particular provinces (such as East Sepik) even since the elections. We note that getting accurate ward lists was a major recommendation at the conclusion of the Stakeholder Workshop on the Electoral Roll, organised by the PNGEC in November 2009.

Checking, Cleaning and Updating the Roll

The systems of checking and cleaning the roll (for false names, multiple entries, people who leave the area, or for deaths), should produce much better rolls if done properly, but they don't always work. The reasons include:

- lack of reliable information upon which to base any verification (e.g. cross matching data with other lists like the civil register, church records, or the now mostly defunct village record books);
- lack of time and resources of the PNGEC and its staff, particularly in the provinces;
- lack of training to improve the capacity of PNGEC staff, especially Election Managers, and

- poor quality staff, inadequate management control systems to ensure performance, neglect and/or deliberate refusal to undertake updating (suggesting complicity with cheating and the status quo).

Checking Identity on Polling Day

When people present themselves at a polling station, the processes of connecting voters to the roll often fail. A host of observer reports show variations on how this occurs, including:

- abandonment of the roll entirely and allowing all ballot papers sent to that site to be cast, often with one or more supporters of a candidate (and sometimes the candidate) filling in all the ballots (known in PNG as ‘bloc voting’²);
- abandonment of any pretence of trying to match real people with names, and allowing each person present to vote (sometimes repeatedly) as if they were a person on the roll until all the ballots are exhausted, and
- difficulty finding names on the roll even if people were enrolled, or thought they were enrolled (e.g. because of spelling errors, family names mixed up, villages confused, or other problems of identifying complex identities in written form).

As noted, studies show that all these issues are current and indeed that they have been well known for decades. They also show that despite many efforts, including the complete reconstruction of the roll in 2006–2007, it is extremely hard to find durable solutions, especially for the most problematic areas.

For example, having observed the 1992 election in Manus (one of the *least* problematic areas, historically), Pokawin and Rooney (1996:126–127) wrote:

The only concern arose when voters were surprised to find that their names were not on the electoral roll. Some voters who had voted in the past could not vote because the electoral roll excluded them. Since this was the first time that the amendment to Section 152(a) of the Organic Law on National Elections was being implemented, disallowing voters whose names do not appear on the electoral roll from voting, many people could not vote. The electoral roll was not properly compiled. It had names of those long deceased; names were recorded more than once; and some names were recorded in different villages or electorates than those from which they came. Thus the electoral roll and supplementary roll registered a total of 20,833 eligible voters, about two thirds of the entire Manus population of which children under 18 would be clearly more than a third. 12,960 voters cast their votes, which is consistent with the previous total votes cast in previous election in Manus.

Summarising more than a decade of electoral observation and research Ketan (2010) observes that:

...the systematic manipulation of the electoral roll, as an election strategy, was ... observed in the Highlands during the PNG Electoral Commission’s Voter Enrolment program in 2005. In my report (Ketan, 2005), I noted that the

² The PNG terminology should not be confused with the legitimate ‘block vote’ plurality/majority electoral system where a voter can mark as many candidates on a ballot as the constituency has seats.

enrolment process was flawed through inappropriate methodology, that enumerators were actively working for incumbent politicians, and that the enrolment process was poorly managed. Several intending candidates, including parliamentarians, threatened to sue the Electoral Commission for not rectifying the problems raised in election studies. A favourite strategy of candidates is to create ghost communities (especially in run down plantations).

By 2002, these problems were starkly evident across the country and the roll was significantly bigger than the estimated national population (double the size in some areas).

The 2002 National General Election was a crisis. In the widespread violence in the Highlands Region, some estimates were that more than a hundred people were killed, in addition to substantial fraud and electoral malpractices. Standish (2007:142) quotes the Attorney-General's evidence to court, citing:

...violence, intimidation, threats, destruction of ballot [boxes] and/or ballot papers, riots, sacking of polling booths, holding hostage people entitled to vote, spoiling of papers, tampering with ballot papers, forging of signatures, giving of false names and addresses [and] the prevention of voting of people entitled to vote.

The inflated state of the rolls are widely acknowledged to have been a key factor in fostering conditions for violence and fraud, and in some cases were the direct causes of violence. In one area in particular, the burning of stored ballot boxes was apparently because they had been illegally 'stuffed' by rival supporters. Indeed it was clear to observers that the election results were "predetermined... by the number of ballot papers distributed rather than the number of people eligible to vote" (Gibbs, *et al.*, 2004:5).

Although a reform to the electoral system with the introduction of the Limited Preferential Vote (LPV) had been proposed before 2002, the crisis galvanised national and international concern. Within the PNGEC, there was determination to change administrative and other systems to address the problems before the 2007 National General Election.

Some 10 by-elections between 2002 and 2007 used LPV. Most used the 2002 roll. These highlighted the continuation of the problems (Ladley *et al.*, 2004).

Preparing for 2007, Chief Electoral Commissioner Andrew Trawen acknowledged the roll issues in some detail, including false names and corruption of election officials to influence the compilation of the rolls. We particularly note the following comments (Trawen, 2006):

The Electoral Commission has admitted that the electoral rolls are defective and it is doing its best to create new electoral rolls. However, at the end of the day the people of PNG must take ownership of the electoral roll. The people of PNG must assist the Electoral Commission in preparing clean and accurate rolls and not take measures aimed at corrupting the rolls by coming forward with false names and seeking to influence electoral officials to include names of non-existent persons.

The PNGEC's legal adviser Dr. John Nonggorr (2006) also noted that prosecution had not worked and that corrupt elections produced a vicious spiral with bad politicians, bad

leadership and bad delivery of services and governance. He appealed to Papua New Guineans to do the right thing by electing ‘good’ people. He also added a perspective, which we will explore further:

Values and ethics take a long time to change, but incentives and disincentives may be used to bring about the desired change more quickly.

As regards realigning the incentives, however, his paper did not go further (we pick up this point in a key recommendation below). Instead, he noted that the changes to electoral laws would reform the procedure for ‘cleaning’ the rolls by administrative action (instead of waiting for objections), and that the PNGEC would have much more flexibility for altering election timetables where there were major problems.

Those changes went ahead. A ‘whole-of-government approach’ recommended in the ‘audit’ of by-elections (Ladley *et. al.* 2004) was implemented, including coordination at central and provincial government level. Flexibility was given to the PNGEC to alter its polling schedule to fit problematic circumstances (such as adverse weather and other contingencies). In addition, specialist advisers helped the PNGEC to update and change the administrative systems in compiling and checking a new roll.

Did the changes produce improvements? Yes, but not uniformly, is the short summary of the weight of the evidence. Reporting on this process to the PNGEC in November 2006, a specialist adviser on the roll assisting the PNGEC (Oberdorf, 2006:4), made the following key points:

- the structure of the 2007 rolls is far superior to that of 2002 because of substantial compliance with the legal ward structure and the abandonment of clans as subsets (however) major problems remain with the rolls. Hence, the rolls are certainly smaller than they were in 2002;
- however, because the enumeration exercise for the new rolls was generally done by partial, elected ward councillors, without the elector present and with no quality control, there remain many obvious and serious problems, which do little to engender public confidence. Examples included:
 - unproclaimed ‘wards’, along with electors not allocated to any ward;
 - wards with no enrolments or with very large over- and under-enrolment;
 - thousands of reversed names, particularly where a female name is the surname;
 - people who are under-aged (explicitly in their roll details);
 - single enrolments with 4 names (2 surnames and 2 first names);
 - countless duplicates within and between wards;
 - dubious names (which appear made up and hence need checking);
 - thousands of genuine electors are undoubtedly not enrolled;
 - under-performing Election Managers (who did not undertake proper enrolment, checking or other duties), and
 - lack of funding for verification of the rolls.

Tellingly, Oberdorf (*ibid.*) observed:

All the above listed problems occur in varying degrees in all provinces and are worst in the larger provinces (the Highlands Region). They will be evident to the

public when the rolls are put on display. It (the public) can rightly have little confidence in the new rolls.

In December 2006, Murray Wicks, the Electoral Enrolment Centre Manager in New Zealand was commissioned to produce a detailed review of the PNG roll and work schedule leading up to the 2007 National General Election for the Electoral Support Program and the PNGEC (Wicks, 2006). That report noted that the re-enrolment had cut the 2002 roll from around 5.233 million to around 3.2 million, a figure significantly closer to extrapolations of voting population from the 2000 Census. It also quoted recent observation reports on the current state of the roll (with particularly strong evidence of major problems in the Highlands Region), and noted PNGEC staffs' rough estimate of the integrity of the rolls in the four regions of PNG:

Table 1: Roll Integrity of the Provinces

Region	Integrity Score	Provinces
New Guinea Islands Region	9	East New Britain, Manus, New Ireland, Bougainville, West New Britain
Momase Region	8	East Sepik, Madang, Morobe, West Sepik (Sandaun)
Southern Region	7	Central, Gulf, Milne Bay, Western , National Capital District
Highlands Region	4	Enga, Simbu, Southern Highlands, Western Highlands, Eastern Highlands

Note: 1 is low integrity and 10 is high integrity

One informed stakeholder said that based on the quality of enrolment forms, the 7, 8, 9 designations were hopelessly optimistic — the other regions were almost as problematic but without the 'highland flair'.

The 2007 National General Elections as a whole were widely regarded as better conducted and much more peaceful than in 2002. Ketan (2010) commented on this observation as follows:

There might have been less violence (in 2007, compared with 2002), but it was still corrupt in many ways. Candidates became much smarter. Rather than relying on crude tactics such as high-jacking of ballot papers, they opted for more subtle methods such as manipulating the roll. In Hagen Open electorate, for example, Koglamp Village has a population of 800 people, but there were several thousand eligible voters on the roll. The figures were allowed to go through during the national parliament election, but candidates for the LLG seat contested the figures and the results of the LLG election were thrown out.

The PNGEC's own summary supports the view that the elections and the roll were better than in 2002 (Trawen, forthcoming: paras 5, 6).

Again, there were numerous reports of significant problems, including with the electoral roll. The Commonwealth - Pacific Islands Forum Elections Assessment Team Observers Report (2007:24) noted:

The quality of the Electoral Roll continues to plague the Electoral Commission and the introduction of a voter ID card or voter register whereby eligible voters

are accepted for registering (which was considered but not implemented for 2007) may require further consideration.

Ron May, a long time PNG election observer noted that “the 2007 Election was a better managed, less corrupt, and more peaceful election than that of 2002” but that there were still substantial improvements that could be made, including to the roll and its use for voter identification (May, 2008:6).

Considering the lessons of 2007 the Chief Electoral Commissioner Andrew Trawen, echoing his predecessor Reuben Kaiulo, (2002) continues to see public behaviour as a key problem in the Highlands Region, including specifically multiple enrolments and voting. His draft report to Parliament (Trawen, forthcoming: para 33), adds:

Through public awareness messages and face-to-face meetings a special effort was made in 2007 to encourage voters to understand the principles of 'fairness' and 'one person, one vote', but the reality was that this was largely ignored when it came to the polling period. Further work on how to bring about a change of thinking will be included as part of the Electoral Commission's public education and awareness planning for the 2012 Election.

As is common in PNG elections, the scale of rule-breaking means that there are dozens of election petitions filed after every general election, and often after by-elections. After 2007, nearly half of the 109 electorates were subject to petition. Whilst many of those were dismissed or later withdrawn, the costs, time and energy (for all concerned) are enormous.

It is also worth noting that, at the end of 2009, in his welcome address at the Electoral Roll Consultative Stakeholder Forum, the Chief Electoral Commissioner's own (again very frank) assessment of the problem of the electoral roll is that the roll is the biggest issue identified by stakeholders. This acknowledgement has come in response to extensive national workshops and consultations. He has stated that he is making it his highest priority. Yet he remains wary of the silver bullet of technical solutions, hoping that appropriate technology combined with community awareness and education on a large scale will form the solution (Trawen 2009).

In short, Trawen observes that after the 2007 Election, there are still major problems with accuracy of the roll ('the *most critical* area') and this has the *highest* priority for the PNGEC leading up to the 2012 Election. Apart from such improvements as the PNGEC might be able to make (including 'technology'), he calls for the people themselves to take “stronger ownership” of the electoral process in PNG's democracy.

