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Welcome to this issue of Impact Connector published by The New Zealand Association for Impact Assessment (NZAIA). This issue has a number of papers relating to impact assessment and infrastructure focusing on Aotearoa NZ and the Pacific Islands. The set of papers provides a range of perspectives:

- Rebecca Foy Place Matters: The importance of geographic assessment of areas of influence in understanding the social effects of large-scale transport investment in Wellington
- Rodney Yeoman Unplanned Consequences? New Zealand's experiment with urban (un)planning and infrastructure implications
- <u>Charles Crothers</u> Reflections on infrastructure, Town and Country planning and intimations of SIA in the late 1970s and early 1980s
- <u>Mike Mackay and Nick Taylor</u> SIA guidance for infrastructure and economic development projects
- <u>Terry Calmeyer</u> Scoping in impact assessments for infrastructure projects: reflections on South African experiences
- Nick Taylor and Greg Barbara Impact assessment for Pacific Island Infrastructure.

It is useful to consider these papers and the issues they raise for impact assessment practitioners by referring to the strategic direction set by Rautaki Hanganga o Aotearoa 2022-2052, a strategy developed by Te Waihanga, the New Zealand Infrastructure Commission (NZIC). The NZIC undertook extensive consultation with the sector and the public. The Commission recognises in the strategy that a combination of factors are creating pressures on infrastructure in Aotearoa NZ, including migration and increases in population, economic and social changes, natural hazards, climate change, and the drive to a low-emissions future. There is a long-standing deficit of capital allocation and expenditure on maintenance and new projects. The strategy sets out key objectives that are very pertinent to Impact Assessment practitioners:

- Enabling a net-zero carbon emissions Aotearoa
- Supporting towns and regions to flourish
- Building attractive and inclusive cities and regions
- Strengthening resilience to shocks and stresses, and
- Moving to a circular economy.

The Pacific Islands also face complex issues and needs in planning for, designing, and implementing infrastructure projects that provide wide benefits and meet the requirements of social and environmental safeguards. The Pacific Regional Infrastructure Facility (PRIF) is a multi-partner coordination and technical assistance facility for improved infrastructure across multiple sectors that



supports enhanced regulations and planning. The <u>Secretariat for the Pacific Regional Environment Programme</u> (SPREP) are promoting good practice and building local capacity in impact assessment. It is notable that the Pacific Island approach is to promote strategic environmental assessment (SEA) focused on sustainable outcomes, setting the strategic context for project impact assessments as outlined by Nick Taylor and Greg Barbara in this issue.

While the NZIC also argue for a strategic approach to infrastructure planning here in Aotearoa NZ, there is no clear call for Strategic Environmental Assessment (SEA) which could provide a much stronger planning tool than is evident at present (Morgan and Taylor, 2021). The call for streamlined planning by NCIC provides an opportunity to conduct SEAs in advance of strategic decisions about infrastructure programmes. Most notable are infrastructure programmes in complex regional settings with multiple stakeholders and components, such as wastewater upgrades or the City Rail Link.

Let's Get Wellington Moving (LGWM) is an example discussed by Rebecca Foy (in this issue). She identifies that LGWM involves multiple agencies and funding sources with potential impacts over a large geographic area and several territorial authorities. As this programme is planned and later implemented there is an opportunity for the SEA work already completed to establish a planning framework. Taking different spaces and places into account as argued by Foy, a planning framework might include specific standards such as noise controls or residential intensification suited to the Wellington urban context. In this example, the SEA work could help to streamline future impact assessments and processing of consents for individual components of a programme. This sort of streamlining is consistent with the advocacy of organisations such as NZIC.

Sufficient and affordable housing is identified by NZIC as an important part of the infrastructure gap and the need to expand housing supply is a central part of the rationale for changes to a planning system that is seen to slow down decisions on infrastructure projects. In fact, infrastructure planning is a multi-faceted activity in which resource planning and consents are just a part. The NZIC strategy (page 135) identifies that poor coordination and delays by funding bodies are a principal source of delays in projects. The paper by Rodney Yeoman (in this issue) points out that planning for urban infrastructure such as public transport and planning for urban growth are inevitably intertwined. Using Auckland as a case study he shows that policies around urban intensification need to be much more consistent with planning for public infrastructure or there is little hope of achieving the goals of smart, sustainable cities – as laid out in the strategy. Yeoman argues that the effort to centrally direct decisions on intensification can easily have unintended consequences for planning and building infrastructure such as public transport at the level of individual cities or suburbs.

A common suggestion for streamlining planning and consents is to narrow the focus of impact assessments. For instance, when the NZIC argue for speeding up infrastructure planning and consents they call for a number of measures, some of which could prove counter to improved impact assessment and decision making. On the one hand, their call, for instance, for improved spatial planning and better use of consistent measures and standards for effects such as noise and dust, which makes a lot of sense. On the other hand, they call for less focus on "human values and preferences (for example heritage, character and amenity)" and for "narrowing the definition of 'effects' to those relating to the natural and physical environment" (NZIC, 2022, page 140). Experience with impact assessment in Aotearoa NZ and the Pacific Islands shows that in fact human values and social impacts are of central concern to infrastructure programmes and projects.

In his article in this issue, Charles Crothers examines the role of the Ministry of Works and Development as the central agency for infrastructure development in Aotearoa NZ from the 1950s through the 1980s. The Town and Country Planning Directorate was a key part of this agency and



over time they developed a strategic approach to regional and sectoral developments. The Directorate soon found that social concerns lay at the heart of efficient project planning, developing what is now called the social licence to operate for projects. As a result, the Directorate were early leaders in the development of Social Impact Assessment (SIA) including development of the first Aotearoa NZ guidelines on SIA (Conland, 1985).

In their paper, Mackay and Taylor (in this issue) suggest that SIA provides essential information to decision makers, affected people and communities when planning for infrastructure well before an action is taken. "Social impacts can be described as changes to peoples' lives, planned or unplanned, positive or negative, that arise either from human activity (an infrastructure development for example) or from naturally occurring events." Their research pointed to the need for new guidelines that provide a practical approach to SIA. The guidelines they wrote cover the basic steps in preparing an SIA from the initial steps of scoping an SIA through to preparation of social impact management plans. They also note a shift towards community-based approaches to project development (Taylor and Mackay, 2022). Their guidelines for SIA are consistent with the approach of the new SIA guidelines for state significant projects in New South Wales (NSW Government, 2021).

In her paper in this issue, Terry Calmeyer addresses practical needs for improved impact assessment and decision making, especially in respect to better use of scoping as an essential start to any impact assessment. Scoping includes methods for identifying and prioritising the key issues and focuses impact assessments on addressing them. Her paper considers impact assessment practice in South Africa where scoping is defined by legislation as a requirement for any impact assessment. South African infrastructure projects include a distinct scoping phase and produce a scoping report that is available for public comment before being submitted to the consenting authority, and before any detailed studies and assessments are done. In this approach public participation is an important part of any scoping exercise as is the analysis of alternatives. The experience in South Africa suggests that practitioners here in Aotearoa NZ could pay heed to improved scoping as a means to achieve a more cost effective and focused process of impact assessment in future infrastructure developments.

Together these papers reinforce the need for enhanced capacity in impact assessment practice in Aotearoa NZ and the Pacific Islands. Enhanced capacity will provide for infrastructure development focused on a range of positive outcomes because impact assessment strengthens and progresses planning and decision making when applied throughout the strategic and project levels. NZAIA and the PNEA are assisting with improved capacity including organising and hosting conference, courses and webinars and facilitating networking though their websites.

We hope you enjoy this set of papers and thank the authors for the effort they have made in putting pen to paper and contributing to our thinking about practice issues. We also thank Richard Morgan and Kate McNab for their work in helping to produce Impact Connector. If you are interested in proposing a theme and editing an issue please get in touch with NZAIA Admin.



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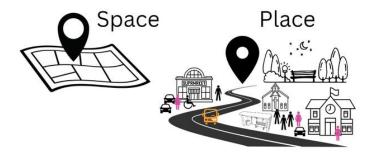




The concepts of space and place are fundamental to analysis of the social impacts of infrastructure. These concepts are widely debated, with different meanings and perspectives depending on disciplinary, political and cultural viewpoints. This article considers the importance of understanding and defining the areas of social influence for large-scale transport infrastructure investment, using Let's Get Wellington Moving (LGWM) as an example. A social impact assessment, undertaken for Waka Kotahi New Zealand Transport Agency, Let's Get Wellington Moving and the associated Wellington Region Councils, is used to show what needs to be considered when assessing the likely social impacts.

Why does place matter?

Agnew (2011) argues that both space and place describe the "where" of things and it is best to consider them together. Sack (1993) supports this assertion when stating "everyone assumes that being in one place rather than another makes a difference, as does being near rather than far. This means that geographic place and space affect everyone". These geographers tend to view spaces as reflecting the physical, social, or economic processes of human activity, generally defined in spatial metrics such as latitude and longitude, elevation, and topography, as well as in terms of political economy, with concepts such as core-periphery, or as administrative regions, for example. In addition, there are those who view geographic locations as places where agency and social practices, connectivity, mobility, and social risks shape and transform the landscape. Agnew suggests that the definition of spaces usually constitutes "a location on a surface where things just happen". In contrast, places are viewed as the spatial context for the facilitation of physical, social, and economic processes.



In the first sense, space refers to a location in a particular place as might be indicated by a physical address, site, or catchment, where daily activities occur. Whereas the second concept relates to the experience of living at an address or going about daily activities in the surrounding communities. The



second perspective relates location to place through social experiences as agents and the social construction of places through social practices such as activities in a street, churches, schools, shopping centres, parks and workplaces. The experience of place can be very different for different societal groups, such as women, children, disabled, socially deprived and vulnerable populations, as places can both constrain and enable specific activities.

Places are situated and shaped within a subset of economic, political, and cultural networks at different geographic scales. The dynamic character of places, and fluidity of patterns due to interconnections with other places means that the geographic scope of specific transport investment options will exert influences over wider areas than simply where the roads, public transport and active mode routes are provided. This understanding has obvious implications for the definition of a study area for social impact assessments (SIAs) as found with LGWM.

