Research Article

An evaluation of the Wellington Regional Genuine Progress Index

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Abstract: There is widespread discontent with the gross domestic product (GDP) as a measure of progress for society. Alternative measures have been proposed, including the genuine progress indicator (GPI). This paper examines the changing institutional arrangements and attitudinal context in the recently developed Wellington region (New Zealand) GPI. We found an alignment between the GPI framework and the Local Government Act. Despite this fit, we identified challenges, including the need to revitalise public participation through deliberative techniques. It remains too early to judge whether the GPI initiative will launch a viable alternative to the GDP for the Wellington region.

Key words: genuine progress index/indicator, indicator, local government, public participation, sustainable development.

There is widespread and long-standing discontent with the gross domestic product (GDP) as a measure of progress for society (Cobb et al. 1995; Hodge 1997; Anielski 2001; Clarke & Lawn 2008a; Bagstad & Shammin 2009; Stiglitz et al. 2009). The singular focus on the GDP has paralleled the strong emphasis on the development of economic capital and wealth, often at the expense of social, environmental and cultural capital and well-being (Talberth et al. 2007). There is an increasing interest in the development of more holistic national accounting tools, such as the genuine progress indicator (GPI), to challenge the uncritical use of the GDP and to provide a more accurate picture of environmental, social, cultural and economic well-being (Ness et al. 2007; Gasparatos et al. 2008; Clarke & Lawn 2008b; Costanza et al. 2009). These tools are important to the push for ‘sustainable development’ internationally and as a means to assess ‘progress’ in sustainable development terms. As these alternative indicators trickle into use, it is important that some critique of approaches taken is provided and the lessons learnt are profiled. The GPI must be robust and understood if it is to become a widely used tool that challenges the primacy of the GDP.

The New Zealand context

Interest in alternative measures of progress has also grown in New Zealand in the last decade. The four most significant developments during this period were the following: ‘The Social Report’ (Ministry of Social Development 2001), which has become an annual publication of New Zealand-wide social indicators; the...
Quality of Life Project (2001), a biannual publication of indicators on the quality of life in the 12 major urban areas in New Zealand; Statistics New Zealand’s Framework for Measuring Sustainable Development (2009), which provides indicators that measure progress towards sustainable development in New Zealand; and most recently, a Treasury paper, ‘Working towards Higher Living Standards for New Zealanders’ (Gleisner et al. 2011), which recognises the multidimensional nature of living standards, including non-material factors and distributional concerns. Investment in alternative indicators peaked during the 1999–2008 government, with considerable discussion about developing a GPI for New Zealand (Colman 2004). However, decision-makers opted to instead use the Swiss government’s MONET Framework to measure sustainable development for New Zealand (Statistics New Zealand 2009).

With a post-election change to a centre-right National-led government in 2008, ministerial support for alternative concepts and indicators has been less apparent. The government has steered away from addressing sustainability issues by proscribing the use of the word ‘sustainability’ across government and at the same time cutting government sustainability initiatives (South 2009; Oram 2010). There has been a refocusing on narrower economic goals and measures, particularly on growing the GDP to match that of Australia.

The effect of the government’s repudiation of sustainability has started to trickle into local and regional politics; this has involved some ‘simplifying’ of the progressive Local Government Act 2002 (LGA). The LGA’s enactment drove a refocusing of local government in 2002, which helped to stimulate investment in alternative measures of societal progress. The LGA made local government responsible for improving sustainability through devolved community engagement (Reid 2003; Thomas & Memon 2005). In practical terms, this means that local government is focused on strengthening local democracy through an increased focus on public participation, providing for the social, economic, environmental and cultural well-being of the community and strategic, long-term and outcome-focused decision-making at the local level (Local Futures 2006; Memon & Johnston 2008).

The local government is empowered to integrate these aims, within a ‘governance for sustainable development’ framework, in their activities. This governance framework, and the flexibility with which local government can implement it, remains fertile ground, despite the recent changes in the LGA, for adopting more holistic measures of progress, such as the GPI. This research looks at the development of a GPI for the Wellington region, bearing in mind the New Zealand-specific context set by the LGA.

