Regional Plans and Remote Settlements:
the implications of statutory planning upon resource dependent economies

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Abstract:

The purpose of this paper is to outline the implications of statutory regional planning that applies urban growth boundaries (footprints) to all settlements within a region’s spatial territory including remote and resource dependent settlements. Remote in this sense is located beyond the peripheral rural areas. This paper uses the example of Chillagoe, a remote settlement within the FNQ Regional Plan jurisdiction to illustrate the social and economic implications of a rigid urban footprint in relation to capturing the benefits of a mining camp that is adjacent to the township. The literature abounds with examples of the negative economic consequences of Fly In Fly Out (FIFO) mining camps upon the economies of remote settlements (Storey 2001, 2010) and the negative social implications for FIFO workers and communities (Carrington et al 2010). However, despite these research findings neither the local or FNQ Regional Plan adequately considers the expansion and contraction of the urban footprint to accommodate labour associated with resource developments and land to support mining and workforce services. As a consequence of these rigid footprints, remote settlements will be less able to respond to development and may see their opportunities to reverse backward economic trends simply pass them by. The paper concludes that there is an immediate need to create policy to address intra economic inequities via Regional Plans to enable the opportunities associated with resource developments to be accessed by remote communities so that they may reverse their economic decline.

Introduction:

In Australia the term Region is used in a variety of contexts. More recently in Queensland a region can be described as a spatial territory associated with a formal political boundary, an economic catchment (State of Queensland 2011) or even an identity that involves boundaries and governance such as a Regional Council (Collits 2008). The Sustainable Australia - Sustainable Communities report (Commonwealth of Australia 2011) outlines how our population growth will be encouraged outside cities and uses the term ‘Region’ to refer to: an urban node outside of the capital cities (Regional City); as a non descript spatial unit (the Regions); and to describe a collective of non urban places such as rural and remote communities.

It is difficult if indeed impossible, to further the discourse of Regional Planning in Australia in the absence of a consistent application of the term ‘Region’ or a continuum that describes the characteristics of non capital city settlements. This is particularly evident for the more remote areas of Australia and Queensland.

While the separation between planning theory and planning practice inhibits the discourse of planning generally, the limited amount of research into the characterisation of remote area planning heightens the need to identify the underlying concepts and inherent meanings of planning for, and in remote areas. A range of terms have been used to describe those areas that lie outside of the main urbanised nodes, among these include peri urban, rural and countryside, which can and invariably are used interchangeably. However, the most commonly used term in the literature is that of the peripheries or the peripheral region (Friedmann 1966, Copus and Crabtree 1996, Slack et al 2003, North and Smallbone 1996, Ball 1996, Hall CM 2008). This term originates from the centre periphery model and assumes the existence of a predictable relationship between the industry
based economy of the urban centre, and the resource based economy of the periphery. Remote areas by contrast do not experience a consistent and predictable economic relationship with either the urban centre or the periphery regions to enable its inclusion within the core periphery development paradigm. However despite this, the core periphery paradigm is the dominant paradigm applied to regional or non urban development planning (Dredge 1999).

The Sustainable Australia – Sustainable Communities report (Commonwealth of Australia 2011) maintains that Australia requires an approach to location that recognises the different needs of our regions and urban areas. The purpose of this paper is to highlight the implications of applying urban planning theory and practices such as urban growth boundaries (Lang and Hornburg 1997) to non urban places, more specifically to remote settlements. The paper will use the case study of the remote township of Chillagoe that falls within the jurisdiction of the Tablelands Regional Council (Mareeba Shire Planning Scheme 2005), and the Far North Queensland Regional Plan area to argue that the planning profession must rethink its approach to non urban places to facilitate opportunities for remote communities to secure economic development and sustain themselves in the future. This paper is concerned with how regional planning distributes the opportunities for growth across a region via the Far North Queensland Regional Plan, and the impacts of urban planning theory, specifically urban growth boundaries (Lang and Hornburg 1997) upon addressing social and economic disadvantage in the remote locale of Chillagoe.

**Background**

The term planning is used in this paper to refer to the decision and plan making processes that underpin change, or as Yiftachel (2006) suggests, planning describes the publicly guided transformation of space. Planning is an intervention to alter the existing course of events (Campbell and Fainstein 2003), and has become the role of the government under the auspices of distributive justice (Wadley and Smith 1998). Moreover, Rawls (1973) maintains that social and economic inequalities are only just if they result in compensating benefits for everyone and in particular for the least advantaged members of society.