Considerations for geographically defining areas of social influence

Mobility, a lack of mobility, and obstacles to mobility all help to facilitate or deter movement between places. Cresswell (2004) emphasises, for example, that commuting paths are part of the experience of place and allow people to maintain social connection with other places, compared with those who are unable to move far and who are more 'spatially rooted' to their neighbourhoods. Typically, the areas that are likely to be affected by major transport investment projects are much larger than linear corridors where roads, cycleways, footpaths, and bus routes will be located. This is acknowledged by Motkee (2022) who considers that a whole-of-city scale geographic area can be important for transport planning. Veeneman and Mulley (2018) highlight that business cases for infrastructure projects in the Netherlands, Australia and South Africa are often financed by federal or state levels of governments, but the social impacts are experienced at smaller scales, such as cities and neighbourhoods, which are managed by local governments.

In the LGWM case, funding for the transport investment package was provided by multiple agencies including central government, Wellington Regional Council, and local councils within the region, especially Wellington City. The financial impacts therefore fall on ratepayers and taxpayers over a large geographic area. This is to be expected because many of those living in Wellington Region either work in the Wellington CBD or other business areas within Wellington City and also use key facilities such as the international airport, hospital, and other recreation spaces such as Te Papa, the Kaiwharawhara ferry terminal, the Basin Reserve, and Sky Stadium. For these reasons they are also likely to benefit from improvements within the roading network in terms of improved accessibility to destinations (i.e. travel time savings).

Some of the improvements and disruptions to daily life will involve specific geographic locations. For example, people living in suburbs along cycleways or improved walkways will directly benefit if they choose to use active modes to travel to work or for daily activities, as will those living along proposed routes and nodes for mass rapid transit. Businesses located along roads and routes that are likely to have more consumers directed to them, or have their access disrupted during construction, will also experience social impacts through increased or reduced activity and profits. Those people travelling across town for work, shopping, school sports, etc., will have their travel patterns improved if using public transport, or perhaps delayed if travelling by car due to new points of congestion being created by additional traffic signals or prioritisation of public transport modes.

As part of the way people move through spaces, and are likely to be aided or hindered in doing so by proposed transport infrastructure, it is important to understand who those people are, and where they live and work. There are many social questions to be investigated. For example, will proposed transport routes help people who cannot afford to own a car to move around the city better, or are the



routes not designed to be accessed by those people? How will this impact on people's ability to access education and work opportunities that could help them to improve their material wellbeing?

Will the proposed transport changes make it easier for less able people (including those who are vision impaired, hearing impaired or physically challenged) to move around the city, particularly as these communities tend to live in particular places that have good access to social support or medical services? Ease of movement is also applicable for businesses and community organisations who rely on good accessibility and connectivity to markets and members. How will the urban form of the city change and will this reduce environmental impacts such as carbon emissions through the design of more compact cities?

How data sources shape spatial analysis of communities

For many urban transformation projects, including large scale transport infrastructure investment, secondary analysis is constrained by available datasets and their spatial definitions. In New Zealand, data published by Statistics New Zealand are available for statistical areas at different geographic scales. For example, some data are published at the regional level, while other data are published for territorial authorities, or for smaller areas such as statistical area 2 or 1 level (in effect, suburbs and blocks).

The types of data that are collected and published for the smaller geographic areas can include sociodemographic information from the Population of Census and Dwellings, and business location and size data from the Business Directory. These are useful datasets to show where there are concentrations of people living and working, and Statistics New Zealand Commuterview data helps to show traffic flows within the city and region for work, education, and other purposes.

Another spatial dataset used to understand the implications of infrastructure projects is the transport zones used by transport modellers; in the Wellington case, these are called Wellington Transport Strategic Model (WTSM) zones. Those zones are broadly aligned with statistical areas, although often not identical. However, for analysis purposes it is important to use information being generated by the modelling as the outputs show volumes of flows, transport time savings and costs, and distances travelled. Aligning statistical and modelling datasets in a GIS platform is important and aids the definition of communities of interest. The alignment of population characteristics, geographic features (such as harbours, rivers, and roads), engineering options, model zones and spatial definitions of communities in order to describe the likely social impacts requires coding smaller areas into larger areas, creating the ability to summarise key variables and possibly pro-rating of data to some areas to facilitate a strategic analysis of impacts.

LGWM as an example of theory and practice

For the LGWM project spatial definition was undertaken prior to the transport interventions being finalised, to define communities in a way that would be of assistance to assessing the social impacts of the potential interventions. Community definition was undertaken in GIS, by categorising the statistical areas into broad communities, taking into account the data outputs that were anticipated to be provided from the WTSM. Natural and human geographic features were used to define communities. The assessment also considered the Index of Multiple Deprivation (IMD) to group areas of comparable social status. The IMD combines variables such as employment, income, crime, housing, health, education and access to services, comparing each area's score with the national distribution.

The spatial definition (Figure 1) resulted in 18 distinct communities in Wellington City and a further 21 communities in the greater Wellington Region. The majority of the social impact assessment narrative



focussed on the Wellington City communities, though consideration was given to how commuting patterns would help improve access to jobs and services for residents in the wider Wellington region, as well as the effects on urban development.

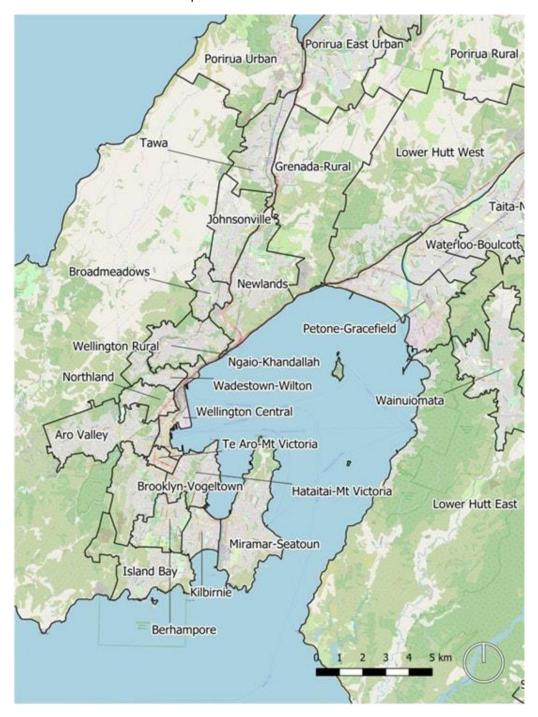


Figure 1: LGWM Wellington communities spatial definitions

Once the communities were defined we compared each community with the city and regional average to describe how the communities varied (see Figure 2 as an example). We also looked at where urban growth was forecast to occur in spatial terms throughout the city under status quo scenarios, to compare them with likely urban form outcomes of new transport infrastructure, which is well recognised as influencing the shape, distribution and function of urban areas. These two steps



provided us with information about how the city and region would be likely to look in the future without the preferred package of transport investment.

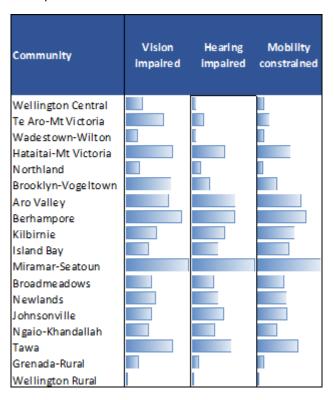


Figure 2: Wellington City populations by disability (Census 2018)

We incorporated modelling output from the WTSM to show the likely effects on travel time and vehicle kilometres travelled for different transport mode users and related those back to the social communities, to allow assessment of which communities would benefit the most from the proposed packages. For some social wellbeing elements, a visual demonstration of where communities were likely to gain better access, no change, or worse access was provided by mapping the options and possible routes of MRT options. Mapping included variables such as the number of workers living close to each route and the number of workers employed along each route.

Learnings for future SIAs

Motkee (2022) emphasises that often the impediments to undertaking meaningful social impact assessments come down to time- and cost-focussed project management approaches, heavy reliance on technical engineering and often economic business case assessments (including cost benefit assessments). In her study, Australian practitioners noted that timeframes were often compressed due to social impact assessments being commissioned well after other forms of assessment.

In the case of LGWM, the need for a social impact assessment was identified fairly late in the planning work and option selection, but still within timeframes sufficient to provide advice and guidance prior to community engagement beginning on the preferred scenario. Fortunately, the key LGWM project managers had a broad focus and were concerned about how the transport infrastructure would shape the future urban form of Wellington City. They understood the value to the project of achieving good social outcomes, as well as other objectives such as reducing carbon emissions, providing a resilient network in an earthquake prone location, and the core engineering matters. That willingness to embrace a broad perspective of the social effects of the project meant



that the insights provided in the social impact assessment were incorporated into the selection of a preferred package of investment despite the time constraints.

Spatial analysis is time consuming but integral to understanding the baseline situation and future outcomes without proposed changes to infrastructure provision, urban transformation, or district plan policies. The process is relatively simple for those with a geographic background and is shaped by the available data sources and their geographies. It does, however, require sufficient time to assemble the datasets, understand all the relationships, and interpret the implications of transport infrastructure changes.

In summary, this case showed, consistent with Motkee (2022), that place and space are integral to social relations, and the nature and the meanings we derive from social activity, so incorporating the spatial distribution of activity that occurs in places is a fundamental building block of place-specific social impact assessments. We must remember that places are shaped by the people who live and interact in them, and that the types of people and human facilities that make up places create unique and interesting places. New transport infrastructure provides opportunities to change the flows of people into, around, and through communities, and can create a wide range of positive and negative impacts that need to be understood based on the specific place in which they occur.

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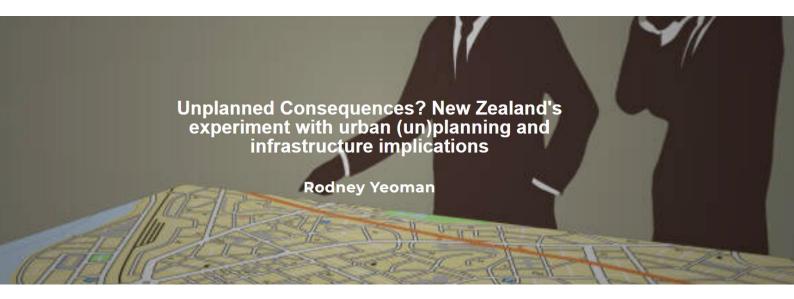
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Background

Aotearoa New Zealand cities and urban areas are home to most of the national population, with the four largest cities, Auckland, Christchurch, Wellington, and Hamilton having grown to account for well over half of the country's total population. This means that the social, economic and environmental wellbeing outcomes that are achieved within these areas are extremely important given the numbers of people involved. Assessing the impacts of urban planning decisions remains a high priority.