The Wellington context

In 2007, the Greater Wellington Regional Council, in conjunction with the region’s territorial authorities, announced that it would develop a GPI. This was part of a joint strategy – the Wellington Regional Strategy (WRS) – which focused on growing the region’s economy and the promotion of good urban form. This GPI and the recently developed Auckland region GPI (McDonald et al. 2009) join just a handful of other such regional level initiatives around the world.

Methodology

While considerable effort has focused on the methodology for developing GPI accounts, Astleithner et al. (2004, p. 23) pointed out that ‘designing and devising SISs [sustainability indicator sets], in itself, changes little. It is a question of how SISs are integrated into the processes of urban governance’. The challenge that Astleithner et al. posed is difficult to address, not least because using indicators to support improved community outcomes (COs) does not sit comfortably within one field of research. Rather, it is an interdisciplinary challenge, with a broad normative aspiration, which Colman highlighted (2004, p. 18):

We feel confident that, at the community level, the GPI can assist communities in mobilizing behind a common vision, learning about themselves, improving their wellbeing, planning a better future for their children, and measuring their progress towards that goal.
Recognising this, the research aim was to explore and make recommendations for how the WRGPI (Wellington Regional Genuine Progress Index) fits into local governance arrangements and how the public is involved in the development and use of the WRGPI.

In the present study, time was spent with the GPI-commissioning organisation, the Greater Wellington Regional Council, to develop and refine the objectives of this study. This process was seen as important to ensure that the research was well fitted to the context and to inform the organisational environment, as much as practicable, about the positionality of the research. The research also tracked the development of the WRGPI from conceptual development through to the completion of the draft report (26 months, July 2008–September 2010). The release of the GPI, however, was delayed, until finally being released in August 2011.

Besides a literature review focused on the GPI and public participation, the research method included an in-depth ‘intrinsic case study’ (Creswell 2007, p. 74) because ‘the case itself is of interest’ (Stake 2003, p. 136). Sources for the intrinsic case study included observational studies, analysis of policies and publications, Treaty of Waitangi analysis (described later) and key informant interviews.

The GPI and Genuine Progress Index

The North American non-governmental organisation ‘Redefining Progress’ devised the GPI in 1995, based on the Index of Sustainable Economic Welfare, developed by Daly and Cobb (1989). The GPI aims to provide a better approximation of a population’s welfare than the GDP (Gasparatos et al. 2008). In contrast to the GDP, it is cost- and benefit-discerning. What is widely accepted to be a cost to society – such as crime, pollution or emergency expenditure – is subtracted as a cost rather than being included as a benefit as the GDP does. Some additions are also made, such as the value of unpaid household work.

Although the bulk of the literature remains focused on the Redefining Progress approach, an alternative form of the GPI has been developed – the Nova Scotia approach – by Dr Ron Colman and his colleagues at GPI Atlantic, Canada (2004). The Wellington Region GPI is one of the first case studies, beyond the GPI Atlantic, to apply the Nova Scotia methodology. This interpretation of the GPI reflects a stronger move away from reductionist, monistic or positivist tendencies than other forms of the GPI. While the Redefining Progress GPI aims to be a more holistic approach to measuring ‘progress’ than the GDP, it remains limited to indicators that have a monetary value assigned. Also, it is usually developed by independent research institutions, which tend to be disconnected from the communities that it represents.

The Nova Scotia GPI was developed in light of the limitations of the Redefining Progress GPI (Colman 2004). It aims to be pluralistic by using both monetary and non-monetary valuation in its accounts and directly involving the community in the development of the GPI.

This divergence in GPI approaches is described here (Table 1) because it is not covered in the literature. This lack of coverage is in large part because GPI Atlantic has been operationally focused, with few resources to put into the development of academic discussion about the Nova Scotia approach (Colman 2004).

The most important consistency between the approaches, other than challenging the GDP by proposing a broader approach, is an emphasis on economic valuation (at least where possible in the case of the Nova Scotia approach) so that a challenge can be made to conventional economic system assessment (Colman 2004, p. 53): In the view of both Redefining Progress and GPI Atlantic, only such economic valuation could challenge and take issue with existing core accounting mechanisms and create an essential dialogue with the world of conventional economics.