Regional planning has been described as an intermediate level between national and local that addresses particular problems of growing urban regions and depressed industrial and rural regions (Glasson, 1978). Friedmann and Weaver (1979) support this notion and maintain that regional planning is comprised of two dimensions. The first addresses the problems associated with urbanisation, industrial location and the creation of stronger inner city ties. Whereas the other purpose is to address problems associated with backward regions in industrially advanced economies. Backward in this sense refers to the poor, and the poor are invariably rural (Friedmann and Weaver 1979). These two dimensions are differentiated on the basis of the economic characteristics of spatial territories. The spatial organisation theory relates to areas experiencing problems associated with urbanisation (i.e. too much development) while the other is associated with areas that do not experience development.

As planning is an activity usually undertaken in and by the urban core centre, planning activities often fail to consider the notion of social equity from the perspective of a rural or remote community in the decision making and delivery of regional plan outcomes (Smith and Steele 1995, Harwood et al 2011). Broadly speaking the concept of social equity, as it is referred to in regional planning, is equated with the reduction in inter and intra regional differences in per capita income (Glasson, 1978) and employment (Friedmann & Weaver, 1979). The core-periphery model describes the spatial economic organisation of the leading urbanised core and the lagging rural periphery (Moore, 1994). Peripheral areas often experience lagging growth or stagnation and rely on the growth driven by the urban core in the form of increased demand for peripherally located resources (Friedmann, 1966). The centre is viewed as efficient in terms of the location of economic activities,
capital investment, education, research, planning and control of government provided services. Whereas, the periphery is seen as a conduit for supporting the economic advancement of the centre (Selman 1995), and is perceived to be unable to make rapid adjustments to constant socio economic change (Friedmann 1966). Knowledge tends to concentrate in the centre of the core and the resources are located at the periphery. This results in the periphery becoming dominated by regulations, land use practices and specifications developed by the urban core (Smith and Steel 1995).

The core periphery model is predicated upon the notion that there is a predictable economic relationship between the industrialised urban core and its resource rich peripheries, and fails to consider the settlements that are beyond or not integrated in the established core periphery economic relationship. Research in health (Dixon and Welch 2001, Singh 2004), education (Bryceson 2002, Schollar 2001), business development (North and Smallbone 1996) and tourism (Buckley 2007, Beyer et al 2005) refers to the concept of remoteness. However, scant attention has been paid to either differentiating the planning characteristics of urban from remote, or describing how the socio economic attributes of remote areas differ from those present in many urban areas (Copus and Crabtree 1996). Rural development literature (Cloke 1996, Marsden 1998, Higgins and Lockie 2002, Mather et al 2006) has described planning in respect to the intensification of agricultural productivity through deregulation (Cloke 1996) and rural governance (Higgins and Lockie 2002, Wilson 2004). However, neither of these approaches has taken a holistic and integrated approach to the development of an entire region. As a consequence, rural areas are examined from a ‘post productivist’ perspective, and urban areas continue to develop in isolation to the development needs of rural and remote area populations.

Typically a remote settlement is beyond an established core periphery relationship due to a range of circumstances. These include (see Harwood 2010): accessibility (transport, human capacity and technology) to the urban core from the isolated remote areas, highly specialised resource dependent economies, socio economic characteristics such as low levels of tertiary education, high proportions of Indigenous people, and uncertain land tenure and insecure property rights.

**Remote Resource Regions**

The remote areas of Australia are either seen as ‘resource regions’ with substantial growth prospects or as places where the populations are described as possessing low socio economic status (particularly Indigenous people) and depict these as problem areas (Pritchard 2003). These two perspectives possess elements of truth, but fail to capture the dynamic relationship between resource industries and the regions in which they operate (Pritchard 2003). A more recent Regional Planning initiative undertaken for the Regional Development Australia Far North Queensland and Torres Strait area was reviewed for how the planning process incorporated the views of the remote and indigenous communities in developing action strategies (Harwood et al 2011). The review concluded that the consultation process focused on the urban issues, and failed to consider the views of the remote. As a consequence the action strategies from the plan failed to address the intra regional social and economic inequities.

The Federal government is taking a market led approach to regional development, whereby economic and lifestyle drivers will be key determinants of the locations that attract population growth (Commonwealth of Australia 2011). The role of governments will be to ensure that the necessary infrastructure is in place to support these growth communities. One of the key economic drivers in locations outside of South East Queensland has been evidenced in the resources boom. The large scale and resource development led growth coupled with the remote location of the mineral and gas deposits has meant that a skilled workforce is brought in to the site. These remote
locations often lack local infrastructure to accommodate the large workforce so there has been little choice but to use fly in fly out (FIFO) roster arrangements to meet development schedules.