As recently as the Kandep By-election at the end of 2009, independent electoral observers recorded ongoing evidence of all of the above problems, including inflation of the roll, bloc voting, assisted voting, no reference to the roll, and no use of indelible ink to prevent multiple voting. As Butler and When noted (2009:38–39):

The electoral roll is not trusted or respected as a vehicle that helps to make elections fair. It is instead an inconvenient obstacle to be overcome by candidate supporters at any polling place. In many instances, its only function is to indicate the total number of ballots available... The number of names on the roll was 42,317. This is much higher than the estimated eligible voting population of 31,843. This negative public perception of the integrity of the roll can only be

shifted by people experiencing a fair voter registration process and at the same time being exposed to awareness exercises that generate expectations of fair use of the roll on polling day.

With these commentaries and observations in mind, the facts that the rolls are inaccurate and not used for voter identification as required on polling day, are clearly established — and frankly admitted by the PNG Electoral Commission. We need however to consider what evidence there is to estimate the extent of the problems across the country.

3.2.3 The Extent of the Problems

It is hard to identify precisely:

- the scale of the issues (exactly how inaccurate the rolls are, in different electorates across the country? How often does the identification system break down);
- the causes (which vary from place to place); and hence
- the solutions (which should be adapted to fit the causes and extent of the problems).

For any country, there are always varying degrees of roll accuracy at different times and at different localities. The questions are therefore about scale, timing, and location. How does one know the extent of the problems?

One common measure of accuracy (in other countries, at least) is that the rolls should be publicly displayed in good time for public scrutiny, complaints, queries, and revision. Lack of complaint is a reasonable measure of accuracy or at least public acceptance of credible accuracy. As Wicks (2006:18), summarises:

The intention behind the public display of the rolls is to:

- allow electors to verify that they are enrolled and that their details are correct;
- allow corrections, deletions and (provide a process for) additions to the roll; and
- provide transparency to show electors that the rolls have been compiled accurately and completely and without bias.

In PNG, this process essentially does not happen in time for public scrutiny and complaints to be a viable measure of accuracy. One stakeholder consulted was of the view that this was deliberate on the part of the PNGEC, which was thought to have “no interest in insisting upon the standard display-verification process”.

When we explored this view, the reasons why it might be the case varied. Most generally, a culture of display and verification does not seem established. Often, logistical reasons (distance from villages, etc.) might account for this, and make display unrealistic anyway. In other cases, local Election Managers appeared to have made no effort. One reason, summarised by an electoral official, is that experience had shown that public display could produce major pressures for adding new names onto the roll at the last minute and many of these were believed to be bogus — that is, the systems for checking identity could not sort fake from genuine. Hence the rolls would become *worse* if there was a public display, not better. This also points to a critical matter in relation to the roll, namely that in the absence of effective means to check identity, the assumption behind a ‘passive public display’ being a

valid means of verification is problematic. Making verification work in PNG might require much more active means of engagement as outlined below.

Overall, therefore, the evidence of inaccuracy of enrolment comes not from public verification exercises, but from four other sources:

- evidence of public complaints (e.g., from informed NGOs that the enrolment was not done in particular areas, or on election day from people who cannot find their names on a roll, measured in observer reports);
- estimates by election staff, informed observers, etc., based on a range of sources including extrapolation from the last census (which, now that the methodology is known, was regarded by one informed stakeholder as almost certainly threatening the integrity of future censuses in contested areas);
- internal checking by PNGEC staff to correct obvious errors on the roll (exact duplicates, etc.); and
- various forms of external research to audit a particular roll (e.g. by priests, academics and others).

A summary of these sources is essentially that the rolls can be confidently said to have very significant problems in the Highlands Region — but even there no one really knows the exact scale of the problems. From reports (often themselves estimates) the range can be estimated. One informed stakeholder estimated that one roll in the Highlands Region was about 30 percent accurate and said that the roll in question was never corrected although the Election Manager concerned knew of the problems. Another suggested a similar one-third accuracy of a particular Highlands Region roll that had been under scrutiny, but was of the view that an internal PNGEC process to clean the roll had significantly improved the accuracy of that roll by removing duplicates, obvious false names, etc., though (significantly) not by trying to add names of people not registered. At the least problematic end of the scale, one observer report from East Sepik estimated that “fewer than 10 percent” of those who turned up to vote were unable to find their names on the roll (but in) “some other provinces the percentage was said to be much higher” (May 2008:2).

Given that approximately one third of PNG’s population is in the Highlands Region, and that the Islands and Momase Regions are by comparison very sparsely populated, this rough estimate suggests significant problems (30 percent or more inaccuracy rate) in the current (2007) rolls in about 70 percent of PNG, and up to 10 percent inaccuracy in even relatively good areas. The estimate of accuracy includes both over- and under-capture of eligible voters. Thus in some areas, 30 percent of eligible voters are not on the roll, while in others the roll is 30 percent bigger than the eligible voter population. Sometimes both are the case. Further, one can with much greater confidence say that such quality of the rolls as does exist early in 2010 is constantly degrading as people die or move away, young people are not registered, and all the problems of fraudulent addition and removal are compounded. But without public verification, or a proper sample of external audits, only these broad estimates are possible.

Similarly with the second part: connecting voters with the roll on polling day. There is abundant evidence that in many Highlands electorates, the roll is essentially only relevant to limit the number of ballots sent out — *all* ballots are used on polling day — and often 100 percent of them are marked for one candidate by bloc voting. The picture is not uniform, however, either across the country or even within one electorate. Thus proper processes might be followed in one polling station run by a very experienced and determined Presiding

Officer, but nearby the station could be taken over for ‘bloc voting’. From observation reports and by extrapolating from voter turnouts (100 percent cast for one candidate being highly suspicious) one could estimate and chart the non-compliance with correct roll usage to identify voters across PNG.

Here, our estimate is that in about 30–50 percent of PNG’s polling stations, identification of voters from the roll on polling day fails to a significant degree, with the Highlands Region accounting for most of the problems.

A critical point from the observation reports is that very local factors can determine the extent of failure. A particularly well-run polling station, with good security, in an area not completely dominated by one candidate, might work according to the rules. A nearby station, without one or more of those characteristics, can be overrun (Butler and Wheen, 2009). This suggests that there may be considerable room for site-specific measures (discussed below).

We pause briefly to consider the question of whether, from the perspective of decision-makers considering reform, or from the perspective of Papua New Guineans themselves, does measuring the extent of the problems really matter?

One stakeholder consulted, when talking about measures to determine with some precision the accuracy of the roll in any area and its use on polling day, returned the discussion from detail to the ‘big picture’, noting the apparent general acceptance within Papua New Guinea that for all the flaws in electoral processes, candidates who somehow emerge from the fray as ‘victors’ are recognised as Members of Parliament. The sentiment was that the people in PNG know, understand and often are upset about what happens in the Highlands, but regard and accept such events as Highlands issues — for others in PNG, life and politics goes on as best as possible.

A similar view is that provided the results of elections in PNG are broadly accepted with all their flaws (May, 2008) and provided there are working systems (such as independent courts) to correct the worst problems, then it is not particularly important to know the scale of the problems countrywide — the system might be flawed (and, in the Highlands Region, deeply so), but it is delivering a government that is broadly accepted by the people.

One answer to this argument is the observation by informed commentators (e.g., Standish, 2007) that the trends are systematically degrading and corrupting PNG’s government at all levels, especially evident in weakening rural administration. In this sense, measuring the scale of the problems is important because it should produce counter-measures. It is often the case worldwide that internal actors, especially politicians, misunderstand trends. They are so caught up in present electoral competition that they keep adjusting their strategies for competition until the institutions essentially collapse.

For this report, we suggest that the specific analysis of Oberdorf (2006) and Wicks (2006), as well as other election analyses, supports the view that the problems of the electoral roll and voter identification are *critical* in the Highlands Region (one-third of PNG), *serious* in several other areas (including Port Moresby), and *probably manageable* in the remainder (essentially, the New Guinea Islands Region).

This summary therefore supports the PNGEC’s recognition that the roll is the most critical area for reform and the highest priority for remedial action.

This brings us back to the second and third elements of uncertainty in defining the problem, namely that if it is hard to know the scale of the problem, it is also hard to know the extent to which each cause contributes to the problem and hence what intervention needs to be addressed to each cause.

Establishing Causes

Assuming there are failures in both parts of the roll's functions, the evidence on causes is much more certain, at least on the surface. In relation to compiling the roll, all the obvious causes have been well-documented (e.g., Oberdorf, 2006; Wicks, 2006). As regards accurate rolls, there are major problems with the systems used in getting the right names onto the roll, cleaning them, and updating them. There are many issues here, but they range from:

- late delivery of finances from central government, meaning that whatever might be done, cannot be (Haley and Anere, 2009);
- poor data collection (no uniformly well-functioning data on births, deaths, physical residence, local logistics for remote areas, poor management, badly trained enumerators, deliberate false entries, poor LLG descriptions, risks of 'capture' by local officials);
- inherent difficulties of entry and use of an alphabet system, given the realities of complex spelling and descriptions of family, clan and locations;
- poor data management (cleaning duplicates, training Election Managers, holding Election Managers to task for inadequate performance); and
- difficulties of keeping any roll up-to-date by continuous processes because of lack of resources and no stable alternative sources of reliable and comprehensive information, such as village record books or church records.

We particularly stress that because of the generic difficulty of establishing personal identity reliably in PNG, the history of the roll has been one of periodic compilation in big events (as in 2006) that try to start afresh with a new enumeration, rather than successfully cleaning and updating an existing roll. But even if a major new enrolment produces an improvement, the new enumeration is, from the start, fraught with problems, mainly because of bad data from enumerators. A rapid degradation of these partly-improved rolls then follows, as people die or move and these changes are not recorded, and the rolls are also added to using the same mechanisms known to inflate the rolls unlawfully. In a very short space of time, the combination of reasons will produce the same problems as were evident in the 2002 roll.

Whilst all these facets of the problems combine in different degrees in different areas, some aspects are more important. One stakeholder consulted put this starkly, stressing the responsibility of enumerators across the country:

The biggest and primary cause of the lack of roll integrity was that the rolls were overwhelmingly created by enumeration teams that were not impartial, without control from an independent and understaffed PNGEC. Decisions on who was in an enumeration team were made by District Administrators and LLG Coordinators. The Election Manager (EM) was supposed to be part of this decision making, but generally they have no idea who is who, with most never having set foot on most of their provinces.

This blunt assessment is well-documented by the various reports of Haley, Ketan, Standish, Gelu and others. In other words, a prerequisite for a credible 2006 roll (namely, that impartial enumerators would list eligible voters) was not met over much of the country.

From his experience and research, Ketan (2010) added that the poor data collection resulted from using a single source of input, for example, total reliance on people recruited in problematic ways (with no real quality control) to undertake enrolment exercises. This allowed the involvement of politicians (and their paid proxies in many electorates) in the enrolment process.

One aspect of roll manipulation that might not be as well recognised in the literature as it should be, emerged from our consultations, where actual examples were given of the deliberate manipulation of rolls by provincial government officials (allegedly acting on instruction or payment from candidates or their supporters) to shift names into different wards to strengthen some candidates and weaken others. This works because polling stations only have their ward roll (not that in the entire electorate). Hence if a voter turns up to vote and does not find her or his name on that ward roll, they might be on another nearby — but logistics often do not allow sufficient time to go there to check. This reduces the voters (and hence distributed ballots) available for rival candidates.

In relation to asking potential voters on polling day to identify themselves as being on the roll, again the causes of problems are, on the surface, very well documented:

- without any widely-accepted identification system, voter identification relies on people giving their name and the ‘checker’ in the polling station finding that name on the roll (then crossing it off);
- in addition to not actually being enrolled, if there is confusion in spelling etc., finding a name can take considerable time, even if it works eventually; and
- in some village areas the people are all known to each other, so identity can be hard to fake. But in urban areas, for example, there is no such community confirmation and the system relies on people asserting their names and polling staff then finding these on the roll, before they are crossed off and a ballot paper issued. There are regular reports of people finding their name, but someone else has already voted in that name (the election rules allow such people still to vote, if the Presiding Officer is satisfied that they are genuinely eligible and have not already voted). Still, in many places in PNG, the system works reasonably, most of the time, confirmed by observer reports and other evidence.

In polling stations where the entire system breaks down, all this is irrelevant, save for the number of ballots sent out to represent the number of voters on the national roll. These are unlawful actions of supporters who take over a polling station and organise a ‘bloc vote’ or some other form of multiple voting to cast all or most of the ballots.

Knowing these causes is one thing, but asking why those supporters do such things entails a much deeper discussion of the problem.

Obviously, supporters act to maximise the votes for their candidate. Do they know the conduct is unlawful? Does it matter? In some areas, there is evidence that the supporters concerned assert that they are casting the votes in accordance with the wishes of the tribe or community concerned: ‘our village has decided who we want to vote for’, and ‘these are all

our votes' are commonly recorded assertions (in some cases, a former candidate told us, this extended to refusing to give a ballot paper *even to her* as a candidate and instead bloc voting *all the ballots* for another 'agreed' candidate — with no reference to the number of voters actually present, of course).