The findings of the Report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al. 2009), commissioned by the French government, highlighted the case for pluralistic approaches such as the Nova Scotia GPI. The Nova Scotia GPI is one of the few existing indicator sets that has successfully integrated a mixture of economic valuation and physical indicators as per the rec-
ommendations of Stiglitz et al. It is the use of economic valuation where possible that will distinguish the WRGPI from other indicator sets developed for the Wellington region, such as the quality of life indicators, CO indicator reports or the Ministry of Social Development’s Wellington Region Social Report.

The Wellington Region Genuine Progress Index case study

The GPI is identified by the WRS, which is a joint venture between Wellington’s regional council and its territorial authorities, as a key means to measure progress on the strategy. The final pages of the WRS document (Greater Wellington et al. 2007, pp. 51–2) outline how progress will be measured and introduce the GPI concept at a very basic level. The establishment of the GPI sits somewhat strangely within a document, which, although it is called a ‘sustainable [sic] regional growth strategy’, is very focused on economic growth.

During the course of the research (July 2008–March 2010), a GPI framework was developed by the WRS team based at the Greater Wellington Regional Council, and its constituent indicators identified. As well as the guidelines provided by the WRS, the WRGPI was designed to fit within the LGA 2002, and specifically the COs process. The Nova Scotia GPI framework described by Colman is broadly congruent with the purpose (section 3) of the LGA, 2002 as amended in 2010. The act inter alia:

- Promotes the accountability of local authorities to their communities; and
- Provides for local authorities to play a broad role in promoting the social, economic, environmental and cultural well-being of their communities, taking a sustainable development approach.

The LGA enacted this purpose primarily through the COs process and the Long Term Council Community Plans (LTCCPs), both of which were amended in 2010. The COs process was developed as a tool for long-term planning.
to address social, environmental, economic and cultural well-being for current and future generations (Local Futures 2006). Local authorities were provided with general empowerment to develop the COs process and at a broader level, to achieve the purposes of the act. The local authority was obliged to work in a participatory way with local communities and relevant organisations at least once every six years to identify COs. Local Government New Zealand (2003, p. 31) underlined the significance of the COs, although its comment recognised that councils were not tightly bound by them:

The outcomes are the community’s judgment of what it needs to promote its wellbeing. Outcomes therefore belong to the community – not the local authority. The local authority does not have to adopt the outcomes in the sense that it would adopt any other plan or policy, and may not even agree with the outcomes.

The 2010 amendments dropped the COs process, and although substantial consultation processes remain, community involvement is more voluntary and may vary more across local authorities (Local Government New Zealand 2010, p.5). The LTCCPs are renamed long-term plans.

The LGA’s community ethos, although now weakened, is well matched with the Nova Scotia GPI, which, as noted earlier, aims to assist communities in articulating a vision and elements of well-being, and measuring progress towards it (Colman 2004, p. 18). However, the community ethos has been challenging for local authorities to enact as for many it has been new territory. This is especially so given that in practice, the local government in New Zealand has limited control over the outcomes and its primary role is as a facilitator.

The WRGPI has adopted the nine COs for the Wellington region as the headings for the GPI (as Table 2 shows) instead of the conventional environment, society, culture and economy headings. For each of the nine COs, there are both headline and secondary indicators, totalling 86 indicators (Greater Wellington 2009b; 2011). Many of the indicators measure the quality of a resource rather than measuring the stocks and flows and without clear limits or goals, are not necessarily informative of the sustainability of resources or activities.

The WRGPI was prepared for release by April 2010; however, due to political uncertainty and the October 2010 local government elections, the WRGPI remained unpublished in 2010. It was finally released in August 2011 through Greater Wellington’s website, http://www.gpiwellingtonregion.govt.nz/.

**Data representation**

As well as the website, the Wellington Region GPI uses three methods of data representation (Greater Wellington 2011), including:

- Individual indicator data, usually based on regional data from 2001 to 2008.
- GPI indexes to show trends for each CO.
- An aggregated GPI graph. To contrast the Wellington Region GPI to the region’s GDP, all of the COs have been aggregated to a single, headline indicator.

**Focus on public participation**

Both the LGA and the Nova Scotia GPI have a strong focus on involving the ‘plurality of legitimate perspectives’ (Funtowicz & Ravetz 1993) through public participation methods as a means to elicit goals and build ownership for community development. Engaging this plurality is a significant challenge in that community development is immersed in a complicated web of politics, evidence and power relationships that need to be negotiated (Juntti *et al.* 2009).