For the most part, the communities that live within the urban areas have become wealthier as the cities grow, having higher incomes and more resources on average than the rural communities in New Zealand¹. For much of the last 100 years, people have moved to urban areas to gain better opportunities, including improved access to housing, education, employment, physical infrastructure and other features those urban environments provide.

However, there are communities within the cities which have experienced inferior outcomes. Most notable is the continuing deterioration in levels of affordable housing which has been termed a 'housing crisis'². Over the last two decades many households within urban areas have not been able to afford the housing options that the market provides. Also, the public and community providers of social housing have not been able to meet the growing demands for more affordable homes.

Consecutive governments have implemented a raft of policy changes in an effort to solve the housing crisis. The volume of policy changes that have been implemented over the last decade shows how significant the 'housing crisis' issue is for the government and the wider community. It also shows that there are many facets to the issue and that it will not be solved by any single policy in isolation.

Unfortunately, even with the best intentions, affordability of housing has not improved and in most urban areas it has worsened substantially. There are growing numbers of socially deprived

¹ Statistics New Zealand (2018) Total household income (grouped) by household composition, for households in occupied private dwellings, 2013 and 2018 Censuses.

² White, I and Nandedkar, G (2020) Housing crisis? What crisis? How politicians talk about housing and why it matters.



households living in motels³, in crowded situations, and cars⁴, and there are record numbers on the waiting lists for housing⁵. This is despite quite strong new housing construction activity, especially in Auckland, and shifts toward smaller and lower cost housing typologies and sizes.

Most recently, the government implemented a set of policy changes that are intended to help solve those problems – the National Policy Statement on Urban Development 2020 (NPSUD) and the Enabling Housing Supply Act 2021 (HSAA)⁶. These policies are intended to see a substantial revision of the planning frameworks in the main urban areas of New Zealand, which will influence many aspects of the urban area and outcomes for the communities that live there. The government considers that the HSAA "will allow more affordable homes to be built more easily in areas with good access to jobs, transport, and community facilities like schools and hospitals."⁷

While these policy changes are likely to impact many aspects of the urban environment, this article explores the potential outcomes that could arise in terms of infrastructure – with a focus on public transport.

Public infrastructure

Central and local government invest considerable sums of public money on public infrastructure in the urban areas, which for the most part is intended to provide the community with services that they would not have received if the government did not intervene. The amount of money that is invested each year represents a considerable proportion of the community's public and private resources. This includes investments in transport networks, water supply and wastewater reticulation, recreational areas, stadium, schools, hospitals, universities, etc.

For most public infrastructure there are both private and public benefits associated with the provision of them, which are benefits that spill over to the entire community, to both users and non-users alike. Those public benefits that accrue to the wider community are additional to the direct benefits that the users of the infrastructure receive directly. This characteristic of public infrastructure is important, as the quantum and distribution of the public benefits that spill over to the community are related to the nature of the urban area and the spatial location of the infrastructure.

Also, it is important to understand that for large-scale public infrastructure, such as public transport and utilities, there tends to be an inherent outcome where the costs associated with serving additional people decline with scale. This outcome is referred to as a 'natural monopoly', where there are economies of scale present and the cost of meeting the needs of existing and future community needs declines as growth is accommodated within the urban area.

In summary, central government and local government invest billions of dollars in public infrastructure and this investment has been planned to meet the expected growth in demand of the community. The public benefits that accrue to the community will be dependent on the extent to which the infrastructure is used. As an example, the government is investing many billions of dollars into rail networks, with Auckland CBD Rail Loop set to cost more than \$4.4 billion⁸, and requiring upgrades to

³ Radio NZ (2021) More children living in motels as housing crisis unrelenting – 29th October 2021.

⁴ 1News (2022) Hundreds living in cars as winter chill bites 1st August 2022.

⁵ Ministry of Social Development (2022) <u>Housing Register</u> – March.

⁶ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021.

⁷ New Zealand Government (2021) Bill to boost housing supply passes. Press Release 14th December 2021.

⁸ City Rail Link (2022) Key Facts about CRL.



the rest of the network of \$6.7 billion⁹. The preferred option for the Auckland Light Rail line along Dominion Road is estimated to be \$14.6 billion and future Light Rail Links to Northshore and West Auckland also being planned¹⁰. On a per capita basis the investment in rail represents an investment of \$20,000 per Aucklander. This is obviously a large resource investment, and the extent to which the new rail infrastructure is utilised will be critical to the social wellbeing outcomes for the community in Auckland.

The investment within the rail infrastructure has been premised on the concept that growth in residents and business activity will occur in central parts of Auckland and in and around the stations along the rail network. If growth occurs as planned, then passenger volumes will be higher than they would otherwise be and the public benefits from the investment that spill over would be significant. These expected outcomes support the case behind investment of large amounts of public resources; however, if growth does not eventuate as planned then the rationale behind the investment may be undermined and the purpose of the HSAA may also be diminished.



Auckland City Rail Link. Image obtained from www.cityraillink.co.nz

Planning for growth

The growth of an urban area can result in positive and negative impacts that accrue unevenly to groups in the community. Local government implements planning frameworks that are intended to mitigate the negative costs and encourage benefits that are generated by growth. These planning frameworks also have an important role in the coordination and provision of public infrastructure.

Many councils have implemented policies that encourage growth into areas that would benefit the community and be served cost-effectively. Generally, councils have encouraged growth in areas around centres, proximate to transport corridors, and in progressively staged greenfield locations around the fringe of the urban area. This type of planning for growth has been termed 'Smart Growth' or 'Compact City' urban planning. This concept of planning tends to encourage growth into areas that have good transport links to avoid sprawl and encourages mixed-use development with a range of

⁹ NZ Herald (2021) Rail shock: Auckland's \$4.4b City Rail Link needs \$6.7b more to reach its potential, 12th

¹⁰ Minister of Finance and Minister of Transport (2022) <u>Auckland Light Rail - decision to progress.</u>



housing typologies.

Compact City or Smart Growth planning tends to encourage more intensive developments and less greenfield development. In part, some of the aspects of this planning framework have been blamed for exacerbating the housing crises in the urban areas. For example, some compact city policies have included future urban zones and urban boundaries on the edge of the urban area which have been designed to manage greenfield developments and coordinate the provision of required public infrastructure. This part of the compact city policy has been blamed for increasing land values and the cost of new housing in the greenfield areas.

Unplanning for growth

The NPSUD introduced intensification requirements (Policy 3) and a range of other policy changes in 2020¹¹ to encourage more development within urban areas. Much of the intensification requirements align with concepts of Compact City planning, with councils required to increase the allowance for higher density development in CBD, Metropolitan centres and within a walkable distance from these larger centres and rapid transport nodes. It also allowed councils to consider intensification in other areas which have high demand. For the most part, the intensification requirements should reinforce the Compact City planning approaches that have been adopted by councils and substantially increase capacity.

Less than eight months ago the HSAA brought forward the intensification requirements set out in the NPSUD and introduced a new requirement that high growth councils would need to change almost all residential zoned land to a new zone called Medium Density Residential Standard (MDRS). The MDRS will allow considerable amounts of additional development potential within the residential parts of the urban area. The councils that have released research on the impacts of the MDRS have shown that the development potential will be orders of magnitude greater than expected demand. Furthermore, the government's economic assessment that supported the new standards suggests that this MDRS could generate a 100% increase in development activity within the urban areas and that this will be located in residential zones which are outside the walkable catchments of public transport and main centres¹².

While the scale of the impacts predicted in the government assessment may be questioned, it clear that MDRS is likely to result in a different distribution of growth across the urban areas. Specifically, the government is expecting that growth will be dispersed across the wider urban area and less concentrated around centres and transit hubs.

This is a clear departure from past council planning frameworks. The widespread Compact City thinking is replaced by a *laissez faire* approach. The Act is effectively 'unplanning' for growth, allowing the market to decide where growth will occur. It is likely to result in ad hoc development dispersed across urban areas. All high growth councils are required to adopt the requirements of HSAA in August 2022, when the Act comes into operation. We consider the blanket application of MDRS across entire urban areas is likely to diminish the benefits that could be achieved from intensification.

The dissipated development pattern enabled by HSAA will be more difficult to plan for and costly to serve with infrastructure. Also, with major public infrastructure such as rail and other rapid transit the dispersal of growth enabled by HSAA will result in fewer people living within walking distance of

¹¹ Removal of car parking minimum requirements.

¹² PwC (2022) The Medium Density Residential Standards under the Resource Management Act: Estimates of development impacts at the Statistical Area 2 level.



centres and transit hubs, and correspondingly lower patronage of public transport services. The benefits associated with these large resource intensive projects are likely to be diminished.

The Auckland case

Auckland has recently gone through a process of substantial changes to its planning framework, the Auckland Unitary Plan (AUP), which was in part based on the Compact City approach and represents the largest increase in development potential enabled within a plan change in the nation's history¹³. Under the AUP, the Council enabled enough residential capacity to meet 60-70% of growth within the existing urban area and 30-40% in greenfield locations¹⁴. The goal of the plan was to shift from the continued expansion of the urban boundary to accommodating more growth within the urban area via intensification. The Compact City approach adopted by the Council provided considerable supply of development capacity within and around major retail and commercial centres, and along transport corridors¹⁵. It was demonstrated that the cost of providing public infrastructure to meet the needs of intensifications was much cheaper than for greenfield developments¹⁶.

Since the AUP was adopted the amount of development within the urban area has increased steadily and there are clear signs that the intensification policy is being achieved. Recent assessments show over 85% of new dwellings in Auckland were located within the existing urban area, which has exceeded the goals of Council, and that the amount of intensive multi-units (terraced and apartments) increased to more than half of new housing development¹⁷.

Proposed zoning changes to meet the requirements of the HSAA¹⁸show that most of the urban area in Auckland can increase in intensity, which will result in an unprecedented increase in development potential, more than ten times what is expected to be required in the coming three decades¹⁹.[19] If all of the opportunity for intensification was developed, then the City would house a community of over 10 million people. The broader spread of growth (see maps) suggests there will be fewer benefits from growth occurring in places where there is good public infrastructure and new investments in public transport – contrary to the intended outcomes.