There is a reasonably common discussion about whether this is 'village democracy PNG-style', and as such should be respected and accommodated, or whether it is mob rule (as that stakeholder put it). The person noted that one particular result of that mob rule was the effective disenfranchisement of women in general, and women candidates in particular (including her). Ketan (2010) comments on this as follows:

You could say that men make decisions in pre-selection of a clan's candidate, youths enforce clan decisions at polling stations, and women rarely question decisions made by men in the interest of the group. But ... we know of several cases where women of forceful personality demanded that they be allowed to vote freely and got away with it. In the 2004 Anglimp-South Wahgi By-election, we reported Cecilia Kuman, a university graduate, and several others voted by free choice, against tribal policy. No retributive action was taken against her and her friends. A small victory, but perhaps a big step in the right direction?

Here we note one of the most remarkable aspects of evidence and discussion about the problem — namely that for all the abundant evidence of deliberate unlawful practices (in relation to the roll, voting and various forms of violence, intimidation, etc.), there appear to be almost no prosecutions, ever. One stakeholder observed explicitly that the absence of prosecution or some realistic deterrence *actively fosters the abuse of the system*.

Why are there no prosecutions? One reason is sheer scale of electoral malpractice and fraud that almost overwhelms all who witness it, including police officers. It is impossible to prosecute mass action, of course, but there may be ways in which some, after-the-event prosecutions, could build deterrence. For observers, advisers, NGOs and ordinary citizens who see deliberate unlawful conduct, the lack of enforcement can produce consternation. As Oberdorf (2006:7) states:

The boldness of the corruption of the new rolls is breathtaking. PNGEC has to send a clear message that it will no longer be fooled, because fooled it was. It must show that it accepts its responsibilities too and prosecute such blatant corruption. Hopefully the new Regulations will help with this.

We observe, in passing, that we found no evidence that the 2006 Regulations resulted in any prosecutions. Of course, election petitions are very often brought for correction of fraud or error. But these are civil matters — though we note that because so many of the issues involve criminal conduct, the courts have required that the petitioners prove the allegations beyond reasonable doubt, which is the criminal standard of proof. In the chaos of events and conflicting witness accounts (which Judges state are often false) this sets a very high threshold for civil petitioners. Even if on this standard a court does find malpractice, the major penalty is the calling of another election (with opportunities for doing the same thing).

In other words, currently, when supporters of candidates calculate the relative risks of unlawful conduct against the potential rewards of winning, the rewards completely outweigh the risks. In our view, the key is to change that reward-risk calculation.

This does not mean that one tactic alone might change what may be quite deeply entrenched patterns of behaviour. An AusAID review team (2003) delivered a sober reflection on the scale of the issues that noted:

extreme tactics... planned months ahead... apparently without any sanctions or prosecutions from a state apparatus which is literally out-gunned and whose personnel were intimidated through the threat of 'payback' reprisals... Although the Highlands Region is seen as having a culture distinct from coastal areas, there is concern among experienced observers that the intimidation tactics and electoral malpractice will spread to other areas... If current trends continue and spread to other areas, women will become increasingly disenfranchised.

Hence the causes might be summarised as follows:

- there are generic difficulties of reliably establishing identity generally in PNG — these make it hard to check who a person is, and if she or he is already enrolled;
- enumerators and local government officials commit unlawful or incompetent actions by enrolling fictitious names, omitting names, or moving names to other wards — this conduct results from bribes and/or inadequate supervision;
- there is a lack of effective systems (and/or a failure to apply existing systems properly) for updating rolls to take account of false entries, double entries, deaths, movement, new voters, etc.;
- it appears to be difficult to use standard public display systems for verification of rolls, and
- there are competitive pressures from candidates or their supporters to maximise enrolment in their base support areas and minimise the enrolment of rival supporters — and thence to capture polling areas so that identification is ignored and all ballots are cast, irrespective of the number of actual voters.

We pause to note again that whilst the degree of difficulty in the Highlands Region reflects its unique complexity in PNG, the same list of causes that are noted above can be found in many places. For example, a detailed study of voter registration in Yemen (Spenelli and Yard, 2001) found problems that (apart from the Highlands' competitive violence) look very similar to the situation in PNG up to 2002 — with a vastly inflated roll and no way of cleaning it. That independent evaluation considered revision, relying on the civil register and conducting a new voter registration exercise — and chose the last, as did PNG in 2006.

First, however, and accepting the challenges of the summary of causes, we suggest that any remedial options to address these causes need to sit alongside initiatives to re-configure the incentives in the Highlands Region. It is to this that we now turn. This is where this report deviates from many previous studies, as it considers factors relevant to re-engineering incentives for electoral conduct generally and specifically in relation to the electoral roll and voter identification on polling day.

SECTION 4: GENERAL PRINCIPLES REGARDING HIGH-TECH SOLUTIONS

With such daunting evidence of *the problem*, stakeholders in PNG elections have naturally become very interested in what technology (especially in the area of biometrics) may offer to improve the roll and voter registration in PNG. The exploration of technical options was suggested in Anere and Wheen (2009) and was the hot topic for discussion at the Stakeholder Workshop on the Electoral Roll, hosted by the PNGEC in November 2009.

The technology for voter identification ranges across a spectrum of complexity from relying on names and other personal data (names of parents, clans, tribes and villages, age, occupation, etc.) and personal identification alone, to indelible ink, to paper rolls, to computerised rolls, computerised ID smart cards with a chip containing biometric data, use of various technological data-input systems, and so on. Several countries in the Middle East have contemplated a smart card voter identification system. For example, Jordan was in the process of implementing a smart card ID to be used also for elections, but has just postponed this project indefinitely. India is currently embarking a nationwide census that is also aimed at producing an ID card for all citizens.

In very limited circumstances, it is possible to manage an election with no roll at all, for example in presidential elections where the entire country is one electorate (as was in Afghanistan in 2009). On election day, voters would be marked with indelible ink. This can only work well, however, if there is little or inconsequential influx of ineligible voters. That option is clearly not available in PNG as a whole, though it might have some relevance in a few isolated rural areas with a travelling ballot box.

Paper-based registration of taxpayers and other communities has been used for centuries. Books or ledgers of voters in many parts of the world have also long been maintained, for example by the local magistrate or municipal administration. Such systems are still or have until recently been used in several countries, for example, former Soviet republics such as Ukraine and Moldova, and countries with a colonial history.

Recent post-conflict elections have made use of registration forms with various data capture technologies, from double-blind manual data entry (which is already used in PNG and also in Kosovo) to optical reading of forms in high speed scanners. The latter can use Optical Mark Recognition (OMR), Intelligent Character Recognition (ICR) or a combination. Ghana has successfully cut down error rate on paper forms by using two forms of data-capture, which were then cross referenced.³

Registration technology can include recognition of barcodes, scanning of photos that can then be printed on voter lists, and scanning of fingerprints that can then be processed by an Automated Fingerprint Identification System (AFIS) that can identify possible duplicate registrations. Zambia has used paper forms with fingerprints that have been scanned and run through an AFIS. The number of duplicates found this way is however lower than comparative experience would expect, suggesting caution about the accuracy of the systems.

³ The name of the registrant was recorded on the form in two ways: as hand written letters and by filling in OMR bubbles. When the form was scanned, the resulting text in the OMR bubbles was compared with an intelligent character recognition (ICR) of the hand written name. Cross-referencing the two versions of the same name produced much higher accuracy.

In the early stages of photographic records of people on the roll, pictures were taken with Polaroid cameras. With increasingly sophisticated digital possibilities, digital cameras with portable photo printers are commonly used. For example, Ghana initially used Polaroid cameras but then had to invest in digital cameras and portable printers.

Computerised registration has emerged in the last decade. Early application was for capture of fingerprints and photos with the alphanumeric information captured on paper forms. The United Nations and the Organisation for Security and Cooperation in Europe (OSCE) Joint Registration Taskforce in Kosovo 2000 used paper forms with pre-printed barcodes. Photo and fingerprints would be captured through a laptop equipped with a barcode reader and a zip drive. Technical difficulties, mainly related to power failures, caused significant problems with lost data and problems matching the biodata and the paper forms.

A preferred system in developing countries is currently a registration kit of standard hardware components packed in a rugged suitcase. The kit contains a laptop, printer (inkjet), camera (typically a standard digital camera as it contains a flash, but webcams have also been used), a fingerprint reader and sometimes a signature pad. The kit may have a power pack or be coupled with a mobile generator depending on the reliability of electricity in the country in question. Alternatively some vendors produce specialised hardware that has all the functionality in one box.

The key selling argument of the computerised kits is typically the capture of biometrics. The biometrics — primarily fingerprints but increasingly facial recognition — produce unique identifiers that can be processed for identification of duplicate records. Experiences with the kits have been expensive and they have suffered under various climatic and rugged conditions. Reports on the success rate of the biometric capture (bad fingerprints or photos) and matching names are varied. There are more stories of failures than successes. A recent example is Somaliland (a semi-autonomous enclave in Somalia). With international support, Somaliland conducted voter registration in 2008–2009 using computerised kits. Despite a built-in requirement for index finger prints, an override feature intended for the disabled and persons with calloused prints was used so extensively that 53 percent of registration records did not have prints. An Automated Fingerprint Identification System (AFIS) was then supplemented with facial recognition software based on the digital portrait photos, but for reasons related to data integrity at capture points, the credibility of the register is tainted. Reports indicate that people were also allowed to register multiple times, using different fingers, which AFIS would not be able to catch (International Crisis Group 2009).

In addition to credible capture of data, a key risk in PNG would be loss, destruction and theft of equipment. If a system is dependent on technical complexity and that fails, there have to be backups.

Obviously, the selection of technology must carefully weigh the benefits against the risks and investment, choosing the technology most appropriate to achieve the objective and considering not just the capital cost, but the cost of ongoing maintenance and use.

Applying these notions to PNG, the key issues can be broken down into two questions. Firstly, how would any new technology help with the core PNG problems? Secondly, how would any new technology fit into the existing technology (and the existing skill set and management systems)?

As we have seen, PNG's roll is computerised based on names and other identifiers such as age and place. Simply establishing identity is a key problem, along with adding reliable information. It would require careful trials to establish if the existing database system could handle additional digital information, such as a digital photograph. There would be considerable risks that any new 'unique identifier' such as biometric information would require an entirely different database system.

One possibility is to use some form of digital recognition of data to reduce entering errors. But as we have seen, the complexity of the PNG data currently makes even that implausible, even noting the possibilities of Optical Mark Recognition for compiling Yemen's roll (Spenelli and Yard, 2001).

Experienced international election consultant Mike Yard (2009) set out 8 key requirements that might help reduce the risks of failure of technology in election systems all over the world:

1. identify the problem;
2. invite broad discussion from stakeholders and implementers;
3. consider whether there is a need to modify the legal and/or procedural framework;
4. provide for required staffing;
5. if possible, start small;
6. provide adequate time;
7. if you have never done it before, don't do it now, and
8. do not introduce technology to compensate for poor procedures.

On timing issues, he elaborates:

Any project that must be implemented on an overly aggressive schedule is a project that has a very high risk of failure. If there is not adequate time to carefully define needs, discuss possible solutions with stakeholders, conduct feasibility tests and pilots, and re-evaluate the approach repeatedly throughout this planning cycle, then there is probably not enough time to do an effective job in implementing the technology.

To this simple list he adds an equally-important warning:

if you haven't done it before (repeatedly, successfully, with staff who understand exactly what is going on and how to use technology) *don't do it*.

And his conclusion calls for simple (but often elusive) commonsense in simple questions for effective, appropriate and sustainable technology:

Does it meet my needs? Does it fit? Can I really afford it? Is it easy and relatively inexpensive to maintain? Can I have it delivered by the time I need it? Will it last long enough to justify the price?

Registration of any kind relies heavily on checks and balances being present at the point of registration, for example neutral registration officers and/or observation. In a completely corrupt registration centre, indelible ink will not work, underage, foreign, deceased or non-existing people can be written on forms, and fingerprint systems that capture anything less

than all ten prints of every voter can be circumvented (because unless there is complete control of all data capture, voters could register a different name for each finger). Typically only one finger is captured, although some go up to four. The more prints, the slower the registration and the slower the subsequent Automatic Fingerprint Identification System (AFIS) processing. The database size requirements multiply enormously with additional fingerprints on the system.