As part of this research, a literature review of ‘good practice’ public participation was compiled, with recommendations, and presented to the WRS Team. This investigated how deliberative democracy and social learning could be applied through the development of the GPI. Despite this report, the public has not been involved in the WRGPI, other than in the development of the COs and the WRS, both of which predated decisions to develop a GPI. An officer from the WRS team summed up the approach to public participation in the development of the WRGPI (from interview):

Our approach has been top-down. The regional community was consulted on the overall strategy throughout its development.
Table 2  Community outcomes and indicators of the WRGPI

<table>
<thead>
<tr>
<th>Prosperous community</th>
<th>Healthy environment</th>
<th>Quality lifestyle</th>
<th>Strong and tolerant community</th>
<th>Entrepreneurial and innovative community</th>
<th>Healthy community</th>
<th>Connected community</th>
<th>Sense of place</th>
<th>Regional foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force participation rates</td>
<td>Air quality</td>
<td>Living in deprivation</td>
<td>Perception of social support</td>
<td>Investment in Research and Development</td>
<td>Obesity</td>
<td>Sense of pride in city</td>
<td></td>
<td>Sustainable water use</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>Coastal/marine water quality</td>
<td>Housing affordability</td>
<td>Voter turnout</td>
<td>Business growth</td>
<td>Risky alcohol consumption</td>
<td>Perception of graffiti, vandalism and litter</td>
<td></td>
<td>Perception of council services</td>
</tr>
<tr>
<td>Local employment</td>
<td>QEII covenanted areas</td>
<td>Crowded households</td>
<td>Perception of understanding of council decisions</td>
<td>Highly skilled workforce</td>
<td>Physical activity</td>
<td>Region as great place to live</td>
<td></td>
<td>Perception of road network reliability</td>
</tr>
<tr>
<td>Equity</td>
<td>Total ecological footprint</td>
<td>Housing waiting lists</td>
<td>Perception of influence on council decisions</td>
<td>School leaver qualifications</td>
<td>Smoking</td>
<td>Sense of community</td>
<td></td>
<td>Perception of public transport reliability</td>
</tr>
<tr>
<td>Income</td>
<td>Total energy use per capita</td>
<td>Perception of quality of life</td>
<td>Perception of cultural diversity</td>
<td></td>
<td>Road injuries</td>
<td>Contact with friends and family</td>
<td></td>
<td>Power outages</td>
</tr>
<tr>
<td>Value of unpaid work</td>
<td>Greenhouse gas emissions per capita</td>
<td>Self-reported happiness</td>
<td>Speakers of Te Reo Māori</td>
<td></td>
<td>Perception of health</td>
<td>Volunteering rates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In developing the GPI, it would have been nice to engage with the community from the start, but the WRS regional projects are principally related to collaboration across councils rather than direct consultation with the community.

This statement reflects an awareness within the council that it is performing poorly in involving the public, and this was a common theme during the interviews.

The dearth of public participation in the WRGPI development process was mirrored by the discontent with the application of Greater Wellington’s COs process, seen as being ‘too broad to be meaningful’, or in the words of two interviewees, just about being ‘healthy, wealthy and wise’. This discontent was evident not only from critiques provided by outsiders but in council documents and by all the interviewees. As a result, the COs have become sidelined and merely approached as another statutory requirement – rather than as a strategic community planning exercise, as intended by the act. This was most strongly highlighted in the 2009–2019 proposed LTCCP (Greater Wellington 2009a, p. 17), which quite clearly states that ‘the outcomes, in their current form, do not help Greater Wellington in setting priorities’.

Attitudes to the WRGPI

Six interviews were conducted for this aspect of the study, including with two elected regional councillors, two Greater Wellington staff members and two staff members from local agencies that are collaborating on the GPI. The interviewees were asked to comment on what they saw as the merits of the GPI. Five of the interviewees were supportive of the development of the WRGPI, while one of the staff members was uncertain about it and admitted to some cynicism about it.

The interviewees identified a range of benefits of the WRGPI, including that it will encourage collaboration across agencies and mitigate the ‘silos mentality’ (unintegrated planning), it represents more holistic thinking (than just the GDP), it can replace current performance indicators, it can effectively communicate important information to the public, it can be used as a tool for education, it will be useful in the policy cycle and it is new and exciting.