¹³ Auckland Unitary Plan Independent Hearings Panel 2016.

¹⁴ Auckland Council (2013) Auckland Plan.

¹⁵ Auckland Council (2017) Housing and business development capacity assessment

¹⁶ Auckland Council (2017) How should we fund our greenfield infrastructure?

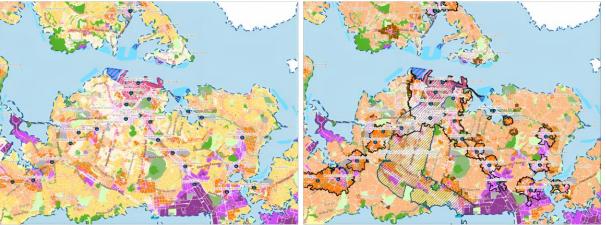
¹⁷ Auckland Council (2018) Auckland Economic Quarterly - What people want: A plan becoming action.

¹⁸ Auckland Council (2022) Preliminary Response to NPSUD and EHSA Act and consultation process – (April-May).

¹⁹ Fairgray, D (2022) Auckland Unitary Plan - Approval of Intensification Planning Instrument for Public Notification - Attachment D3 Intensification Planning Instrument Section 32 Economic.



Auckland Unitary Plan 2016 Proposed Intensification 2022



Map shows zoning under the AUP and the proposed intensification policy. The proposal shows that most of the urban area in Auckland is proposed to increase in intensity, which is indicated in the Council's planning maps with land changing from lower-intensity zones (yellows/whites) to higher-intensity zones (orange) for most residential areas and increased intensity around public transport and centres (dark orange).

Conclusion

Overall, the 'unplanning' approach to be implemented under HSAA is likely to result in unintended consequences, where the positive benefits from intensification are diminished because of the likely wide disbursement of development within urban areas. These would be contrary to the objectives of the government, particularly in relation to the core "well-functioning urban environment" concept.

The large investments in public infrastructure are less likely to be utilised to their full potential. This is important as more than 70% of New Zealand's growth will occur within urban areas and there will be greater financial costs for funding more infrastructure to service that growth, which would not have been needed under the previous planning provisions.

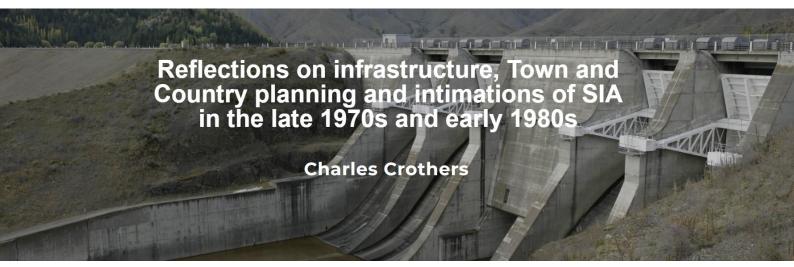
This policy will have implications for many urban areas in New Zealand. More time and assessment effort should have been devoted to understanding the likely impacts.



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Introduction

These observations are based on my time working as a Senior Investigating officer in the research section at Town and Country Planning (TCP) of the Ministry of Works and Development (MWD) in the late 1970s and early 1980s. They are personal glimpses into the platform of planning and research around public infrastructure projects. My notes point to matters that would benefit from detailed examination against records, but here I provide clues as to thinking of the time when strategic planning and social impact assessment (SIA) emerged as important to project development.

There are already several (short) histories of SIA in Aotearoa NZ: Buchan & Rivers (1990), Taylor and Mackay (2016), Pomeroy (2019) and I build on these. Most of the various projects and infrastructure programs I mention developed a stream of working reports and papers; some are in the references to this article but others can be found in National and University libraries.

Infrastructure, the environment and power stations

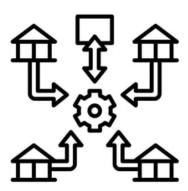
The MWD was heavily involved in an extensive period of development of transport and energy-generation infrastructure in the 1970s and 1980s, the last phases of a century of national infrastructure building, and it was a large, strong, organisation (Muir, 2021; Noonan, 1975). The Department of Public Works (often termed the Public Works Department) was founded in 1876, becoming the Ministry of Works in 1948 and the Ministry of Works and Development in 1974, then being disestablished and largely privatised in 1988. The Ministry moved to the Vogel Building about 1966 from the Old Government Building. At this time there was a 6000 strong workforce, including highly impressive cadres of engineers and other professionals.

It had powerful divisions (Power Construction, Highways, Water & Soil, and Town & Country Planning, etc.) and seven District offices: woe betide a Head Office visitor to a local area who strayed into a region without notifying the appropriate District official! The MWD design computer was the largest in the southern hemisphere. The responsibility of MWD for scheduling major projects required intrusion into more general economic planning. Some staff in the mid-1980s saw it as an alternative Treasury, and the MWD computer programming system was pressed into service to provide alternative economic planning scenarios.

Main highways were owned/maintained by MWD, and it supported catchment boards, and designed and constructed dams and other energy infrastructure on behalf of NZED. The MWD was responsible



for dispersing a large portion of the resources needed by Councils, especially (rural) Counties. The links between district offices and County engineers were very strong. This was a centralized planning approach that became anotherm to neoliberal thinking of the 1980s.



Pushback on environmental effects began with the setting aside of National Parks at the turn of the previous century but the fracas over the proposed raising of Lake Manapouri for hydro development in the 1970s substantially changed the orientation of New Zealanders to environmental matters - a widespread environmental movement eventuated. Environmental agencies emerged including the Environment Council, Commission for the Environment (CFE), and the Clean Air Council. The CFE had Environmental Protection & Enhancement Procedures (EPEP), whereby government proposers of major projects were required to prepare an Environmental Impact Assessment (EIA: incorporating a Social Impact Assessment -SIA) and the CFE instigated an extensive audit process. Given a common emphasis on physical environmental effects, early social assessments were often limited in scope. Some social impacts could also be considered in private developments as part of Town & Country Planning or other legislation. There were tensions between these frameworks. CFE tended to adopt a mix of top down and bottom-up approaches: experts provided advice but local opinion was tapped into. Local government and other official agencies were largely 'gone around' and perhaps seen as pro-development-at-all-costs.

By the late 1970s, as the NZ economy responded to the UK's entry into Europe and with the export difficulties which followed, the Muldoon government developed a 'Think Big' programme of state planning, facilitation and infrastructure investment. The National Development Act 1979 (NDA), built in EIA/SIA in a 'one stop shop' where all the various resource consent requirements for a particular project could be rolled together. Opponents considered the NDA served only to ram through controversial development proposals without adequate consideration. TCP did some informal monitoring of the projects developed in this framework.

MWD also facilitated investigations and construction of projects on behalf of various commissioning bodies, which increasingly became set up as Ministries and then state organisations: Transport, NZTA/Waka Kotahi; Energy and Resources (now incorporated in MBIE) and NZED (energy infrastructure). As part of their drive to develop local energy resources the New Zealand Energy Research and Development Committee, and Liquid Fuels Trust Board were set up (Maiden, 2008). They sponsored a considerable research programme, including a survey on possibilities for alternative fuel uses and other studies by sociologist Louis Arnoux and geographer Peter Philips (1979) as well as early strategic environmental assessments of options for new liquid-fuel projects.



Town and Country Planning (TCP) Division

My early employment at TCP coincided with early implementation of the 1977 Town and Country Planning Act. The TCP Division represented Crown interests to local authorities responsible for developing and implementing plans – both providing information for plans and appeals to the TCP Appeal Board. Consistent advice was not always easy then or now: in one set of submissions DSIR scientists were particularly concerned with the likely loss of high quality soils, whereas other departments were more concerned with housing and social needs that required new areas of land. However, the division was endeavoring to unhitch itself from this role and let other Government departments look after planning their own property and building portfolios (e.g. Departments of Education, Health, etc.).

From the late 1950s TCP pursued an active research programme of descriptive studies in addition to their advice on planning issues. The mainstay was a series on regional resources, which were large and well-illustrated compilations of the natural environment, resources and population characteristics of various regions. Other work was on populations and their projections (largely compiled by population geographer Jeremy Lowe). An impressive staff across landscape architects, regional planners and research, plus district offices, driven by the concept of 'master planning', produced reports that covered Waikato valley (1959) Bay of Plenty (1962), Marlborough (1962), Northland (1964), Nelson (1965); Otago (1967) Hawkes Bay (1971), Wanganui (1971) and Waikato (1973) among others. The regional and locality populations (and population projections central to planning) were published separately.

By the 1970s this work petered out and was supplemented by more analytical regional planning studies (Manawatu, Hawkes Bay, BOP, Marlborough, Central North Island). These strategic studies drew on a range of central, local and MWD resources to analyse and model regional issues: e.g. the Central North Island Study was to work out ways in which the large forestry resources of the central plateau – many areas planted in the 1930s – might be effectively transported to processing, coastal ports and other economic opportunities. A common issue was how to accomplish new suburbs to accommodate increasing population numbers without destroying horticultural capabilities. A social aspect was built into some of these plans; for example, in the Hawkes Bay Planning Study a postal survey of resident's views on urban expansion was undertaken but with a very low response rate.

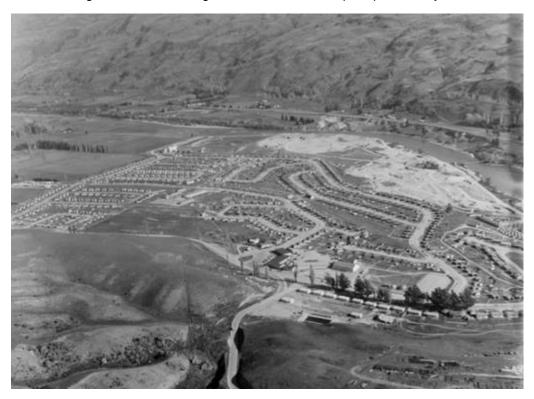
Alongside this programme was a general effort to support work of regional/united councils on topics such as rural residential and household mobility, led by Lindsay Gow, who later was deputy CEO of MFE, and Patsy Fischer, supported by social policy consultants including Peter Melser and Alan Levett (see Crothers & Dwyer, 2010). TCP material was widely circulated around councils and other units. It was backed up by an extensive, annual bibliographic exercise (the *Planning Research Index*).