But even the best registration kits and teams would be helpless against the level of fraud and intimidation that currently exists in the Highlands Region. One could send in military forces and capture all ten fingerprints of all registrants and there would still be risks of fraud on election day in the practices of taking over polling stations, impersonation, bloc voting, and ballot stuffing. Most simply, the more advanced the registration kit (and any expected on-site processing of data on election day), the easier it is to break the system by simply dropping equipment or leaving it in the rain.

As we outline below, however, new registration systems could be trialled in areas where agreements are reached around core processes. Implementation in the most problematic areas would be delayed pending agreement on a new compact negotiated at the grassroots level and including candidates and supporters, supported and encouraged by the relevant institutions. Given PNG's competitiveness, there is likely to be vigorous contest at any suggestion of delay in some areas rather than others — hence the need to get the systems right.

Establishing a conducive environment and implementing a complete new technical electoral register for the entire country is a monumental task. This is surely not feasible for the whole of PNG in time for the 2012 elections. It would be inadvisable to rush into such an immense task without proper preparation, which would include piloting and establishing a permanent legal, institutional and infrastructure framework for maintaining and updating the register after the initial drive. An interim solution that can minimise the risk of extreme failure of the 2012 electoral process must be sought — this will have to be based on the proposed steady improvements and adaptations proposed in the first three categories of recommendations below.

The PNGEC should be appropriately cautious about technological 'quick fixes' until at least:

- effective management systems are in place;
- ongoing technical operating capacity is assured;
- voter, community and candidate consent to genuine elections is reasonably widespread;
- all systems are adequately tested; and
- the full costs of purchasing, operating and maintaining systems are reliably established.

Our view is that for 2012, it is extremely hard to see these conditions being fulfilled. For these reasons, we have concentrated on areas which in our view offer better prospects of improving the roll and voter identification by 2012.

SECTION 5: KEY TARGET AREAS AND POSSIBLE OPTIONS

As with everything in PNG, however clearly options are put, on the ground their application has to cope with complexity. There is no point recommending a solution if the conditions for its implementation are not met in terms of financial or institutional capacity, or because of intractable resistance from the people.

In considering options, it is actually not only a matter of weighing one course of action against another, but also judging the range of target areas that significantly influence the successful compilation and use of the roll and recognising the options applicable to improve each area.

One matter not considered in detail involved, for rural areas, the possibility of reviving (and then basing rolls on) the well-remembered village record system in which someone is paid to identify and keep ‘the book’ for all residents, births and deaths, movements of people out of the village permanently, and so on. Some stakeholders argued that this could be successfully revived. But most commentators say that today the system operates with wide variations of accuracy (or even existence) all over PNG. Indeed it only exists in a few provinces and even then, patchily. One stakeholder was especially frank:

Anyone who recommends going back to village records, particularly by going back to the LLG for anything, does not know the reality. Village records are gone. Suggestions to recreate them in their existing guise, especially using people who are not impartial, are scandalous. The same people who did the enumeration will recreate a suspect Village record. Village (record) books ceased in the 1960s, and the 1990s attempt to revive them only worked in a few areas.

For these reasons, along with the evidence of the declining capacity or lack of capacity of district administrations, we did not pursue the option of re-creating a village record system.

Instead, the range of target areas covered in this discussion are grouped around four categories of action:

- ensuring adequate and timely financing;
- re-shaping incentives;
- making improvements to the current systems; and
- thinking for the long term.

5.1 Ensuring Adequate and Timely Financing

We earlier highlighted the constitutional duty of government (and all public authorities) to make all necessary arrangements to enable the PNGEC to carry out its functions (a.225). This does not suggest that there are no limits to expenditure. Rather, it is a matter of proper planning by the PNGEC on the one hand and, from the sides of the PNG National Government and Parliament, proper attention, on time, to core budget and other requirements. These issues have been widely acknowledged in commentary on PNG elections, and by the PNGEC itself (e.g., AusAID Review, 2003:3).

For the 2007 National General Election, the PNGEC initially received about two thirds of the funding it requested, although that was belatedly increased to the full amount, allowing

the elections to take place. The initial request was for K125m for the 2007 financial year, of which K86.5m was approved. After vigorous and lengthy discussions, this was increased to K124.3m (Trawen, forthcoming:45). Reflecting on this issue in its draft report on the 2007 National General Election, Chief Electoral Commissioner Andrew Trawen frankly set out the ongoing issues (*ibid.*):

Finally I wish to express my real disappointment that funding for the Electoral Commission in 2009 is insufficient for me to undertake any substantive work on making improvements to the management of the electoral process. My office provided a detailed budget submission totalling K42m for 2009 but Treasury has advised that the National Government approved just K7.4m. Of this, K4.9m is for recurrent expenditure; K2m is for the work of the Boundaries Commission and K0.5m is for the work of IDEC.

This gives my office no funding whatsoever to start work on the many urgent areas to improve the way in which elections are managed in PNG — we will only be able to focus on issues that require minimal expenditure such as a few workshops etc. I must point out that if the same lack of funding is provided in 2010 there is every possibility that we will run out of time and not be able to make the necessary changes in time for the election in 2012. I am greatly concerned that after all the good work preparing for and conducting the 2007 National Parliament Election, we will go backwards and once again experience many serious problems that have been such a feature of elections in PNG in years gone by. To make ongoing improvements requires a reasonable level of funding — without it we will face serious problems.

Put simply, all the good ideas in the world are essentially useless unless there are appropriate resources. During our consultations some stakeholders suggested that the delays in funding reflect the arguments alluded to earlier (e.g., funds are diverted from core institutions to feed the ‘crisis-spiral’); or that governments and treasury officials are ‘gaming’ aid possibilities (e.g., because elections are regarded as so important by the international community, funds might come from foreign aid, thus allowing state funds to go to other priorities); or simply that officials and governments are overwhelmed by demands, reflecting lack of capacity and a general struggle to prioritise. Whatever the reason, the foundation stone of any improvement to the roll (or any other part of the election process), addressing any of the causes and recommendations, has to be the provision of adequate resources. Foreign aid might add value in key areas, but the issues go to the heart of the PNGEC and the obligations of the PNG National Government. Without the resources needed for the PNGEC to answer the ‘*who votes?*’ question reliably, the PNGEC cannot deliver the constitutional requirement for genuine elections.

Here we do not estimate PNGEC costs between elections for the roll, because budgets will depend on the options chosen. Rather, our point is that the roll is central to the effective functioning of the PNGEC and hence there must be agreed processes to ensure appropriate and timely funding.

Clearly the existing Interdepartmental Committee on Elections (IDEC) is an operational vehicle, and might assist the constitutional issue of an adequate budget. But if this does not provide the hoped-for assistance in advocating for greater and more timely resources, then

short of the PNGEC seeking a Supreme Court ruling on the meaning and application of article 225 of the Constitution, some other institutional process might be needed.

Here we note the practice of some other Commonwealth countries, such as New Zealand and Australia, where special committees of parliament deal with budgets and reports from organs of state with particular constitutional status. For example, the Offices of Parliament Select Committee in New Zealand, which sets budgets and receives reports on the work of Offices of Parliament (the Ombudsman, Auditor-General, and Parliamentary Commissioner for the Environment).

In New Zealand, Treasury officials offer advice to the Offices of Parliament Select Committee. But the work program of each Office of Parliament is discussed and approved by the Select Committee on behalf of Parliament as a whole, and then the resulting budget is entered (without change) into the overall budget presented to Parliament by the Minister of Finance. Annual reports from the Offices of Parliament are also presented to Parliament, and discussed in the Offices of Parliament Select Committee (Robertson 2009).

One possibility is to consider whether a special Select Committee of Parliament for Constitutional Offices in PNG might be an appropriate forum to navigate the issues. This would obviously have to be structured and operate to avoid suggestions of breaching the separation of powers and constitutional functions of the Offices concerned. It would hinder, rather than help, the Constitution if the issues became narrowly politicised. On the other hand, the key parts of the constitutional system have to work together to find the right balances — although transparency is seldom a bad thing for a democracy. Hence an open process might encourage broader recognition of the issues, including by a better-informed public.

Properly Implement Article 225 by Internal Executive Mechanisms

A relatively simple mechanism would be for the PNG National Government to task its Treasury officials and the IDEC to work with the PNGEC and report on the proposed processes for giving proper effect to article 225, as a matter of urgency (or alternatively, for the PNGEC to use its existing avenues to raise this matter, to the same end). From the PNGEC side, there are no ‘blank cheques’, of course. Its obligation is to use resources effectively, which requires strategies and systems to deliver genuine elections.

Conduct Further Analysis of Other Possible Constitutional Implementation Mechanisms

If the interdepartmental discussions do not produce appropriate systems for considering these election funding issues, further research should be done on an appropriate implementation mechanism for article 225. The research could be taken up by the NRI, followed by discussions and seminars with Members of Parliament. The goal would be to put concrete recommendations to the Speaker of Parliament, to the National Executive Council (NEC) and to all Members of Parliament. One specific outcome considered might be for Parliament to establish something like a Constitutional Offices Select Committee with designated powers under Standing Orders to receive annual reports and to debate resource requirements for inclusion in the annual state budget.

Alongside recommendations to ensure adequate financing, we repeat that throwing money at the problems will produce more of the same unless there are changes. We therefore return

to our two key categories of options and recommendations: to re-shape the incentives, and to improve the systems.

5.2 Reshaping Incentives: Building a ‘New Compact’ on Fair Elections

This section is principally concerned with trying to re-shape the environment in which elections take place, which in many parts of PNG are underpinned by high levels of competition in an atmosphere of conflict, fraud, mistrust and open disregard of election laws.

Here we summarise the findings and proposals of our related paper *Re-aligning Incentives for Elections in PNG* (Ladley *et al* 2010). Whilst the findings of that report relate to the management of elections as a whole, we argue that they are also vital to creating a ‘consent environment’ within which improvements can be made to the electoral roll.

Using the metaphor of fair play in sports games, the point is that the incentives to cheat in PNG elections, especially in relation to the compilation of an accurate roll and the use of the roll on polling day, outweigh the incentives to follow election rules. Prosecutions for cheating are rare and communities generally do not have adequate processes and resources to negotiate and implement ‘fair play arrangements’ amongst the very influential electoral candidates.

The arguments draw on the lessons of public policy, regulatory theory and conflict management to recommend a significant reassessment of the role of the PNGEC in elections, especially regarding the power the PNGEC may have in terms of how incentives for good electoral behaviour can be structured.

Regulatory theory notes that citizen compliance can most effectively be secured using mechanisms that encourage citizens to act voluntarily, through the use of various means of inducements — carrots — to encourage good behaviour. At one end of all regulation mechanisms are sticks, which involve the threat and use of punishment and law enforcement. From abundant evidence, the key point is that ‘sticks’ are massively expensive and inefficient compared with ‘carrots’ — thus common sense (and experience) supports paying more attention to how incentives can be structured in elections to get maximum voluntary compliance. The key recommendation is that the PNGEC should work with local communities and candidates in the most problematic areas, to secure conditions that would assist in better compliance with ‘fair play’ in elections generally and particularly in relation to the roll.

Putting this simply, in the absence of the very substantial resources needed for coercion (police, security forces, courts, prisons, etc.), the three major options currently appear to be:

- proceeding as best as possible by maintaining a semblance of law, but recognising that core legal requirements cannot be upheld and leaving defeated candidates to petition the National Court and overworked security agencies to ‘hold the fort’ against whatever actions take place in elections;
- trying to make the systems work better through a range of management and technology options, and
- trying to find some way to secure more voluntary compliance.

We suggest that present conditions reflect the first two of these options. We favour adding the third to the suite of options available to the PNGEC. However, this requires that the PNGEC rethinks its role and it is necessary here to explain the arguments and issues briefly.

For example, an ‘instrumental view’ of the role of the PNGEC is that when an election is required by law, the PNGEC’s job is to administer that election – whether or not the historical and current evidence suggests that it will be extremely difficult to conduct a genuine election as required by the Constitution and electoral laws. Enforcement of the law, on the instrumental view, is a matter for institutions other than the PNGEC (the police, courts, etc.).

The issues are nicely illustrated by the case of the Kandep By-election held in late 2009. The conditions on the ground showed significant problems were looming, yet the law essentially expected a by-election to be held. Such conditions produced great costs to the state, violence (including some loss of life) and an extremely unsafe working environment for electoral officials and others at key crisis points in the process.

Instead, the argument is that the PNGEC, with the right support, could play a more proactive role in negotiating a better ‘consent environment’ for elections, using the lessons of regulatory theory and of conflict-management.