The interviewees also had concerns, including that it is resource-intensive and doubles up on work, that it is beyond the call of duty of the council (the GPI measures things that are not the function of the regional council), that time will be wasted measuring things at the cost of taking action on things, that the success of the GPI depends on the content of the indicators and that the GPI will be implemented at the cost of economic development.

Should the full-cost accounting procedure be undertaken?

Most of the interviewees admitted that they did not know enough about full-cost accounting to make an adequate judgment. The primary concern, which all of the interviewees reflected, was the cost and resource intensiveness of the procedure. Some felt that they were unsure of the gain from it. As shown in Figure 1, three of the interviewees were supportive of full-cost accounting if resources were streamlined and pooled within the region to develop it.

The findings of these interviews were provided to the WRS team, at a time when it seemed unclear as to whether full-cost accounting would be done. Since then, commitment to developing the full-cost accounts strengthened, with the WRS team expecting that at least two accounts will be calculated in 2011, but the fate of this work was unclear at time of writing.

Treaty of Waitangi analysis

Given the constitutional and political importance of the Treaty of Waitangi and the legal requirements on the New Zealand State to act in the interests of the ‘Principles of the Treaty of Waitangi’, this study undertook a ‘Treaty of Waitangi Analysis’ to consider how the WRGPI involved Māori.

Article two of the Treaty of Waitangi (1840) gives Māori the right to ‘tino rangatiratanga o ō rātou whenua, ō rātou kāinga me ō rātou taonga katoa’, which can be translated as self-determination over land, homes and all possessions therein. Therefore, local government has a clear responsibility to involve local Māori (tangata whenua) in decision-making (as recognised in the LGA). Greater Wellington liaises with representatives from the Wellington region’s iwi (tribes) through the iwi advisory group, Ara Tahi.
The initial WRS project proposal outlined the way in which Ara Tahi would be engaged (Greater Wellington et al. 2004), and subsequently, Māori-specific measures have been developed in liaison with Ara Tahi (Greater Wellington 2009b, pp. 10–1). Some of these indicators have, however, been limited by a lack of indicator data as effective cultural indicators have been difficult to identify for the GPI (Greater Wellington 2010).

There is an intuitive link between tikanga Māori and the normative framework that underpins the Nova Scotia GPI. This has been further reflected in the adoption by the Māori Party, a political party with four Members of Parliament at time of writing, of a national-level GPI as a core policy initiative (Sharples 2008). Further research is being jointly developed between Te Wānanga o Raukawa and the New Zealand Centre for Ecological Economics to develop variables specific to Māori. These measures could also potentially be integrated into the WRGPI. While this analysis suggests that the perspectives of Māori have been adequately engaged with, further analysis is required to reveal the authenticity of this engagement as the WRGPI is released and reported.

Discussion

The development of the WRGPI reflects a laudable commitment to more holistic measures than the GDP alone, and a realisation that the GPI may present a different picture than the GDP. The recently released first report on the WRGPI notes, for example (Greater Wellington 2011, p. 47):

When comparing the Wellington region’s real GDP per capita index to the WR-GPI, differences are apparent. The regional economy, in terms of GDP increased at a much faster rate than our overall regional well-being in terms of GPI. This suggests that, over the last decade, some of the benefits of economic growth to society have been offset by the declines seen in the areas of the region’s environmental, social and cultural well-being.

Nevertheless, this study has revealed challenging institutional barriers to the full application of the Nova Scotia GPI philosophy by local authorities. The two most significant challenges are enacting the community philosophy and navigating the changing political climate.
The community philosophy
The analysis of the LGA and the Nova Scotia GPI found a close affinity between the community philosophies of the two. This affinity has been exhibited in the use of the COs to guide the selection of the WRGPI indicators. However, this link has not yet stimulated action towards the COs because council work programmes have yet to be shaped by the findings of the WRGPI. Moreover, it remains to be seen how closely councils will consult with their communities on desired outcomes now that a formal COs process has been removed from the LGA.