Social research capacity in NZ

During this period there was a build-up of social research staff in government departments, including a cohort of sociologists. An effervescence of social surveys amongst NZ Ministries/departments followed, and included the Department of Statistics (now Statistics NZ), which carried out supplementary survey modules piggybacked on the new Household Survey (on topics such as housing conditions, travel to work, health services, etc.). Wider availability of small-area census data facilitated community profiling and an early generation of social indicators emerged. In addition, large surveys were carried out by the National Housing Commission, Department of Internal Affairs, Ministry of Recreation & Sport, Department of Social Welfare and others. Consideration of public views and evidence of social impact of policies had become part of the technology of governance.



These surveys were largely confined to reports on objective circumstances or answers to batteries of Likert-type satisfaction scales, and did not include much qualitative information. It is useful to draw attention here to an interesting early study – Hydrotown (Campbell, 1957) – brought into the mainstream literature by a secondary analysis (Burch, 1969) of the construction camp of the Roxburgh Hydro Project, perhaps the best NZ ethnography on this topic. The reanalysis is organized around the requirements to build community, whereas successive management of project construction accommodation failed to engender social solidarity in work 'camps', leading to poor labour-management relations, high worker turnover and poor productivity.



View of village attached to Roxburgh Hydroelectric project, Otago, New Zealand. Whites Aviation Ltd: Photographs. Ref: WA-35517-F. Alexander Turnbull Library, Wellington, New Zealand. /records/23145392

Working in TCP

As a summer student project, I was employed to measure up the land use coverage of a sample of c40 NZ towns of various sizes, replicating in some part a US study (Crothers, 1976a). Distinct patterns of densification by size of settlement were found. I was appointed an Investigating Officer (later a Senior IO) in 1977 and continued until 1982 when I moved to the Department of Sociology at the University of Auckland.

There were 3 classes of research-orientated civil servants, all part of the wide Clerical 007 class: advisory officers (usually marooned composing answers to letters to Ministers/Ministries or similar low level tasks) investigating officers who might carry out research and/or develop policy, and a few research officers who held more detached positions.

My main task was to produce working papers and a report on internal migration based on an extensive Department of Statistics survey (for which we had an SPSS file of the unit record data, albeit strictly bound by State servant secrecy). Side-projects included methods for public participation, with NZ examples, and later – in association with Paddy Gresham from CFE –developing a



conference on Public Participation in NZ with supplementary material and the publication of the conference proceedings (Crothers and Gresham, 1979). This conference canvassed various public participation approaches in a fairly orthodox manner but drew much-needed attention to this important aspect of local democracy.

Research into mental stress by Stephen Webb & John Collette (1977) examined pharmacy prescription rates, finding that rural (small town) residents were apparently more stressed than urban, and challenging the notion of 'rural tranquility'. However, questioning their distinction between rural and urban residents, and knowing that rural residents draw on pharmacies in the towns, my analysis suggested the reverse pattern of anti-depressant use was more likely, and this was proved in subsequent survey research (Crothers, 1978b). This interest in rural-urban differences led to a flurry of work on measures of population density (e.g. Crothers, 1976b; 1976c; 1992) and consideration of its social consequences. I also participated in some of the regional planning studies in Hawkes Bay and to some extent Marlborough (Crothers, 1978a), for which I organized a survey of views on the expansion of the region, examined data on land parcels to assess their capacity for subdivision and critiqued some of the models being used in the cost-benefit analyses of alternative expansion options, which included attempts to measure agricultural loss. I was also able to offer assistance with processing and analyzing data for Danna Glendining's survey later published as 'Why are they leaving Eketahuna?' (Crothers, 1978b).

Early intimations of SIA

An early task on joining TCP was to review the Huntly Power Station Social and Economic Impact Monitoring Project, an 'urban industrial' aspect of environmental policy (Whittle, 2013). Planning for the Power Station began in 1971 and the monitoring project, mainly funded by MWD, was set up in the mid 1970s. The project is broadly recognized as the first Social Impact Assessment/ Monitoring project in NZ and looked to provide generic advice for subsequent SIA work. The University of Waikato funded a unit under the leadership of Tom Fookes (1981), who wrote his PhD out of the project, and Bob Dury, who later worked for the Waihi gold mine development company. Useful background investigations were carried out on Māori aspects by Dr. Evelyn Stokes. The approach of the unit was to assemble sets of accessible data, together with regular meetings of a forum of residents and representatives from a range of agencies. Unfortunately, the project's statistical analysis was limited in its ability to examine interrelationships and timelines and the project came to rely heavily on public participation tapping into residents' experiences. This was an expensive exercise and at least one lesson was the need to include both qualitative and quantitative data in social monitoring frameworks.

A later exercise involved exploration of various Waikato coalfields, with the firm Murray-North engaged to lead an investigation into the consequences of different developments (Lewthwaite, 1984). Ironically, having criticized other project developments for bringing in social concerns too late to have any effect on the location decision, the project team now complained that they had been brought in too early and there was not enough information to allow adequate consideration of options. This is an ongoing dilemma for considering infrastructure options.

A study of the attitudes of Lower Waitaki residents to possible hydro developments on the lower river was conducted by contract anthropologist Ruth Houghton (1980), who was linked to the University of Otago. She used in-depth interviews based on a snowball sample, starting with County officials, while living locally in a caravan. [1] This technique raised methodological issues for me, with respect to including a full range of groups and viewpoints in social impact analysis, including farm workers and those for and against a development project.



Asked to attend a meeting of design engineers of Power Division to discuss develop strategy, I made some remarks around the importance of relating engineering works to their community and societal contexts. Top management resolutely supported this view, while younger engineers were less convinced. On a tour of central Otago developments with some power engineers there were conversations with project staff. One consequence was a memo addressed to me from Max Smith, the Project Engineer for the Waitaki (with a fearsome reputation for pushing power developments and publically reported as threatening to send his bulldozers down the Waitaki River building dams along the way.) I immediately took the memo up to the top floor! (It was well above my pay grade).

Two further involvements with SIA brushed with my leaving MWD. The Patea Freezing Works was a large meat-processing plant (1883-1982) employing nearly 1000 workers during peak season. However, in the early 1980s and a downturn in the New Zealand meat-processing industry the company suffered badly and the Patea works were among the first to close down, ending operations in September 1982. Patea reeled and a TCP study to investigate the likely social impacts and explore development alternatives was set up (Melser, et al., 1982). Tensions involved those seeing the needed strategy as ameliorative – sending in social workers to sooth the town on its death bed versus others who wanted economic development possibilities explored. The famous Poi E song from the Patea Maori Group emerged from the town and a later review of regional development implications was written by Patsy Fisher (1982).



Patea Freezing Works - abandoned

Extensive petro-chemical developments in Taranaki became a government concern and MSD and MWD got together to help fund the Taranaki Energy Monitor, coordinated by Yvonne Landon (1982) with some advice from both Ministries. Carrying out objective monitoring is always fraught, and Yvonne supported a mothers' group where many were in difficult circumstances, which led some local leaders to consider she was abandoning her neutrality.

After moving to Auckland University, I was involved with the Marsden Point Expansion social monitoring project, set up in 1982 under the auspices of the Northland Regional (Planning) Council. This was a community-based, action-research effort supported by a wide range of community organisations with several funding sources, including the Labour Department's Project Employment Programme. The monitoring was to measure the concerns of Whangarei residents about the expansion of the refinery at Marsden Point and social issues prior to and during construction (McPherson, 1982; McPherson and Blair, 1984). The Social Impact Survey produced a series of



eight monitoring reports from the group based in Whangarei - led by Jill McPherson.

TCP provided a Wellington-based informal support structure for the development of SIA – working with units of other Government Departments with a community development interest, e.g. DIA where Bill Buxton was a 'roving ambassador'. Mary-Jane Rivers and others brought a community development approach and social policy interests into TCP. During 1983 and 1984 a series of workshops on the social impacts of the major energy projects in Taranaki and Whangarei led to a set of working principles drawing on the emerging SIA community and a very useful guideline was developed (Conland, 1985). A report on Social Impact Assessment was also prepared for the Royal Commission on Social Policy. The Unit later transferred to SSC and monitored impacts of Rogernomics, which was generating social impacts from large redundancies amongst forestry, rail and other government-owned, services and workforces, often in smaller provincial centres. Several regional monitoring exercises were commissioned.

Envoie

There is continuing tension between social research and community development approaches to SIA: with each driving a different set of methodologies. Community approaches use devices such as community meetings, locating responsibility for identifying impacts with those impacted, opposed to more formal social research – both approaches are ideally combined. There is also tension between pre-construction SIA and the prediction of impacts for projects and the rights of land owners and other stakeholders to present their case/defend their turf in front of appropriate planning authorities and the Environment Court.

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Social impact assessment (SIA) provides information to decision makers, affected people and communities, when planning for infrastructure and economic development projects (Burdge and Colleagues, 2004). The SIA process (or 'cycle') is analytical and predictive in nature; it helps to identify potential social impacts before an action is taken. Social impacts can be described as changes to peoples' lives, planned or unplanned, positive or negative, that arise either from human activity (an infrastructure development for example) or from naturally occurring events. In instances when negative social impacts are predicted or (after the fact) are evident, social impact assessment practitioners suggest mitigations that will balance economic, social, and environmental outcomes, and promote equitable and sustainable development. SIA was applied in Aotearoa New Zealand from the late 1970s to major projects, such as to the large energy infrastructure projects that utilise and process energy resources, including, for example, the Huntly power station, oil and gas projects in Taranaki and Northland, and the Clyde dam (Taylor and Mackay, 2016), as also discussed further in the article by Charles Crothers in this issue of *Impact Connector*.