In this scenario, as part of its usual election planning, designated PNGEC representatives would spend the months leading up to the election working with the candidates, local communities, churches, authorities, supporters, etc., to establish the ground rules of an election — by agreement. Those ‘rules of the game’ would include:

- all candidates and parties signing a code of conduct (displayed widely in the electorate, used by all local groups to educate voters);
- public displays and verification of the roll (at agreed places, using agreed processes);
- gaining community commitment to respect the use of the roll for voter identification purposes on polling day (using agreed processes);
- gaining the support and advocacy of local authorities (churches, LLG representatives, village elders, civil society groups) to respect voting processes and procedures, especially one person, one ballot, a secret vote, and the proper use of indelible ink (along with processes agreed in advance to assist voters who did not know how to cast their ballots); and
- ensuring candidates and communities are aware of the consequences of poor conduct — for example, refusal to poll by officers or the postponement of elections.

The recommendation is therefore that the PNGEC, as part of fulfilling its core role as the instrument for elections on polling day, could play a more active role in negotiating, in advance, conditions for good conduct with communities, candidates and their supporters. Put in terms of basic economics, there is in PNG an extraordinarily strong candidate ‘demand’ to compete in elections, but the PNGEC has a constitutional monopoly on the ‘supply’ of the conditions in which elections take place and the declaration of results. This monopoly enables the PNGEC to negotiate ‘price’, framed here as higher levels of voluntary compliance. The PNGEC thus has a significant ‘bargaining tool, namely its power to withhold or delay elections in scenarios where there is strong evidence that violence and/or extensive cheating is likely to occur, until better conditions exist on the ground. Put simply,

the PNGEC would work with candidates and local communities to improve voluntary compliance with rules of fair play.

Furthermore, and specifically in relation to any significant introduction of new technology to improve the reliability and technology of an electoral roll and voter identification, the PNGEC would seek to realign the incentives to support agreement, trust and compliance amongst candidates and communities before any new and expensive technologies are tried.

Building on these reasons and the previous analysis of PNG, we recommend a series of simple steps aimed at building trust and hence realigning incentives in relation to elections generally and the roll in particular in PNG.

Convene a National Working Group on the Realignment of Electoral Incentives.

To explore this concept further, the PNGEC (or the NRI, by agreement) could convene a series of seminars and workshops, especially in the Highlands Region, with key stakeholders to discuss realignment of incentives of elections to establish if there is sufficient consensus for the approach.

Part of the discussion might include the possibility of engaging external support or agencies to assist the PNGEC and to operate under its authority in the implementation of the new processes. This could be significantly supported by the Electoral Support Program but also include other forms of specialist conflict management and negotiation assistance.

Review legislation to clarify power of PNGEC to facilitate these realigned incentives in order to ensure genuine elections.

The electoral laws should make it clear that the PNGEC has the power to delay elections if the necessary arrangements cannot be made to ensure genuine elections, as required by the Constitution.⁴

Develop an Elections Reconciliation and Cooperation Strategic Plan

The PNGEC would need to develop a strategic plan for the implementation of the approach. As the level of agreement from key stakeholders on this is at present unknown, the details of such a plan cannot be outlined here. Suffice to say that it would include developing and implementing codes of conduct, coordination with voter awareness, targeting of specific electorates, and close discussions and negotiations with all relevant parties including highly public media awareness. The methodology would be to consult continually as the strategic plan developed, consistently conveying a clear message of the goals (lawful processes, by agreement).

If sufficient consensus was achieved, the initiative would mark an important new direction for the PNGEC. Considerable assistance and training will therefore be needed. This would

⁴ We note that following our discussion of these issues with the team appointed by the Electoral Commission to review the electoral laws leading up to the 2012 General Elections, the Reviewers included this recommendation in their report as follows: Recommendation 8.1 It is recommended that the Electoral Commission be empowered: (a) to delay issuing a writ in an electorate where a peaceful election is not likely to occur; (b) to enter into binding arrangements with individuals or groups as conditions for issuing a writ in such situations; and (c) to enforce such arrangements where a party is in breach.

start with trialling the proposals in key constituencies. Changes to the internal administrative structure of the PNGEC would probably also be necessary, including trained senior staff or advisers charged with coherent application of the ‘preparation’ phase of elections.

Improve Prosecution and other Forms of Disciplinary Action

Even accepting the clear evidence from regulation theory and practice — that the coercive powers of the state should be the last resort and that they are the most expensive part of the regulatory triangle in shaping behaviour — it seems extraordinary that it is so rare that prosecutions ever follow such widespread evidence of breaches of the law. One obvious reason is that the scale of violence or breach can overwhelm people on the spot and it can be dangerous for polling staff or police to resist, let alone try to intervene.

This is well understood by the PNGEC. For example:

Bribery and corruption is still a major problem but it is extremely difficult to stop. Polling officials, indeed election officials at all levels, often see evidence of money or goods being given in exchange for votes but it is happening on such a large scale in some locations that they are powerless to prevent it. And of course the significant risk to their own personal safety, and that of their teams, if they did so. This is another aspect that the Electoral Commission is giving consideration to before the next election (Trawen, forthcoming, para 73).⁵

The irony is that whilst any attempt to rely on criminal prosecutions as a principal means of enforcing compliance would be extremely expensive (and probably fail), the complete absence of prosecutions multiplies the problems by encouraging more abuse of the system. Certainly that was the view of some stakeholders. Hence, identifying and prosecuting offenders will at least reduce the ‘multiplying effect’, especially if a few prosecutions are widely publicised. In relation to the roll, for example, we were advised of specific instances of named people who under their own signatures had placed their daughters (aged below 10) and in one case, dead relatives, on the roll. This was brought to the attention of the PNGEC. Yet there seems absolutely no suggestion that prosecution was ever considered. In practical terms, the police face as many problems of capacity and resources as any other institution in PNG. And there are substantial inefficiencies in the whole criminal justice system, that come from wasting energies on petty offences, delays in court processes, and so on.

Still, despite the accuracy of Nonggorr’s (2006) observation that “prosecution has not worked”, it is extremely important to the integrity of any regulatory system that at least some prosecution should take place strategically. The goal would be to achieve public attention, through a small number of high profile cases. Achieving this will require close discussions with the police in following up on clear evidence of crime (e.g., in the case mentioned above).

5.3 Making Improvements to Current Systems

As noted earlier, when a problem appears intractable, it is tempting to look to big changes and high-tech fixes. Hence, it may be tempting to suggest that the obvious quick-fix solution

⁵ We note that there are relevant offences in the Criminal Code, rather than in the electoral law, but that prosecutions are still extremely rare.

in PNG is a biometric ID card or fingerprint scan that can reliably establish identity on polling day. As we argued in Section 4, without a very wide range of other enabling conditions, high-tech automated options are likely to have the same problems as the current systems, but be much more expensive! We return to some specifics below (see Section 5.4).

Here, we repeat the caution attributed to Bill Gates (quoted by Yard 2009):

Automation applied to an efficient operation will magnify the efficiency.
Automation applied to an inefficient operation will magnify the chaos.

Bearing this in mind, this target area concerns itself with a more pragmatic approach to improving the roll: making meaningful improvements to the current system. As noted, there can be difficulties in establishing identity in *any situation* in PNG. Here, this includes registration in the first place, updating, and identification on polling day. Until management processes are solid, consent levels are high and some unique national identifier process is developed (or a secure Voter ID card is produced), the system will largely rely on a reasonably ‘low tech’ combination of local checks and some computer cleaning.

A general problem of relying on names is that there is no ‘unique identifier’ for each enrolled person that could show if a person is registered in the wrong place, or more than once using variations of names, ages, residency, and so on. Unless there are unique identifiers, names and variations can thus be duplicated. The same problems would apply to establishing an ID card system.

Even without a unique identifier, both Wicks (2006) and Oberdorf (2006) recommended practical and detailed mechanisms by which these systems could be made to work better. We adapt from these in our own terms below.

Briefly, this section covers:

- improving Management Systems;
- improving Enrolment and Enumeration;
- improving Verification and Cleansing;
- improving Voter Identification, and
- improving Awareness.

5.3.1 Improving Management Systems

A common starting point for problem-solving is management. This essentially means finding ways to use the human and other resources of the organisation more effectively. But management takes place in a context and culture — and if those are not conducive to ‘good management’, frustration awaits.

In our view, the current roll management system is a problem. The decentralised structures are not addressing some of the biggest roll-related issues.

Clearly one reason is resources: roll management does not have the high profile support of government that it could if it was defined as a program on its own. Similarly, roll-related activities are usually only funded when there is a pressing job to do — rather than funded as an ongoing and specific program of reform and renewal.

We recommend that the PNGEC consider a management structure for the roll that, with funding and coordination provided by the PNG Government and donor support, can better address this massive task.

Establish a Roll Management Unit

In some countries, compilation and management of the roll is such a specialised business that it is entirely contracted out to another organisation. In New Zealand, for example, the roll is entirely maintained by NZ Post. In PNG, there may be room for picking up earlier suggestions from reviews (AusAID Review 2003) for internal specialisation and management. This would be along the lines of a dedicated management person or team with a well-defined scope of work to be made responsible for the roll and all activities related to reform and implementation.

This unit should develop a strategic plan for improvement of the electoral rolls, with a multi-year budget. The plan should be the subject of consultation with political parties, civil society as represented by NGOs, and relevant government entities, most notably the Office of Civil Registry, and politicians as regards secure funding.

Once political and stakeholder support is in place the unit would be responsible for detailing the strategic plan into an operational project plan and implementing it under the supervision of the Chief Electoral Commissioner.

The substance of the strategy could take many forms. As we have noted, the issues cannot be resolved by throwing money at them; they require careful consideration of the psychology of elections, the nature of the society, and the constraints and opportunities that confront the relevant institutions (including funding).

Our starting point for a strategic plan and a possible roll unit should encompass most of the elements below regardless of which registration methodology or technology is employed — and even whether a reliable civil register is eventually developed or not. The suggestions might seem obvious, but they have nonetheless not always been sufficiently addressed:

- develop clear terms of reference for the staff in the unit;
- define targets for each step of the process along with quantifiable measurements of quality;
- implement a capacity building program for permanent staff — for example on-the-job training paired with experienced international advisers, and external training courses;
- train registration staff on processes and procedures using professional trainers and materials: manuals, handbooks, training kits; monitor and evaluate quality assurance plans and steps, with timelines for corrective measures — for example, end training of registration staff with a simple test to see if staff have understood the training; follow civic education with surveys to detect if the messages have been heard and understood; sample test roll-versus-reality and reality-versus-roll after registration training, to uncover if people can be found based on the data in the rolls and whether people who claim to have registered can be found on the roll;
- plan and implement civic and voter education on rights, responsibilities, timing, and locations well before each type of electoral event, including registration, display and

voting, fitting voter awareness and education into the practical realities of what a voter will experience on polling day;

- foster confidence through transparency in consultations with political parties and civil society, media briefings, press releases, and encouragement and facilitation of observation; and
- pilot, pilot, pilot: test any changes before wider implementation. Any measures — simple stop-gap measures or long-term advanced solutions — should be tested thoroughly through small pilot projects under controlled conditions. Once the concepts have been tuned from experience, a pilot under more rough conditions might be considered. Most stakeholders welcomed the suggestion of piloting proposals in urban areas, testing and establishing solid systems, and then moving to rural and more difficult areas — but the reverse may also be true in some cases. Once pilot projects have shown a concept to be viable it could be rolled out into other areas. For particularly harsh areas this may need to be under special arrangements following negotiation and agreements backed by the risk of delays, commitment by parties and candidates, and special security.

Ensure Dedicated Support in the Highlands Region

It seems clear that provinces in the Highlands Region need particular resources, funding, support and systems, tailored to meet the nature of the problems faced. This favours a dedicated Highlands Unit, based in a central Highlands location, working with Election Managers in their constituencies and ensuring ongoing and systematic engagement with local actors, candidates, and supporters. This would need considerable capacity-building support.

Focus on Election Managers

The weakest links in roll management are often Election Managers (though this is not universal), who have the chief responsibility for updating the roll in their constituencies.

Building on the above recommendation relating to a dedicated management unit for the rolls, an overall PNGEC management goal should be to train Election Managers in the right procedures and hold them accountable for those procedures, including employing impartial staff and operating auditable systems.

As noted, particular attention should be given to management systems where any enumerators, assistants or local contractors are engaged. Flat payments irrespective of work are simple but convey all the wrong incentives. So does the absence of any established-in-advance audit systems to discourage fraud in provincial election offices.