The LGA–GPI link was found in this Wellington case study to be weakly realised because even though the community was consulted in the development of the regional COs, the GPI was not the subject of any part of the original COs consultation for the region. A range of key stakeholders has been involved in the development of the WRGPI, but they represent a select few in the Wellington region community. As a result, community participation and ownership of the WRGPI falls short of the Nova Scotia GPI community philosophy. In short, a substantive reconsideration of how the community can be engaged in linking desired outcomes to the WRGPI would strengthen the latter. A more comprehensive and inclusive process for discussion of desired outcomes and progress measures need not be significantly more resource intensive.

The WRGPI is poised on a political edge
Over the course of this research, the national political climate significantly changed. Coupled with the government spending cutbacks in response to the global financial crisis, a political shift to a more simplified vision of local government is underway, with a new Auckland Council being a significant element. So far, the sustainable development focus of the LGA has been preserved, although, as noted earlier, the COs process was removed in the 2010 amendments to the act. At time of writing, the Minister of Local Government is ‘in eclipse’, and the implications for further local government legislative change are unclear. Further moves to pare back the environmental, social and cultural mandates of local government with the primary focus shifting to economic growth (Hide 2009) appear unlikely for the moment, although a wide-ranging three-year review of the local government system is getting underway. In turn, the implications for the WRGPI framework are unclear.

In 2007, when the GPI was first mandated, the political climate was more amenable to developing more holistic measures of progress. Even then, however, the GPI’s inclusion in the WRS created a tension between the dominant, conventional economic paradigm and the more holistic paradigm reflected in the GPI. Understandably, if the introduction of new and more holistic measures proceeds, there may be some confusion and misunderstanding as to its purpose and focus. This confusion and political tension were likely causes of the multiple delays in the release of the WRGPI.

Can the challenges in the WRGPI context be resolved?
To address the challenge of improving community participation and ownership of the WRGPI, institutional attitudes towards consultation on desired outcomes and the GPI’s role as a strategic decision-making and planning tool need to be addressed. Only with further institutional learning about CO development can the process become more meaningful for Greater Wellington and the community. There is considerable frustration with the public participation processes that Greater Wellington currently uses to engage the community, both on the part of the council and the wider public (for a public critique, see Duston 2009). The challenge therefore is to carefully tailor public participation initiatives so that they are rewarding, empowering and produce useful outcomes.

A case study that can help to inform the design process is the ‘Dialogue with the City’ initiative in Perth, Australia, which saw 1100 participants actively engaged in deliberations over the future of their city (Carson & Hart 2005; Carson & Hartz-Karp 2005; Hartz-Karp 2005a, b). Participants from the event left very satisfied overall, with a large majority of them reporting that the deliberations went ‘okay’ or ‘great’. Of the participants, 97% said that they would be prepared to participate in a similar event again. The design of the initiative was based upon three principles: that effective public participation needs to be inclusive, influ-
ential and deliberative. Coupling such principles with institutional learning could be important in reshaping attitudes and outcomes from public participation.

Increased and effective public participation would help to address the second concern – that of political override. The Wellington regional public has been largely ignorant of the WRGPI’s development. While this perhaps reduces public criticism, it also makes it more vulnerable to political fiddling or a decision to drop the initiative as there has been relatively little opportunity for the public to articulate their support for it. Ensuring that the ownership of the WRGPI is diverse and spread across the region would be an important step to developing resilience to these risks. This once again reinforces our central argument: that the role of public participation in the WRGPI needs to be strengthened through deliberation and social learning.

Is the WRGPI likely to challenge conventional economic analysis?
The WRGPI was born into a polarised context, beginning as a relatively undeveloped part of a strategy dominated by a strong economic growth framework. As already noted, there is an irony that the GPI seeks to challenge such frameworks. This institutional tension can be seen as reflecting a transition between two differing paradigms. The conventional economic paradigm is based upon neoliberal ideals of a high-growth economy driven by market forces. The GPI, on the other hand, is based upon the principles of ecological economics and green accounting, which attempt to provide a more holistic framework for monitoring well-being than conventional accounts focused on the GDP. Furthermore, it aims to facilitate, through social learning, the transition away from growth.