While undertaking research for the Building Better Homes, Towns and Cities National Science Challenge ("BBHTC") Ko ngā wā kaingā hei whakamahorahora, the communities and built environment stakeholders we were working with expressed a need for guidelines providing a practical approach to SIA, written for a wide audience with little or no prior experience of SIA, to learn the basics about how to conduct an SIA, contribute to an SIA, use the results of an SIA and judge if an SIA is fit for purpose. This need was especially apparent in our research with regional communities experiencing the social impacts of economic regeneration projects, including tourism infrastructure development, housing, irrigation, and heritage conservation. We took up the challenge of compiling a set of practical guidelines that will be useful for anyone proposing changes that affect people and communities, as well as those experiencing social impacts. In preparing the guidelines we had strong collaboration with the Waitaki District Council, Stronger Waitaki, the Waitaki Housing Task Force and stakeholders in social services and economic regeneration. The guidelines also benefitted from work commissioned by several other organisations including the Ministry for the Environment and AgResearch as they developed strategies for better land and water management, as well as our work on several infrastructure projects including hydro-electricity, wind farms, irrigation, tourism infrastructure, highways, port developments and airport expansions.

In developing the SIA guidelines, we also drew on a wealth of material produced by centres of excellence in the practice of SIA internationally and in Aotearoa New Zealand, and several handbooks (e.g., Vanclay and Esteves, 2011). A key consideration was that there should be consistency in terminology and thinking about the components of an SIA. Two international starting points are commonly used for guidance on SIA. The first is the International Association for Impact Assessment (IAIA) guidelines for assessing and managing the social impacts of projects (Vanclay, et al.,



2015). The IAIA is the principal international body of professional people doing different types of impact assessment, including SIA. The second starting point is the <u>World Bank Environmental and Social Framework</u> in which the Bank takes an integrated approach to social and environmental safeguards for infrastructure projects.

Recently, the New South Wales (NSW) government (2021) prepared <u>social impact assessment guidelines for state significant projects</u> and these are useful for developers of infrastructure projects in Aotearoa New Zealand. Every state-significant project in NSW is subject to a proportionate SIA (Parsons, et al., 2019). These guidelines aim to assist project proposers, affected communities and state government work through the preparation of an SIA. Another useful source of ideas from Australia is the <u>Centre for Social Responsibility in Mining</u> at University of Queensland, which focuses on advice for extractive industries, especially relating to indigenous peoples, corporate social responsibility, and SIA more generally.

As the leading organisation of people practising impact assessment in Aotearoa New Zealand, including SIA, NZAIA held a <u>conference on SIA</u> in Christchurch in 2020. Development of the SIA guidelines for Aotearoa New Zealand benefitted considerably from discussions with members of the Association. Another important reference point for people planning infrastructure projects is Waka Kotahi, the New Zealand Transport Agency, which developed a <u>guide for assessing social impacts of state highway projects</u> and applying a sustainability framework to projects.



Our new guidelines cover the basic steps in an SIA:

- 1. Screening of the SIA (usually as part of project feasibility analysis), which establishes the requirements and terms of reference for an SIA.
- 2. Scoping an SIA so it is focused on the likely impacts and main issues of concern to people and communities and sufficient time and resources are allocated to the SIA.
- 3. Gathering information about the social baseline the starting point for understanding what is changing and how social outcomes are affected.

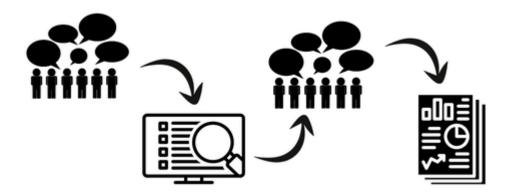


- 4. Assessment of alternative options or alternatives for planned actions such as sites, routes or construction methods.
- 5. Monitoring, mitigation, and management of impacts for the optimum social outcomes.
- 6. Evaluation and auditing of those outcomes.

Throughout the guidelines are examples of how SIA is applied, drawing on our practical experiences doing SIAs.

We emphasise in the guidelines that an SIA should include social data that you can observe and describe, as well as information you can count. Both qualitative and quantitative data are important because social change is often complex and will include positive and negative impacts which are often uncertain and distributed unevenly. The process of doing an SIA must therefore include thinking about the best ways to manage social change so that the most sustainable, positive outcomes are achieved for people and communities.

Activities that constitute an SIA build on each other over the design, planning and construction of a project and then its operation. Some activities necessarily precede others. SIAs therefore follow the common steps or stages of project development in a project cycle (Taylor et al., 2004; Arce-Gomez et al., 2015). Our guidelines show how an SIA can build up a picture of the potential impacts of an infrastructure project as it works through these steps. Social data are gathered, analysed iteratively and used to develop management actions geared toward delivering the best possible outcomes for people and communities in the short, medium, and long term.



Practical early steps in the SIA of a project are, first of all, to screen for social issues and for red flags in particular, and then scope the SIA in more detail. With the broad parameters of the SIA in place, such as a project description, an agreed assessment area, and an initial description of social impacts, the budget for the full SIA can be agreed. A staged budget assists in larger project assessments because of the importance of first defining what must be done through scoping an SIA and allowing for the usual timeline changes as a project evolves. The next steps include development of the social baseline, assessment of alternatives, and the preparation of plans to mitigate and manage predicted social impacts.

Our BBHTC research on the use of SIA in different project settings found, however, that it is often initiated too late, even as late as the point of obtaining the necessary financial, resource consent, and technical approvals. The worst approach is for SIA to start when affected communities begin to raise questions about the project when they first get wind of it. We argue that this reactive approach needs to change, with SIA embedded in project planning and design from the start, when developing a



project concept and considering feasibility of options. Early consideration of social impacts when options are on the table will ensure that ways to avoid or reduce negative impacts on people and communities, and to enhance positive ones, are considered during project design and planning, which is the most practical time to adapt a proposal.

We note in the guidelines that Social Impact Management Plans (SIMPs) play a key part in planning for and constructing a project (Holm et al., 2013). A SIMP is needed when there are significant potential social impacts. They should include all the strategies and actions required to monitor, mitigate or manage negative social impacts and enhance positive ones, looking to maximise outcomes from project construction for social wellbeing. Management plans are most effective when prepared during project planning and design, normally as part of the SIA used to gain project approvals. SIMPs then provide an empirical basis for judging potential residual impacts (those remaining after management measures are implemented).

There are numerous typical topics in a SIMP. In this country they could include, for example:

- Land acquisition and planned resettlement including any relocation of homes or businesses, urupa or sacred sites, and managing effects on rural production activities.
- Management of a construction workforce such as procurement plans, training, accommodation for any incoming workers, and management of associated influxes in population and demand for social services.
- Human resource management, gender issues, health and safety and familiarisation with local practices and sensitivities.
- Management of effects on local movements, access and traffic and any social severance.
- Managing effects on recreation and food gathering, including intrinsic and cultural values.

In pre-construction of many infrastructure projects, when the emphasis in environmental and social management pivots from planning, design and approvals to the management of construction, new project components are often introduced. Some of these changes may indeed result from the knowledge gained by doing impact assessments and plans to mitigate negative impacts. SIAs (including the social baseline) need to be updated to reflect any project changes, or indeed to account for the time that often elapses since the SIA was originally completed. This additional SIA work might require additional resources and further input from affected people and other parties.



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Our SIA guidelines also highlight the importance of engaging directly with interested and affected parties, including local people, groups and communities, from the start. We stress that SIA needs to work closely with affected communities to fully understand the dynamics of the local social environment, account for and consider any local anxieties regarding the proposal, sense check the social impact analysis with the community, understand what they expect or would like to see from the project, and consider the plausibility of proposed management actions from a community perspective. Here collaborative and community-led approaches can empower local leaders, community organisations and public agencies that provide and support social development (Taylor et al., 2021). We also emphasise that quality SIA research and analysis should use more than one source of data (including local knowledge and hard-to-reach groups) and must report results in a balanced way. Ethical practice does not cut corners in facilitating participation of all interested and affected people and communities throughout a project cycle (Vanclay, et al., 2013).

In Aotearoa New Zealand, indigenous Māori world views, rights and interests are integral to Treaty-based decision making and community development. The SIA guidelines we have produced acknowledge Māori protocols and processes and provide observations relating to indigenous peoples and SIAs. Māori often prepare cultural impact assessments that cover social and cultural impacts in their ecological and historical contexts. The SIA guidelines are not for cultural impact assessment, but they do suggest these knowledge and assessment systems can complement each other and help to channel mātauranga Māori into infrastructure planning, construction, and operation.

As a final comment we note that Sara Bice, a recent president of the IAIA, has urged all practitioners of impact assessment, including SIA, to place greater emphasis on approaches that utilise collaboration and empower community-based assessments (Bice, 2020). In a community-led approach to SIA, all participants work together on a proposal and produce knowledge about the impacts in a collaborative and strategic way. Our research has identified this approach as the coproduction of knowledge (Taylor, et al., 2021) and this is a fundamental premise of the SIA guidelines. In this context, we align the SIA steps and community processes, engagement methods and analysis of impacts from the early stages of planning through to taking actions and managing social change. Different people can join this sort of community-led approach to planning and managing change: community leaders, organisations and groups, iwi, councils, agency personnel and professional social scientists. A community-based approach is applicable to many aspects of infrastructure planning at different scales, from the planning of community facilities and housing projects to major developments, with the intent of ensuring affected communities share fully in project benefits.



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Impact Assessment

The legendary Charlie Wolf describes the field of impact assessment as answering the questions "Who Gets What, When, How, Where and Why" by assessing impacts before they happen (Hayes, 2017). The fundamental components of impact assessment have adapted to different regulatory and cultural contexts, but otherwise have not changed significantly since the 1970s. These components include scoping, considering alternatives, predicting impacts and evaluation their significance recommending mitigation measures, consultation, preparing reports and a decision by the designated regulatory authority (Banhalmi-Zakar et al, 2018:507-510, EIANZ, 2015). In this paper I focus on scoping as the first main step in project impact assessment, using two South African case studies.

Scoping

EIANZ (2015) defines scoping as: "...the process of identifying and prioritising the key issues associated with a project to be assessed in an impact assessment (IA) and the extent of work that needs to be undertaken to address those issues." Canter and Ross (2014, p21) suggest that scoping is essential for effective impact assessment but rarely done well. Weaver et al (1999) suggest that scoping should "serve as a priority-setting activity aimed at improving efficiency and providing a focussed product for informed decision-making". Similarly, DEAT (2002) notes that scoping is a critical early phase of an impact assessment.