Election Managers need to be trained, paid and held responsible for accuracy, fairness, the right incentives, prosecution or other action against irregularity. There must be consequences from within the PNGEC, let alone outside prosecution, for fraud, dereliction of duty and failure to meet standards. There must be resources, such as training in computers to use the databases and transport for people to get out and do their work on the ground in areas where there is no road access.

Configure Donor Support for a Roll Management Unit

Expert support will assist in building the capacity of the PNGEC and with building and implementing systems. Sustained work with the PNGEC on the roll is essential, rather than brief visits. This requires a combination of in-line, advisory and other forms of support, depending on identified needs. Donor support should have some flexibility towards supporting a range of different inputs. Such support does not of course diminish or substitute for PNGEC and PNG Government responsibility and authority.

5.3.2 Improving Enrolment and Enumeration

Building on better management systems, this section looks at considerations and possible options that should be on the table without contemplation of nationwide high-tech solutions (the general principles for which were outlined in Section 4 above, with more specific discussion in Section 5.4 below).

Re-enrol Strategically and Conduct Solid Pilots in Key Areas

As noted above, although there are widespread problems all over PNG, the nature and extent of these vary greatly. Different parts of the country may react differently to different options. It is also worth emphasising that, reflecting on all of these issues, not everything needs to be tried everywhere at once. Strategic deployment of energy is the key to improvement. As Oberdorf (2006) observed, in some areas processes work reasonably well — hence the strategy should be at once to keep good processes from deteriorating, and concentrate attention on the problem areas.

For the 2012 National General Elections, it seems feasible to have different provinces and regions using differently-compiled and differently-managed rolls. For example, after securing a ‘consent environment’ (as outlined above), a new roll could be compiled for an electorate in the Highlands Region based on re-registration at designated polling centres. Should this pilot be successful, the same process would move to other problematic electorates.

In some areas, the roll is considered reasonably robust and secure — but this needs to be proven and demonstrated in general terms, including by public displays (discussed below).

As noted above, it is extremely difficult in PNG conditions to update the names of people who have moved in or out of the electorate, turned 18, or who have died. As the lead-up to the 2002 National General Election showed, many rolls grow and never reduce. For this reason, Wicks (2006) recommended abandoning continuous updating, and instead advocated new rolls for each major election event. Pending resources available, this could be especially relevant for urban areas.

Fresh enrolment is not cheap, but in the critical areas of PNG it may be the best way to stop ongoing inflation and deterioration of rolls. To take a specific example backed by hard data, the figures in Appendix B indicate that electorates in Western Highlands Province are seriously over-enrolled already. In such areas, an update would only increase the problems. Hence a new roll might be necessary already.

Add Receipts, Issue Voting Certificates

Two simple additions could be trialled in any of the re-enrolment processes that could potentially make large improvements to the existing systems. Both would themselves only be

done based on pilots to get the systems right, and then in particular electorates following voter education and careful discussions and agreements as to their application (realigning the incentives).

The first, cheaper and more low-tech option (and as recommended by the Commonwealth Observer Group in 2007 and supported by Haley and Anere 2009) would see registrants given some sort of durable and identifiable receipt. Production of that receipt on polling day would, at face value, identify the voter and dramatically speed up the polling day processes. Issuing voting certificates are another, similar, low-tech option.

Pilot a Photo Roll

The second and slightly more high-tech option could see digital photographs of registrants taken at registration and printed on the roll for display and verification purposes, as well as checking on polling day.

Photos on the roll will make it easier for observers and other voters to object, as will the requirement to bring the registration receipt or voter ID. This relatively cost-efficient interim solution will not work under current conditions in the Highlands Region (where the roll is irrelevant in the face of bloc voting) but may slow the tide of what has been seen as bad practices spreading further around the country.

The forms could be Optical Mark Recognition (OMR) and/or Intelligent Character Recognition (ICR), which allow for easier data capture and reduce data entry time.

The bottom line is that this would remain based on very basic technology, with only photos added to the current registration process.

These additions would not of course make the roll work against all attacks, especially in locations where the entire voting process is hijacked. The combination may however facilitate a fairer registration/identification on polling day in areas where the incentives are aligned and a sufficient number of stakeholders desire a genuine election.

A pilot project that combined recommendations regarding pre-election conflict management and negotiation, massive awareness, controlled conditions and well-trained staff could give valuable insights, especially if combined with the suggestions below.

Align Enrolment with Polling Sites

The current enumeration method — where enumerators travel door-to-door and village-to-village to enrol voters — works where enumerators do their job properly. But poor enumeration (according to some key commentators) is the single most clearly identifiable cause of bad rolls. Hence we recommend consideration of a by-pass alternative methodology, where a voter must register in person at one registration centre and that location becomes the polling station on polling day.

The alignment of registration centre and polling centre was successfully used in post-conflict elections, for example, in Cambodia, Kosovo and East Timor. In contrast, the new voter registration prior to the 2009 Afghanistan presidential election failed to assign voters to

polling centres, creating fertile ground for an immense volume of fraud and the subsequent crisis of legitimacy.

The relevant locations should of course be carefully chosen by the PNGEC for the usual reasons of accessibility and suitability for voters and election administration, and with sufficient capacity for any site to process voting within the designated times.

In some instances it would not be problematic to have just one polling place per ward. In other instances, especially larger wards (by population and geography), these would need to be in smaller units.

Voter lists are currently created on the basis of wards, building up to open electorate and provincial constituencies. But as observed earlier, in the most problematic areas ward councillors have become amongst the most vulnerable to corruption by politicians and supporters wanting to manipulate the rolls, in other words, such councillors are the key sources of the problem and any solutions must deal with this. Further, wards are always changing — indeed proliferating — meaning that it will be difficult for the PNGEC to keep track of what exact wards are on the ground and how that translates into the rolls.

Our recommendation cannot deal with all the details, e.g. that each ward should have a polling site, or a combination of sites for combinations of wards. But where this is tried, registration should be done from scratch, following extensive publicity and civic education. Registrants would present themselves in person (no proxy or household registration) in the location that will later become the polling station.

We stress that where the evidence is that ward-based rolls are working well in an electorate, there is no need to change the systems. Otherwise, we draw on common international practice which has two related variations. *Either* voters from relevant rolls are assigned to designated polling stations (with attendant publicity well in advance), *or* voters are actually re-enrolled at a specific polling location, in advance of polling. Our recommendation favours the second. In either case, the name of the voter appears on the voter list only at that location. Obviously this raises issues of advance voting, and/or voting outside of electorates. But those are separate matters of policy and law which we do not address here.

This recommendation must also be seen alongside the proposals for realigning incentives — meaning there would be close discussion on the ground with candidates and communities not only about the processes of enrolment and voting, but also about location.

As with elections themselves, mass-registration in person at specific sites would be significant logistical exercises, requiring a temporary ‘surge’ in resources for registration and a combination of outsider and insider registration staff at every centre. But with good publicity and education, using polling stations as registration centres enables strategic ‘rolling’ deployment of resources and is often approved of by voters due to the specific directions provided and the greater certainty and transparency of the processes.

Also, voter information on where to vote becomes as simple as “vote where you registered”. Doing registration in centres rather than by door-to-door canvassing also makes the process more transparent, observable and manageable. We note that voter registration in

Pakistan is done door-to-door and suffers from complaints about many missing households. Civil registration in contrast is done through centres supplemented by mobile vans.

It could also be more accessible and convenient and allow voters to be confident that they are on the roll in their electorate precisely where polling will be conducted. This will also assist in display and verification processes, because rolls would be displayed at polling sites (and in other areas) and there could be community involvement in reading the rolls, checking them personally, and so on.

Polling centre-based registration also strongly supports registration processes that envisage technology, such as computers or even digital photos (which require a consistent background). It is virtually impossible to use technical equipment properly in canvassing door-to-door, often in rugged conditions. As noted, canvassing door-to-door or village-to-village has also produced fundamental problems of the quality of the data, however requiring personal registration in centres gives much better conditions for control.

The main arguments against centre-based registration are usually the fact that they have to make the effort personally to enrol (rather than waiting for someone to come to them) and the distance registrants have to travel. As noted earlier, whilst the primary legal obligation to enrol is on voters, the corollary obligation on the PNGEC is that access should be reasonable under the circumstances. How this translates on the ground in any specific situation is of course beyond the scope of this report. It can be expected that those who have benefited from the scope that door-to-door canvassing gave for fraudulent enrolment will object loudest to changes that reduce their opportunities (and cite voter-access amongst their objections). But transparency, publicity, engagement with local communities and key stakeholders, and effective systems will reduce the scope for complaints — all in the context of the PNGEC's efforts to ensure genuine elections. This reinforces the 'compact' discussed above. It requires clear knowledge (and hence voter education, advertising, working with candidates, parties, local communities, etc.) that if people do not turn up to register, they will not be able to vote — and if they are not identified on the list at the time of voting, they will not be able to vote.

In summary, connecting registration with specific polling centres using registration events does not have to be done everywhere, at the same time. It could be piloted in urban electorates, alongside other proposals such as registration slips and photo IDs (see above) to establish systems, and to allow for periodic updating with some key mechanism to check identity (e.g., photo recognition).

Remove Confusion Regarding the Boundaries and Actual Designation of Wards

Enrolment based on clearly defined wards is now fundamental to the successful operation of the roll. If changes are made to wards for administrative reasons — often without the knowledge of the PNGEC — it can effectively confuse the roll at the grassroots level. In the past, ward designations, and subdivisions such as clans, villages and hamlets, could produce impossibly complex subdivisions simply because of spelling errors. These details therefore need constant checking, especially because ward designations appear to be regularly changing, creating fertile grounds for error and opportunities for fraudulent allocation (based on ghost wards where no one actually lives). Where the systems work well, there is of course no need for changes. But in some areas, the best solutions might be new registration (or displays of existing registrations) at designated polling sites. In practical terms, this recommendation may require legislation and administrative cooperation from local

government authorities to prevent delimitation of wards across electorate boundaries, and to prevent the new designation of wards within a defined period from an election.

5.3.3 Verification and Roll Cleansing

The current roll is essentially built in a computer database from hand-written forms that capture names, addresses, and other data fields (age, sex, village, ward). The new processes implemented for the 2007 roll required data to be manually entered using double-blind processes onto the database (eliminating one major source of error) and this should be continued. The database is programmed to scan for exact or similar details and for apparently fictitious names. In theory, these details should be checked by Election Managers or Ward Councillors for accuracy and then submitted to database managers for cleaning.

However, as we have seen, it all has to be made to work in practice.

Design, Publicise and Follow an Accountable System for Roll Verification

On the basis of the above, a foundation of auditable systems for roll display, verification, correction and updating should be built. This should start with the manageable electorates and be implemented progressively elsewhere as circumstances permit and as lessons are learned. The key here is auditable systems — meaning defined standards (e.g., setting out advance publicity standards; when displayed; by whom; methods used; numbers of complaints, corrections and updates; etc.). Alongside the standards there should be clear means of ensuring accountability for those who sign off, including all in the chain of responsibility right up to Election Managers. Subject to the Election Managers' overall responsibility, local civic organisations and churches should be utilised where possible to build community engagement and 'ownership'.

Verification by public roll reading could create community events (as has been successfully done in India). Voter education should precede and be part of such exercises.

Cleaning the Roll including Backup, Software Checks with 'Groundwork'

In general terms, cleaning the roll by and under the authority of Election Managers requires attention to detail, sending notifications to the PNGEC for the deletion of previous enrolments, and checking on the ground for other verification. The current database software was only developed to produce intra-province duplication reports and the size of the databases effectively prevented inter-province reports. Even within one province, it is extremely difficult if there are multiple names for one person, or different spellings, ages, etc., to know which records to remove from the roll. It is also possible to have multiple people with the same name in the same or in other villages. Currently, it is impossible to check this nationally.

It should be possible to use a field in any standard enrolment update that notes where the person had previously been enrolled, and to ensure that all such names are sent to the home area for removal from the home roll (and to check that this is done). We were reliably advised that the quality and the capacity of Election Managers, especially in relation to the use of computers varies greatly. Again, the key to this weakness is good management systems to get proper standards from Election Managers (see above).

5.3.4 Voter Identification on Polling Day

As outlined earlier, there is a critical verification point on election day that links the roll to actual voting, and on which hangs much of the credibility of the entire process. When things work, voters at a polling station give their names to a polling official; the official scans the list to locate the names and crosses them off the roll; the relevant finger is checked for indelible ink marks (as an alternative key check to see if the person has voted before); if the finger is clean, a stain of indelible ink is applied to a finger; voters are allocated a ballot; they vote. We have argued that the biggest reducer of risk of failure at the verification point is higher levels of compliance. However, each and every advance in the entire chain helps reduce risk: proper compilation of the rolls, good public verification, removal of false and double-entries, accurate spelling to assist quick location of names, registration slips or photographs on a voter's card. Because all these have been dealt with elsewhere, here we comment briefly on only one aspect of the chain in identification: the use of indelible ink.