The conventional economic analysis is particularly evident in the core objectives of the WRS, such as ‘double the region’s exporting share of GDP by 2026’. This objective is based upon business-as-usual forecasting, remarkably unperturbed by a sense that the economy and society are likely to go through major and probably disruptive adjustment over this period. Yet, future global economic, social and environmental disruption due to peak oil (Heinberg 2007; Kerschner & Hubacek 2009; Birol 2011) and particularly the need to cut emissions to mitigate future climate change (Richardson et al. 2009; Rogelj et al. 2010) is now widely expected. Knowledge of such risks has, however, rarely led to convincing or proactive responses from policy-makers, except where policy-makers are able to build a broad-based constituency for adjustment (Beddoe et al. 2009).

The WRGPI has been partially successful thus far: it has been released, with the support of the chair of the WRS. However, in other areas, it has been less successful. In particular, given the limited public engagement in its development, its full value and potential as a decision-making tool has not been realised. Its next challenge will be making a real difference to decision-making, in a way that reflects the public’s concerns. We argue that a stronger focus on public participation through deliberative techniques and social learning is needed to ensure that the public see the WRGPI’s connection to their own concerns, and become supportive of it.

The context created by the WRS is thus a mixed blessing in terms of a transition to a GPI-based community-learning approach. On the one hand, the context that the WRS has created limits the extent to which the WRGPI can reflect the holistic Nova Scotia GPI philosophy. On the other hand, the strategy has enhanced the integration and cohesion between the territorial authorities and the regional authority and therefore increased the resourcing opportunities for it. Such a mixed context is likely to define pioneering efforts to develop a GPI at the local government level.

Implications of this case study for applying GPI at the local government level
In a global context in which the development of a GPI by any form of government is uncommon, it can be expected that pioneering initiatives, such as the WRGPI, will be developed in difficult political and institutional contexts. Therefore, the imperfect application of the GPI philosophy, as exhibited by the WRGPI, is not surprising. While the inception of the WRGPI is an innovative initiative embedded within a relatively conventional economic strategy, its
future development will be tied to the normal incremental policy changes typically seen at local government level in New Zealand. These will have a major impact on the WRGPI’s effectiveness (Lindblom 1979; Geczi 2007). The social learning frameworks recommended by this study will be important in ensuring that these incremental changes support, rather than work against, the WRGPI.

**Conclusion**

For some time, New Zealand local government has been moving towards a broader view of well-being that goes beyond measuring the rate of GDP growth, and this change accelerated with major revisions to the local government legislative framework in 2002. This study has found that the success of the wider transition from narrower, conventional economic monitoring and analysis to more holistic and meaningful accounting frameworks, centred on well-being, requires the following:

- Innovative step changes, of which the introduction of the GPI is an example, coupled with supporting incremental adjustments of policy frameworks.
- Pioneering case studies that can provide evidence on the way in which the GPI can be useful and effective, positively reinforcing ‘community outcomes’ development and social learning
- Communication and integration between institutions to ensure that a GPI is adequately resourced and embedded and maintains relevance to the region.

The Nova Scotia GPI is potentially a powerful tool, with the scope for shifting thinking around ‘progress’ and well-being. However, this study has argued that such a tool alone is not enough; a GPI needs to be coupled with social learning frameworks that align with its development. Moreover, a GPI should be seen as part of a wider process of institutional and worldview change that challenges outdated views of conventional economic ‘progress’ and helps communities to engage in redefining well-being in a way that fits their locality. This process will require all the imagination, charm and persuasiveness that local government practitioners and supportive experts can muster.

**Endnotes**

1. Each index value is calculated using the ‘best year’ in terms of positive impact on well-being, which has a value of 100 and is used as the benchmark for all other years. All the constituent indexes are averaged to give a single index value per community outcome per year.
2. Available from the corresponding author
3. The draft WRGPI (Greater Wellington 2010, p. 2) provides the following definition: full-cost accounting describes how goods and services should be priced to reflect their true costs (including environmental and social costs). With full-cost accounting, natural resources would be defined as assets and environmental degradation such as the depletion of soils or the destruction of wetlands would be defined as costs.
4. The interpretation of these principles remains hotly debated, as the treaty was written in both English and Māori, and there are discrepancies created by mistranslation. This study has sought to favour the Māori version of the treaty.
5. This research has only focused on how the WRGPI has been developed; further issues are not covered here, such as the appropriateness and technical features of the constituent indicators.
6. Minister Rodney Hide has been replaced as leader of his party, the ACT Party.

**References**


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