In scoping an impact assessment we:

- Confirm the scope and extent of the proposal/project.
- Identify relevant legislation, regulatory standards, policies, plans and guidelines that determine the outcomes that will be considered acceptable by regulators (EIANZ, 2015; IAIA, 2018).
- Identify interested and affected parties to involve in the impact assessment.
- Agree with interested and affected parties how they will be involved in the impact assessment (IAIA, 2018).
- Identify the key issues and concerns informing the impact assessment (IAIA, 2018; Canter and Ross, 2014).
- Identify specialist studies that will be required to assess the impacts (effects) associated with the key issues.
- Agree terms of references for specialist studies, including methodologies, and who will undertake them.



- Agree methodologies for assessing the significance of impacts (effects) (IAIA, 2018), and
- Agree on approaches to mitigation of adverse impacts and environmental management (e.g. a mitigation hierarchy).

If key stakeholders, including right-holders and regulatory authorities do not have input to the impact assessment process during the scoping phase, then the first time some parties have sight of and input to the scope, methodologies and findings of specialist studies and the detailed impact assessment is when these have already been completed. It is very difficult to have meaningful input to the process and methodologies at this late stage. It is also important to record how input in the scoping phase influenced the design of the impact assessment.



Impact assessment and scoping in South Africa

The National Environmental Management Act 107 of 1998 (NEMA) was promulgated in South Africa after the adoption of the Constitution in 1997 and guides individuals, institutions and government in environmental decision-making (Van der Linde & Feris, 2010). Chapter 5 of NEMA enables the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities. The primary mechanism that NEMA uses to achieve this goal is the requirement for authorisation of activities that may have a significant impact on the environment.

Large infrastructure projects are subject to an environmental impact assessment process that informs decisions on authorisations. This process includes a distinct scoping phase that culminates in a scoping report that must be made available to the public for comment before being submitted to the authorising authority. The scoping report is reviewed and approved by the authority before the impact assessment can continue to specialist studies and the assessment and mitigation phase. The guideline for scoping published by South Africa's national environmental authority (DEAT, 2002) presents definitions, outcomes, benefits and methods for scoping.

Case studies from South Africa

The two case studies below demonstrate how scoping contributed to the impact assessment processes that informed decision-making on infrastructure projects under the South African legislation.



Case Study 1: New substation and high voltage powerlines

This <u>electricity infrastructure project</u> consists of a new 400/132 kV substation in rural KwaZulu-Natal, which will be integrated into the 400 kV network by 250 km of 400 kV and 165 km of 132 kV powerlines. The substation requires a flat 24 ha space.

The two endpoints for the powerline were known. The applicant and the environmental practitioner, in consultation with specialists and interested and affected parties, identified four technically possible 2 km wide corridors within which a 55 m right of use servitude to construct a 400 kV line could be acquired for each of the 400 kV powerlines. Sections of the corridors that were found to have obvious significant impacts were discarded, leaving two corridors which the environmental practitioner recommended be further assessed in the specialist studies and impact assessment phase of the project. The specialists and environmental practitioner also identified deviations from the 400 kV powerline routes to further avoid potential impacts identified by interested and affected parties and specialists during the scoping phase.

Technical alternatives considered during scoping included the burying of 132 kV and 400 kV powerlines to reduce visual impacts on the eco-tourism sector.

The following key issues were identified in the scoping phase:

- Impacts on people and communities in the areas protected by conservation legislation resulting from the loss of plants and animals of conservation value and a loss in the income from and value of tourism facilities, primarily due to visual impacts;
- impacts on areas of high conservation value and their rich and diverse fauna and flora (specifically large birds);
- impacts on land use, particularly for sugar cane farmers and forestry;
- · impacts on heritage resources;
- · social impacts;
- impacts on the biophysical environment resulting from access roads;
- · construction impacts; and
- cumulative impacts.







One of the key issues that landowners affected by the proposed project raised was the impact on the eco-tourism activities and knock-on effects including a potential decline in property values, loss of jobs, and reduced budgets for conservation of animals. The socio-economic specialist study proposed in the scoping phase allowed for this set of impacts to be assessed on a qualitative level. Interaction with the landowners during the scoping phase highlighted that the project could be opposed should this aspect not be adequately addressed. Subsequently a more detailed economic assessment was commissioned. If this gap had not been identified and action taken during the scoping phase, it could have resulted in delays later while this aspect was assessed, as described in DEAT (2002).

Public participation is a key aspect of scoping as it provides for stakeholders to table issues of concern, make suggestions for enhanced benefits, and comment on the findings of the EIA to that point. A database was established during scoping to record the details of stakeholders who wished to register for the project. Key stakeholders were identified and notified of the project and their opportunities to participate. A background information document was compiled and distributed to all registered interested and affected parties and at meetings. Newspaper advertisements were placed, in the two languages most spoken in the region. On-site notices were erected at 23 locations in the study area. Meetings were held with key stakeholder and authorities at four venues in the study area in order to present the proposed project to them and give them an opportunity to raise any concerns they might have. Similar meetings, in isiZulu, took place with each of the 31 Traditional Councils in the study area. Focus group meetings with organisations concerned about impacts on birds, farmers organisations and the landowners of the substation site alternatives also took place. The issues and concerns raised, and local information offered, were used to inform the draft version of the scoping report.

The draft version was then made available for public comment. All comments made at meetings or submitted by other means were captured in a comments and response report and were incorporated into a final scoping report that was submitted to the authorising authority for review. The authorising authority accepted the final scoping report and the rest of the EIA of the project was undertaken according to the plan of study in the scoping report.

Case Study 2: Regional water supply project

The main aim of the NZ\$1.25 billion Mzimvubu Water Project is the socio-economic upliftment of the largely undeveloped and impoverished communities within the Eastern Cape. The application consisted of two new large dams, a potable water supply scheme, irrigated agriculture, hydroelectric power generation and associated infrastructure. The EIA was undertaken between February 2013 and December 2015 (DWS, 2015a). The project included new access roads and the re-alignment of roads and bridges inundated by the reservoirs, borrow areas and quarries, as well as the relocation of households and graves.







During the scoping phase of the assessment, high level alternatives including constructing smaller dams, developing groundwater resources, provision of water by rain-fed tanks, alternative sites for the dams, alternative dam types, and a number of smaller water sources rather than dams were considered. The scoping process confirmed that other alternatives would not meet the project objectives and supported the preferred sites for the two large dams. During the impact assessment phase, the assessment of alternatives focussed on powerline routes, alternative dam sizes at the preferred sites and hydropower generation options.

Key issues that informed the specialist studies and the next phase of the impact assessment included impacts on plants, animals, rivers, wetlands, the quantity and quality of instream flow, societal welfare, the landscape and sense of place, and the inundation of graves, archaeological sites, structures and livelihood-supporting resources, were identified as key issues.

The public participation process during the scoping phase included consultation with national and regional government. All authorities with roles that intersected with any aspect of the project were invited to an authorities' forum that met on a regular basis.

Notification letters, background information documents and newsletters (in English and isiXhosa) were distributed to all registered interested and affected parties. Site notices and newspaper advertisements were placed in English and isiXhosa. Comment periods were provided for draft and final scoping reports.



Public meeting at Laleni

Public and focus group meetings took place to introduce the project and allow parties to raise issues and concerns and provide local information. This information informed the draft scoping report that was presented at a second round of meetings aimed at providing an opportunity for parties to confirm that their issues had been accurately captured and incorporated into the terms of reference for the specialist studies.

The stakeholder database and an issues and responses report were updated on an ongoing basis and recorded every comment made in any meeting or received by any medium (e.g. e-mail) and how it was addressed in the impact assessment (DWS, 2015b).

Benefits of robust scoping in the case studies

A robust scoping process with extensive public consultation was a valuable part of both these case studies from South Africa. The scoping processes reduced costs, delays and objections received, built relationships with stakeholders and sped up decision-making, all identified as benefits in IEMA (2011). It also facilitated co-operation between government departments with mandates associated



with the projects.

The scoping phase enabled the environmental practitioner and project applicant to consider a wide range of alternatives at a high level and to narrow these down to acceptable feasible alternatives for detailed study in the impact assessment phase. The specialist studies and consultation process in the subsequent assessment phase of the process excluded alternatives that had been scoped out in the scoping phase. Input from consultation also allowed the scope of the specialist studies to be amended and expanded to cover all the relevant issues and concerns that had been raised.

Scoping prevented the unnecessary collection of information, for example ecological surveys of sites that were scoped out (Weaver et al, 1999) and increased the effectiveness and efficiency of the impact assessments and associated consultation (IAIA, 2018). Scoping focused assessment on those aspects that would influence decisions about effects and conditions for the projects (Canter and Ross, 2014).

Comparison of Aotearoa NZ experience

My experience in Aotearoa NZ is limited to being on the receiving end of impact assessments as a regulator over a short period of time.

I observe that notification processes provide a transparent way for submissions to be received and considered. Pre-lodgement consultation with the relevant authority, and even the review of draft applications that include impact assessments is encouraged. Processes have not, however, typically included a distinct scoping phase where all interested and affected parties and authorities have an opportunity to comment on the formulation of key issues, terms of references for specialist studies, impact assessment methodology, or proposed consultation process. The impact assessment reports that I have seen have had volumes of detailed information (IAIA, 2018), and scoping has often been limited to a very brief description of what will be assessed, with no apparent input from external parties.

Impact assessment to inform decision-making in Aotearoa NZ is currently grappling with how to weave mātauranga Māori into the traditionally western science approach to the assessment of environmental effects. Experience from EIAs for large infrastructure projects in South Africa leads me to consider that starting an impact assessment with a good scoping process that involves mana whenua, and other iwi and Māori groups could help to ensure better focus of the studies undertaken by specialists to inform good decision-making and to decide who does these studies.

Overall, the South African experience and the emphasis there on fully scoping an impact assessment suggests that this is an underrated part of impact assessment in Aotearoa NZ.

Disclaimer: The views expressed in this article do not necessarily reflect those of the author's employer or any organisations that she is affiliated with.



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Impact assessment for Pacific Island Infrastructure Nick Taylor and Greg Barbara

The Pacific Island countries face complex issues around the development of socially robust, sustainable and resilient infrastructure. A key challenge of planning for infrastructure and urban development in the Pacific Islands is incorporating practical measures for dealing with the increasing incidence and severity of coastal hazards (including periodic inundation and coastal erosion) due to climate change. Another key feature of infrastructure planning is to design, prepare and implement projects that are appropriate to the environment and scale of island geographies and ecosystems, and to their social-cultural environments.