Use of Indelible Ink Properly

In many elections (including in PNG) rumours swirl about the ineffectiveness of the ink and methods by which the stain can be removed. On proper investigation, invariably these turn out to be failures of systems, not of the ink: deliberate fraud, human error, disregard of procedures, or insufficient ink supplies. From observation reports and discussions, it is clear to us that indelible ink is often not used properly in PNG — this severely limits its value in one aspect of voter identification: preventing double voting (or double registration at re-enrolment drives). The proper sequence is to make sure the relevant finger is dry, shake the bottle of ink, completely dip the dry finger in the ink, and remove excess drip either with a tissue or by a short delay for drying. The shaking ensures that the actual staining ingredient (silver nitrate) does not sink to the bottom of the bottle. The complete dipping ensures that ink reaches the cuticle, where it is hardest to remove. A common electoral practice is simply to dab ink on a fingernail, but this is much more prone to failure. The proper procedure needs more ink and produces minor clutter of tissues — but it works.

5.3.5 Awareness

We have argued above for the importance of community engagement in elections as part of building a 'consent environment'. This can also be seen as an extension of the educative role of voter awareness in the delivery of key election messages that foster community support for genuine elections.

We emphasise how crucial it is that any election messages are reinforced by voter experience on polling day. If a considerable time is spent generating community support to refuse to bloc vote, and then on polling day a polling officer then willingly allows a bloc vote, then the credibility of those involved in awareness campaigns are reduced. The same applies if a bloc vote is coercively conducted (e.g., by threatening the polling officers to allow it) and there are no consequences (such as the ballots being excluded from the count).

Underpinning most of the recommendations in this paper is a major scaling up of genuinely participatory election awareness, infusing all election events from registration, verification to the campaign period.

Key public figures could be used to publicise honest behaviour and electoral enrolment — people involved in the electoral process, including those writing about and analysing elections, should set examples. So should respected public figures. This should be a national and local campaign. Particular attention should be paid to educated elites who seem to avoid updating their enrolment (e.g., students and staff at UPNG). Given the difficulties of checking enrolment in one province against that in another province, care should be taken to avoid the public embarrassment of double enrolment being exposed by the publicity. One stakeholder told us an informal check of public figures (including election experts, commentators and academics) had found about half were enrolled in their home provinces, not in Port Moresby where they had been resident for years. Again, publicity must be backed by capacity — if citizens are expected to update their enrolment, there must be efficient systems to allow this.

5.4 Long-Term Thinking

5.4.1 A Civil Register or a National Identification Card

The lack of a reliable national identity system is a contributing factor to the difficulties faced in roll management and the use of the electoral roll on polling day. Identity must be established using no recourse to any other forms of paper identification. Consequently, sometimes the best check of voter identity available is the reaction of the crowd assembled around a polling centre to a voter stepping forward when a name is called from the roll (Butler and Wheen 2009).

We recommend thinking about the longer term possibilities that might also integrate the electoral roll with a national system for citizen identification.

Some countries build electoral rolls entirely from a civil register. Voter lists are extracted from the civil register (for example the Scandinavian countries). In 2000 the UN and the OSCE established a joint civil/voter register in Kosovo.

For PNG, we are advised that the government had made the decision to establish a civil register, with a national ID card more than two years ago — but that the progress is going very slowly, despite being backed by Malaysian technical support.

We note that the policy drivers for a national ID system are very different from electoral identification, but that there is considerable ground for synergy. Undoubtedly, a widely-used and reliable national ID card would greatly assist the basic problem of identification of voters (and hence reduce election malpractices). But the same pressures for fraud may apply here as elsewhere, and if there is no solid control of data capture and entry, exactly the same issues as with the electoral roll will result. One stakeholder noted personal field observations of the civil register that there were almost no checks on identity in Central Province, and that several thousand false registrations appeared to have taken place, specifically with the 2012 National General Elections in mind. Conversely, we note that citizens may respond very differently in seeking a national ID card, which could be used for many purposes other than voting every 5 years (e.g., domestic air travel or opening bank accounts). This might also mean that there would be great demand for such cards, hence they would last longer as they would be more carefully looked after.

Although civil and voter registers have different purposes, priorities and incentives, under the right circumstances there can be synergies. Combining civil and voter registration can create an added incentive to register. An electoral event is a good opportunity to get people to register in large numbers in a short period of time, and social benefits associated with civil registration can boost a voter register. For example, the civil registry in Kosovo 2000 used the elections as incentive for registration.

A national ID card could bring many benefits, including facilitating numerous aspects of daily life from banking and other financial transactions, to all dealings between citizens and government including social services, pensions, education and healthcare.

We note that if cards did become compulsory for voting, then the purchase, theft and destruction of cards would be incentivised (to prevent rival supporters from voting). This returns the discussion to the alignment of incentives, as such factors would have to be carefully balanced. This would also support the need to build community backing for fair processes. Initially at least, cards might thus function to support identification, not as compulsory requirements.

Some stakeholders particularly pointed to the importance of a national ID card for women, noting that it would give them identity for a wide range of purposes, not just as part of a family group. It was suggested that this would boost gender participation in voting as there is less chance for multiple or bloc voting when ID cards are used, hence allowing women to exercise their right and choice to vote.

We understood from the consultations that pilots are under way regarding the core elements of a civil register (including births, deaths, etc.) and possibly also of an ID card. Noting the cautions applied in this paper to electoral technology (including the risks of fraud, stealing of equipment, and establishment of fake IDs) there is a very good case for the PNGEC to be involved in all stages of any pilot. For example, a pilot in an urban area could run alongside an enrolment exercise.

Although the technology involved is reasonably simple, the key issues will inevitably be maintenance of the integrity of the system across time. If ever the civil ID became universal in PNG, the responsibility for determining eligibility criteria such as citizenship and age would shift from the election management body to the civil registration authority, along with the responsibility for elimination of double entries. Where a separate voter register is kept but resting on the civil register for identity, the key aspects of voter registration can be *geographical eligibility* (that a person belongs to or lives in a given constituency) and assignment of the voter to a polling location.

Reflecting our earlier comments, we stress that if pilots go ahead, the card should only be issued after strict verification. The verification — primarily to avoid duplicate entries — could be based on biometric and alphanumeric cross-referencing in the register, combined with public scrutiny and associated adjudication of challenges. The registration methodology and technology (most likely computerised registration kits) should be tested thoroughly through pilot projects. Any national roll-out should be staggered rather than simultaneous across the country.

Establishing the link between the existing civil registration authority and the PNGEC is a sensitive issue that requires excellent systems, sustainability and good protections against

abuse. We are aware of the examples of Afghanistan, Iraq, Moldova and Pakistan. Attempts that have been made to establish cooperation between electoral and civil registration authorities in places such as Ukraine (2005), Afghanistan (2006), Iraq (2007), Moldova (2008) and Ghana (2009) have proven very difficult for non-technical reasons. An initiative is underway between the Election Commission of Pakistan and the National Database and Registration Authority, responsible for civil registration. In any of these areas, a successful outcome will save a country from investing in two separate registration drives.

For PNG, if a permanent population register with an associated civil ID card is able at some future point to capture at least all citizens above the age of 16, the ID card could then be a key identifier of persons on the roll. But this is clearly not attainable for the short to medium term.

In summary, a reliable civil register national identify card would greatly assist the PNGEC by providing a unique identifier and up-to-date information, that is, a long-term consideration based on current progress. For 2012, the PNGEC will have to solve its own problems, whilst maintaining close cooperation with any national ID card project as it develops. Still, the PNGEC should cooperate actively with the developing national ID card and civil registration process to share lessons and establish the feasibility of building reliable systems for unique personal identification.

SECTION 6: ASSESSMENT OF OPTIONS AGAINST CORE CRITERIA

In the previous section we outlined target areas and key options for elections planning and management. We have avoided what we assess as unrealistic options, as the entire research process has been informed by the criteria in the terms of reference for this project: sustainability, appropriateness, resource considerations, donor assistance required, capacity of institutions, and timeframes. In this section, however, we need to comment more specifically on the options as set against the key criteria.

6.1 Sustainability

For our purposes, ‘sustainability’ can be regarded as the institutional capacity (meaning all the relevant state institutions, not just the PNGEC) to adapt to, maintain, and improve consistently, rather than degenerating under PNG conditions over time. Seen this way, sustainability embraces all the other criteria. Hence the discussion of this first criterion is slightly fuller.

Under this definition the current electoral processes are at best marginally sustainable because:

- the present course appears set for steadily deteriorating conditions, with occasional expensive corrections that will temporarily improve matters, for example, the 2006/2007 roll is quickly degrading already;
- the capacity and systems at present cannot manage continuous updating and verification in all areas (especially until the corruption and political bias of local government staff or contractors, involved in the roll and in elections generally, is addressed);
- the funding available to the PNGEC is currently insufficient to sustain the level of work required, especially between elections;
- the current management, training, integrity and capacity of staff, especially in the most problematic provinces and districts, is not sufficient to conduct the work that is expected of them; and
- voter identification on polling day fails in many places and in the heat of polling it is extremely difficult to correct things.

Further, under this definition, seemingly sensible options, such as introducing biometric systems to establish unique identifiers, are currently unsustainable because there is insufficient support in technical terms, insufficient public support for fair processes and insufficient time to test the systems properly before 2012.

6.1.1 Sustainable options in the short term (before 2012)

1. Any policy changes need to be based on stable and reliable funding and in this respect our first recommendation emerges most strongly.
2. The PNGEC will have to adapt strategies and resources to suit the nature and seriousness of the problems, learning lessons for application elsewhere in the country.
3. As regards *generally-applicable* strategies, the sustainable criteria would require the PNGEC to:

- focus on building management skills and systems, especially to avoid political bias in local administration of elections generally and the roll, in particular;
 - establish a dedicated roll management unit;
 - establish whether LLG elections could be held before national elections in order to spread the workload and also for the validation purposes of the roll;
 - establish a working group with the police for the investigation and prosecution of some key examples of offenders;
 - continue to seek cooperation and support for expert assistance;
 - pilot various options for voter registration (ID cards, photos, centre based registration) in small-scale groups; and
 - engage with the processes of establishing a national ID card to ensure appropriate cooperation.
4. In the *least-problematic* areas, the sustainable criteria would require the PNGEC to:
- focus on improving and maintaining the rolls (and learning what works), for example, removing duplicates, doing display and verification, holding personal-enrolment exercises to update the rolls.
5. In the *most-problematic* areas, the sustainable criteria would require the PNGEC to:
- re-register voters based on personal enrolment at future polling stations in areas where the current roll cannot be reliably improved (and consider piloting receipts and/or photo identification on the roll where this might be feasible);
 - convene discussions with stakeholders to establish if political parties and candidates and other major players such as community groups, will support the realignment of incentives (with possible electoral delays), for genuine elections; and
 - (if the above discussions are successful) begin the implementation of ‘incentivisation’ so that citizens and communities are engaged and problems are at least reduced wherever possible.

6.1.2 Sustainable options in the medium term (before 2017)

1. Sustain technical and managerial capacity-building in the PNGEC.
2. Consolidate incentives and the processes for engagement and agreement so that most electoral behaviour, including maintaining and updating the roll and its use for identification on polling day, complies with key rules.
3. Introduce a secure voter ID card that establishes a unique identifier for each voter, provided control of inputs onto the roll and its proper use on polling day can be established in most areas.
4. If a national ID card can be successfully introduced to provide a unique identifier, this should be used as a foundation to compile the electoral roll to establish geographic eligibility.

6.1.3 Sustainable options in the long term (before 2022)

1. Consolidate a broad consensus on core standards and processes for elections.
2. Establish secure systems for ongoing maintenance and updating of the roll, based on responsibilities of citizens to fulfil their obligations, and PNGEC systems that make enrolment accessible.

6.2 Appropriateness

This criterion is taken as requiring some assessment of how any changes or proposals will fit into a PNG cultural and political context, including high risk electorates, especially in the Highlands Region. We thus regard ‘appropriateness’ as a combination of acceptability and viability in terms of PNG culture and context. Under this definition, high-tech systems, though popular elsewhere, fail a basic test of appropriateness considering the geography, climate, human capacity, competitiveness and basic needs of PNG. Systems have to work with substantial popular consent, be able to cope with heat and rain, and survive the drama of change and competition.