There is a long history of unsustainable practices of planning and development for island infrastructure and evident conflicts between development tracks and the different economic, environmental, social, cultural outcomes that they achieve. Some emphasise economic growth, others emphasise pathways out of poverty, or targeted programmes of development and related assistance. Many Pacific low-lying atolls and exposed islands are particularly vulnerable to climate change, but the impacts of climate change are not restricted to sea level rise. There are wider impacts such as increase severity of extreme weather events, droughts and coral bleaching events that also affect the raised atolls and high islands that are usually surrounded by protective reef systems. These issues are exacerbated by waste management issues and land clearance that contribute to further waterway pollution, erosion and degradation of ecosystem services.

All island types have issues of concern around infrastructure project development: biodiversity loss, resilience to climate change, high levels of poverty and social-economic disadvantage, food insecurity, gender inequality and uncertain futures for youth. While these impacts and issues affect all levels of the community it is most often the more socio-economically vulnerable people who suffer the greatest effects. These issues raise questions about the use of participatory planning and the transparency of decision making and environmental governance. Greater resilience is possible through enhanced land and water management and planning systems, and from infrastructure that contributes to improvements in social-economic wellbeing, resilience and sustainability goals.

Pacific countries have infrastructure needs (building and maintenance) in multiple sectors including low-carbon energy production, electrification and potable water supplies in remote areas and villages, road improvements, airports extensions and improvements, port facilities and harbours, telecommunications, primary processing, produce markets, waste management, sanitation, health and education. To assist with these needs across the region the Pacific Regional Infrastructure
Facility (PRIF) is a multi-partner coordination and technical assistance facility for improved infrastructure. The PRIF development partners are the Asian Development Bank, Australian Department of Foreign Affairs and Trade, European Union, European Investment Bank, Japan International Cooperation Agency, New Zealand Ministry for Foreign Affairs and Trade, United States



Department of State and the World Bank Group. PRIF works with member countries to identify and prioritise national infrastructure plans, donor financing and support for sustainable infrastructure management.







Alongside the current phase of infrastructure development there is a strong interest across the Pacific in adding to the capacity to undertake impact assessment and enhance the sustainability outcomes of infrastructure projects. The <u>Secretariat for the Pacific Regional Environment Programme</u> (SPREP), headquartered in Apia, Samoa, is the premiere regional inter-governmental organisation charged with the protection and sustainable management of the Pacific Island countries and territories. One of SPREP's key goals is the development of environmental governance and promotion good practice in impact assessment. SPREP have developed and published a series of guidelines on impact assessment that are used widely through the Pacific including: <u>Strengthening Environmental Impact Assessment, Guidelines for Pacific Island Countries and Territories</u>. These 2016 guidelines set out the environmental impact assessment (EIA) process for promoting positive project outcomes and sustainable development. Importantly for practitioners the regional EIA guidelines, as they are known, also provide templates and checklists for project screening, terms of reference for an EIA, and reviewing EIA reports.

The regional EIA guidelines have been endorsed by all the SPREP Members and cited by the World Bank and ADB as good practice for the region in the PRIF Shared Approach. SPREP has subsequently produced the EIA guidelines for coastal tourism development in PICT (2018) and Strategic Environmental Assessment (SEA) Guidelines for PICT (2020) and Good Practice in Environmental Impact Assessment for Coastal Engineering in the Pacific (2022), along with providing training and support to member countries and territories to build capacity for better practice in impact assessment. The training and guidelines focus on the interconnectivity of the socio-economic and environmental impacts of development, emphasising the need for meaningful early and ongoing stakeholder engagement with enforceable environmental management and monitoring plans.

Due to the vastness of the Pacific region and remoteness of its many islands, face to face support has long been difficult. This was further highlighted during the pandemic with border closures and restrictions on gatherings. In order to address this issue SPREP was able to leverage off its existing practice network to deliver much of its support virtually to Members.

The Pacific Network for Environmental Assessment (PNEA) Portal was established by SPREP to support capacity building programmes for EIA and SEA across the Pacific Island countries and territories. PNEA is the principal network of a fast-growing community of practice for impact assessment across the Pacific. Their internet portal provides access to guidelines documents, resource materials, training materials including webinars, email blasts and a regular newsletter. PNEA also assist regional practitioners with requests for advice on any matters relating to safeguards, EIA and SEA and provide a platform for peer-to-peer sharing. It is possible for practitioners to subscribe free to the network to gain access to the training modules, resources and email updates.



A number of issues stand out when considering the use of impact assessment in planning for infrastructure development in the Pacific. These issues include the following:



Complex safeguards arrangements are a particular problem for projects in many countries, where external funding sources are utilised. Safeguards requirements and compliance is often a complex combination of country and funder requirements. To successfully meet all the project requirements project developers often have to enlist external consultants with knowledge of the systems of development banks and donors. The mix of requirements can result in a stop-start-stop approach to planning with adjustments to project components and resulting changes in impacts as originally assessed, and then ongoing revisions and updates to approvals and to environmental and social management plans. The results are increased project timelines and costs, short-cuts to participatory processes and assessments of impacts, and a lack of time and commitment to build local capacity in IA.



Benefit sharing for infrastructure projects needs careful assessment and clear articulation. Projects generally are designed to create positive impacts, while negative impacts are mitigated or managed to enhance the net outcome for people and communities. A number of benefit-sharing mechanisms and institutional arrangements can be possible and desirable (Schulz and Skinner, 2022) and should be considered as part of project impact assessment with wide participation to determine community needs, including support for the capacity of affected communities to absorb any new arrangements. It requires extensive coordination between the various stakeholders to take place, to achieve an understanding of what benefit sharing will entail and how it will be delivered. One issue is that benefit sharing is often seen as a form of pay-out, so it is important that all parties clearly define the objectives of any provisions they design. Another issue is that benefit sharing is not impact management nor is it merely a form of compensation, or the provision of any offsets for the loss of assets, including ecological, cultural and heritage assets. Benefit sharing is also not remediation of past mistakes such as environmental clean ups encountered in a new project. The matter of benefit sharing is therefore potentially contentious and donors have varying requirements for how it is applied, although generally it is aimed at disseminating the financial benefits of a project to the wider community and society in the form of programmes to enhance livelihoods, living standards, skills and technical capacity. It can also be used for synergistic infrastructure projects that offer benefits to the community through health, security, sanitation or other initiatives.





Cumulative effects come from the combined impacts of a single or several activities or events on a receiving environment over time. Common examples in the Pacific include the effects of climate change, waste and pollution on areas subject to successive development of infrastructure, such as ports, coastal roads and causeways, and reclamations for urban growth affecting reef systems or coastal vegetation including mangrove forests. Other examples are the spread of tourism infrastructure across small islands and coastal areas, and nitrification and sedimentation of lagoons from agricultural activity, urban waste and storm water. The important feature of these sorts of cumulative impacts is that they often result in a wide range of consequential effects, including on cultural practices, livelihoods, food security and human health. The focus of cumulative assessment therefore is often on valued environmental components. Assessment of cumulative effects requires skills in strategic assessment, systems and spatial analysis, ecological and social analysis, integrated assessment and participatory appraisal.



Gender and social inclusion are considerations in most projects. The PRIF facility recently commissioned a report on this topic and it identifies priority groups in relation to social inclusion. There are multiple groups potentially impacted by infrastructure development in the Pacific that face at least some level of social exclusion. These groups include "women and girls, people with disabilities, rural and remote communities, residents in urban settlements (often migrants from rural areas), ethnic minorities, youth, and the elderly" (Jones, 2022). An inclusive approach to infrastructure development looks to generate positive outcomes for the human rights and social wellbeing of all social groups and utilises an inclusive, participatory approach to project planning, including all forms of impact assessment. Social impact assessment in particular plays an important part in ensuring there is analysis of social disparities in any social baseline analysis, an understanding of any impacts on human rights, and makes sure participatory techniques are used in identifying, analysing and managing impacts (Vanclay, et al., 2015).



Grievance redress mechanisms (GRMs) are an under-utilised tool in the Pacific Islands (and elsewhere). GRMs provide projects with an important way to maintain ongoing engagement with affected people and a channel for communicating progress, and to address any new issues arising from impact mitigation and management. Key concerns with using GRMs are their often complex and bureaucratic arrangements and the involvement of multiple parties who might be channels for grievances arising from a project. These different parties can include contractors on the ground undertaking project works, a lead contractor, project owners, and responsible agencies. Often grievances reflect unresolved issues such as the use of customary land, payments and distributions of royalties, and confusion over the



distribution of project benefits. Grievances can also build from previous failures to deliver project benefits or to remediate previous environmental damage. Gendered GRM processes are an increasing focus for impact assessment internationally and require particular attention in the Pacific (Kimotho and Ogol, 2021).



Monitoring and audit procedures are an important aspect of project compliance to national, donor and multilateral requirements and standards. These procedures also provide an important set of data for evaluations of project outcomes including post-project assessments and assessments by third parties such as NGOs. Assessments are usefully designed consistent with established frameworks such as the UN Sustainable Development Goals (SDGs) and specialist indices such as the Multidimensional Vulnerability Index for SIDS. A key issue for monitoring and compliance is the mix of requirements when projects consider the multiple needs of host governments, donors and multilateral organisations such as development banks. It is therefore essential to develop an agreed framework for environmental and social monitoring, including spatial boundaries, early in project implementation. SPREP has maintained a particular focus on environmental monitoring and governance and supports countries through resources and technical support including national environment data sharing and reporting.

The demands of implementing these requirements all too often fall on small regulatory agencies that are ill equipped to deal with due to the administrative requirements, inexperienced staff, high levels of staff turnover, small budgets/resources. The resulting problems are compounded by ever increasing numbers of complex projects, expansions and requirements to revise legislation. It is therefore critical for the success of the EIA process that capacity building and empowerment of regulators and regional practitioners continues.

In conclusion, Pacific Island countries are in an unprecedented era of infrastructure development with funding from multiple donors and funding sources. These ongoing developments require robust but workable systems of environmental and social assessment and management. Support for impact assessment is provided by SPREP as the central regional entity and there is an active community of practice through the PNEA. A number of issues need attention in the use of impact assessment in planning for infrastructure development, as outlined in this paper. Members of NZAIA can further support local and donor efforts to address these issues in ways appropriate to island cultures and environments and their unique challenges due to climate change.



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