Options must also confront the competitive situation of candidates and voters on the ground on polling day in many areas. Experience shows this cannot be remedied with institutional, legal and administrative changes alone (useful as those might be).

Section 5.1 (ensuring adequate financing), is appropriate because the need to establish sustainable government funding is rooted in the constitutional processes of PNG.

Section 5.2 (realigning the incentives) proposes working with the basic culture of PNG (especially competitiveness), and engaging the people so far as possible to build consent for lawful processes. This appears appropriate in the PNG context, rather than expecting coercive machinery to squash the problems. A new orientation will require the PNGEC to change its view of its role and functions, as it work more closely with communities, candidates and parties to establish the conditions for genuine elections.

Under Section 5.3, we outlined various options for improving current systems, with variations to account for the nature and extent of problems. A steady process of adaptation should fit PNG circumstances, building on known systems. Caution in introducing technological changes is also deemed particularly appropriate to a PNG context until systems are solidly proven and consent solidly established.

6.3 Resource Implications

This criterion includes administrative, communications, human, training, technical, logistical and financial resources.

At every juncture in observer reports, external assessments and even from the PNGEC itself, issues of resources and capacity re-appear. We have addressed these issues, arguing that stable funding is essential, that careful pilots must be the basis for assessing all elements of resource implications and that costs must be measured across the human-capacity cycle of all activity, not just the capital purchase of shiny new equipment and processes.

In our view, the PNGEC seems understaffed, relying on surge modalities to achieve core objectives at election time. Engaging (or seconding) thousands of extra staff at critical periods is universal practice and necessary. But the basics must also be done between surge periods, or the risk of failure increases significantly. The resource implications of tackling the rolls again before 2012 would obviously depend on the exact modalities decided upon, along with the timeframe. A short burst of countrywide registration is more costly than staggered exercises spread out over a longer period of time because in the latter case resources (trained staff and equipment) can be reused.

Costs for a computerised registration kit range from US\$2,000 to \$5,000. But the kits account for only half to a quarter of the overall cost — depending on whether registration everywhere is conducted simultaneously or staggered. Hence, the human resource and logistical costs (which are completely different from country to country, and so comparisons should be treated with great caution), far outweigh the equipment costs.

As example of how cost can fluctuate even within a country, in Ghana the cost of registration increased dramatically from one cycle to the next even though the registration methodology and technology remained the same. In 2004 the cost per registrant was US\$1.20. In 2006 this went up to \$3.85 and by 2008 it was \$10.79. This was due to doubling of allowances for temporary registration staff, tripling of fuel prices and the need to replace obsolete Polaroid cameras with digital cameras and printers.

Only a detailed budget exercise where key factors like technology, procedure and timing are determined can give a reasonable approximation of the expected cost of using technology for registration. In very general terms paper registration is cheaper than computerised registration, but even that depends on factors such as labour cost and the elusive cost of perceived quality.

In PNG, the highest cost option is to introduce completely new technology — coupled with a new enrolment process to take up that technology. The labour costs would be massive, as would the technology and maintenance costs. The risk of complete failure (and hence multiplied costs) is extremely high.

But as we have seen, continuing with current processes is also expensive, and may become increasingly so. Hence it makes most sense in terms of resources to manage the present as best as possible, build consent and then introduce more efficiency.

6.4 Donor Assistance Requirements

For host governments, vendors of high-tech wizardry (and their supportive governments) may seem particularly attractive if offering financial support for capital. The key is to ensure complete local sustainability of maintenance and implementation — and that technologies will work in PNG conditions. For these reasons (backed by sorry tales such as Somaliland), we have cautioned against technological quick-fixes, whatever the apparent generosity might be from donors, simply because all the evidence is that unless fully thought through, technology has a tendency to expensively fail. This does not mean that all offers should be spurned. Rather, the offers need to be assessed in terms of the considerations we and others have set out.

As regards ongoing relationships with key donors, we are of course aware of the PNGEC's close relationship with the Australian Electoral Commission. Further, the timing of this report coincides with an external AusAID review of the Electoral Support Program, which in its current form ends in mid-2010. Without intruding into that review, our clear sense is that the ongoing and stable relationships provided by some forms of donor support are greatly valued by the PNGEC and are essential for any sustained improvements in the roll as well as for the electoral processes as a whole.

Election processes always have strategic periods, when much more support might be needed (including not just advice to counterparts along with capacity-building, but hands on, boots and all, *work*). The PNGEC's highest priority of tackling the roll for 2012 seems just such a period. But any external support of whatever nature needs to coincide with funding from the PNG National Government for the PNGEC's own activities. For example, it may be that specialist advice and training for negotiating community compacts in the Highlands Region could draw on a wide range of specialist PNG knowledge and capacity, alongside external academic and other conflict management expertise. Since this is quite different from anything currently operating in PNG, donor support may be crucial for assisting the PNGEC in this, in all phases, including evaluation.

6.5 Capacity of PNG Institutions

We regard this criterion as referring to the capacity of PNG institutions to maintain the present systems as well as implement any changes.

Again, these issues have been alluded to above. Much will depend upon institutionalising stable budget processes for the PNGEC (and indeed other constitutional offices).

But even for the low-tech options (such as improved management, getting more consistent performance from Election Managers in the provinces, and making better use of databases to clean rolls), training is essential.

Even though the recommendation for realigning the incentives for following the rules is essentially only establishing the theoretical and practical support for what the PNGEC has itself been arguing for years, it will be especially challenging in capacity terms for the PNGEC to change gear to 'think outside the box' (and then *act* outside the box) as recommended in this report.

Changing gear in this regard will require a subtle but significant change in culture, from managing elections to also managing conflict and resistance. This will need training, and we suspect that the core elements will quickly become clear. To drive the new orientation, it is possible that a new senior appointment at Deputy or Assistant Commissioner level may be needed, along with relevant expertise and support. In key provinces, a whole new orientation will be sought. We note again that external support and expertise might be contracted to assist the PNGEC in this responsibility.

We have also made it clear that even the improvements to existing systems would require considerable capacity improvements, especially in management systems by which the PNGEC works with its Election Managers and their contractors in the provinces.

As regards high-tech options, we are especially cautious about institutional capacity — simply because comparative experience shows it is extremely difficult to find, train and sustain technically-skilled people within election management bodies at the levels that will be required. Hence we advocate progressive trials, building experience and capacity, talking to candidates, parties and civil society and ensuring they are on board, before launching too much technology into the electoral system.

Even in relation to the wider ambition of a national ID card and civil register, the capacity of the relevant ministries is very much untested. But as we have argued, across time there will be synergies, and the PNGEC should ensure that it is engaged cooperatively alongside the learning processes.

6.6 Capacity to Deliver before 2012

This criterion refers to capacity to deliver an accurate and inclusive electoral roll for the 2012 National General Election in PNG.

This section essentially concerns timeframes, and whether any of the options above can be implemented in time to bring some substantial improvements for the 2012 National General Election.

We add to earlier commentary to reinforce the argument that ‘big fixes’ (such as an entirely new roll based on nationwide ID cards) are not appropriate simply because problems with their introduction could threaten, rather than enhance, the capacity of the PNGEC to deliver reasonable elections in 2012. The watchword is the maxim that new technology enhances efficient systems, but otherwise could magnify existing problems and existing inefficiencies.

To deliver an accurate and inclusive roll for 2012, each proposal must be planned, funded, implemented and completed six months before the 2012 election — leaving in reality about 18 months from June 2010.

On this basis, the best options are ones that target improving rolls in problem areas, small pilot projects, and in particular trialling the recommendation of linking re-registration in person to polling sites.

However, even these smaller activities need a starting point in a new strategic plan backed by adequate funding.

SECTION 7: CONCLUSION

The problems with the quality of the roll over much of PNG are acute in the Highlands Region.

The issues are to some extent administrative, technical and managerial — and in those respects, the PNGEC can do more, as the specialist advisers (Oberdorf and Wicks) also earlier reported.

But however well these administrative, technical and managerial options are resourced and then tackled, the PNGEC (and indeed political parties, candidates, and voters) should not have to walk hopefully into recurrent patterns of electoral violence and fraud. Commentators, stakeholders, observers and comparative experience support key messages from public policy and conflict-management approaches. These combine to encourage the PNGEC to manage the conflict areas in advance, by fostering agreements and conditions for the constitutional requirements for what this report has described as ‘genuine’ elections — and by waiting until these are reasonably established before conducting elections in any area.

We have repeatedly conceded that there are no ‘quick-fix’ solutions in PNG, whether in social contract terms, in technology, or in management. The issues, as we have seen, are hard. But there are options and we humbly suggest it will help PNG to explore, test and progressively implement them as evidence builds. Waiting for the next crisis seems less preferable.

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APPENDIX A: STAKEHOLDER CONSULTATIONS

Peter Aitsi	Chair, Transparency International
Daniel Aloï	School of Business and Administration, University of Papua New Guinea
Qwentan Cholai, Peter Niesi and staff	New Generation Party
Betty Billy and staff	Office of Civil Registry, Department for Community Development
Murali S. Nair	IT Consultant to the Department of Community Development
Sir Kina Bona	Registrar of Political Parties and Candidates
Roger Bottrall	Program Manager, Electoral Support Programme
Nixon Duban	General Secretary, People's National Congress Party
Sarah Garap	Civil society representative
Dr. Alphonse Gelu	Senior Research Fellow, National Research Institute
Sir Barry Holloway	Member, Task Force for Government and Administration Reform
Raphael Huafolo	Former Deputy Police Commissioner — Operations
Priscilla Kare	National Council of Women and former candidate
Patricia Kassman	Electoral Support Program Board Member, Civil Society Representative and election researcher
Richard Kassman	Director, Transparency International
Dr. Joseph Ketan	Election researcher and author
Hon Dame Carol Kidu	Minister for Community Development
James McGovern (and team)	Review Team of Electoral Support Program
Sally Mokis	Secretary, Papua Hahine Forum
Chief Superintendent Joseph Morehari	Royal PNG Constabulary
Dr. John Nonggorr	Lawyer to the PNG Electoral Commission
Thelma Oberdorf	Former roll adviser to the Electoral Support Program
The Hon. Michael Ogió	Minister of Education
Steven Pokawin	General Secretary, National Alliance Party
Dr. Orovu Sepoe	Former academic and Election Researcher
Dr. Musawe Sinebare	Deputy Director, National Research Institute
Dixon Susub	Department of Political Science, University of Papua New Guinea
Andrew Trawen and staff	Chief Electoral Commissioner, Papua New Guinea Electoral Commission
Sophie Temby	Second Secretary, Governance, AusAID
Milo Timini and Moses Taian	Pangu Party
Beau Tydd	IT Advisor Electoral Support Program
Dr. Thomas Webster	Director, National Research Institute
Michael Yard	International Foundation for Electoral Systems

APPENDIX B: FINAL ROLL FOR 2007

The final totals, by province, at roll closure were as follows. Please note that the 2000 National Census figure is the total population not just those eligible to vote :

Province	1997 Electoral Roll	2000 National Census	2002 Electoral Roll	2007 Electoral Roll
SOUTHERN REGION				
Northern Provincial	66,705	133,065	112,502	82,509
Milne Bay Provincial	114,420	210,412	187,149	119,895
Gulf Provincial	65,312	106,898	105,912	68,509
Central Provincial	136,155	183,983	191,496	151,932
National Capital District	125,296	254,158	233,763	221,908
Western Provincial	83,583	153,304	141,467	100,565
NEW GUINEA ISLANDS REGION				
West New Britain Provincial	109,628	184,508	148,181	112,049
Manus Provincial	26,833	43,387	30,701	26,918
East New Britain Provincial	126,159	220,133	172,481	132,478
New Ireland Provincial	56,951	118,350	64,568	66,696
Bougainville Provincial	85,284	175,160	129,299	126,867
MOMASE REGION				
Morobe Provincial	278,770	539,404	462,341	356,772
West Sepik Provincial	102,274	185,741	145,838	122,439
East Sepik Provincial	205,112	343,181	286,716	240,551
Madang Provincial	200,493	365,106	345,476	224,303
HIGHLANDS REGION				
Enga Provincial	271,411	295,031	411,201	277,638
Western Highlands Provincial	305,844	440,025	497,190	444,357
Southern Highlands Provincial	364,191	546,265	598,811	450,795
Chimbu Provincial	287,524	259,703	451,775	228,187
Eastern Highlands Provincial	402,127	432,972	602,228	383,471

(Source, PNGEC Draft Report to Parliament on the 2007 Election, para. 31)