Essentially the FIFO work is organised around a roster system in which employees spend a certain number of days working on site and then return home for a specified rest period (Markey et al 2011). FIFO originated in the offshore oil industry in the Gulf of Mexico in the 1950’s (Storey 2010). The drill platforms at this time were designed to accommodate staff to address the issue of increasing distances of the oil rigs from the shore, which made daily commuting impractical (Storey 2010). The on shore use of FIFO gathered momentum in Canada and Australia to support the expansion of mining activity into increasingly remote areas. However this practice has evolved as a necessity, as in many remote locations there are no nearby settlements to permanently house the workforce and families. In the past company mine towns were created such as Leinster and Laverton in Western Australia, and hybrid towns such as Weipa in Queensland. However, this practice has ceased for a number of reasons including (Markey et al 2011): government policy that favours FIFO camps; the structure of the mineral industry (favouring high value, short life span deposits); and a high demand and low supply of skilled labour that predominantly reside in metropolitan areas.

Current workforce servicing for resource developments are therefore largely deregionalised (Pritchard 2003) whereby the workforce are permanent residents in larger metropolitan areas and therefore temporary residents in the remote work location. These FIFO trends have had serious implications for the sustainability of remote resource communities. This is more evident in Queensland where many of the resource deposits are within close proximity to rural and remote settlements as opposed to Western Australia or the Northern Territory where there are fewer settlements outside the metropolitan areas. These implications include (after Storey 2010):

1. Fly over effects upon remote communities where the benefits of resource developments accrue to larger metropolitan urban centres. Local businesses are unable to access the population or procurement process associated with these camps and as a consequence remote settlements are unable to attract or establish industry support services such as retail or heavy industry.
2. High social costs of development as a result of increases in crime, drug use, prostitution, gambling and alcohol related violent behaviour (Carrington et al 2010). Conflicts between local and non local populations are exacerbated due to rivalry over women, territory and status (less financially well off locals), with locals feeling invaded and threatened by the number of men living in camps in close proximity to their town (Carrington et al 2010).
3. Inability to raise revenue beyond property taxes (ie rates). Mining activities are not controlled by local governments and the resource is owned by the state. Therefore all royalties that are generated are paid to the central government with no return of investment to the remote source of extraction (pers comm. Graham King). The local population are not able to influence the decision making and the benefits of the state overrides the losses to the local community (referred to as a Utilitarian perspective of social equity by Wadley and Smith 1998).
4. Pressure upon transport infrastructure. The economies of remote settlements are characterised by their vulnerability to quality transport infrastructure that provides linkages for the export of raw produce. The resource developments exacerbate maintenance issues as they are typically associated with large, heavy and dangerous loads.
5. Cumulative effects of multiple developments upon the local remote community and associated limited infrastructure. The current Environmental Impact Study process undertaken in Queensland does not consider the cumulative impact of exploration activities and mining development where they occur concurrently. Moreover, the exemptions contained within the relevant resource legislation (for example the Mineral Resources Act
1989, Petroleum and Gas Act 2004, and Geothermal Energy Act 2010) do not trigger the Sustainable Planning Act 2009, and as such work camps are exempt from assessment where they occur on the respective mining or exploration tenement.

The case study of Chillagoe a remote settlement in North Queensland illustrates how a population that possesses low socio economic characteristics is unable to access the benefits associated with the surrounding resource industry due to the urban boundary limitations associated with land tenure. Chillagoe is located within the North East Minerals Province which is reputed to be highly prospective (Welters et al. 2010), with several mines and quarries (Solomon Mines, Chillagoe Perlite, Mungana Gold and Kagara Ltd) in operation within close proximity to Chillagoe. In 2007 Kagara Ltd gained a Development Permit from the Tablelands Regional Council for the construction of a temporary mine workers accommodation camp located on Leasehold land 1km from Chillagoe. (see Map 1)

Map 1: Chillagoe township

Case Study: Chillagoe and resource development

Chillagoe is located 140km West of Mareeba and approximately 210km west of Cairns in Far North Queensland. The township was developed subsequent to the discovery of copper in the late 1880’s. Chillagoe has a small residential population of 226 people (ABS Chillagoe Community Profile 2006). Of the 89 male employees residing permanently in Chillagoe, 60% earned less than $800 per week, and of the 80 female employees more than 74% earned less than $600 per week. The main industries of employment for local residents (ABS Chillagoe Community Profile 2006) were: Accommodation 15.2%, School Education 8.7%, Metal Ore Mining 5.4%, Motor Vehicle Parts and
Tyre Retailing 4.3% and Building Completion Services 4.3%. Of the total population in Chillagoe 24.2% were Indigenous persons, compared with 2.3% Indigenous persons in Australia.

According to the ABS (ABS Report 6306, 2006) the average weekly wage of all Australian employees in the mining industry in 2006 was $1738 and the lowest was in accommodation ($485.00 per week) and Retail Trade ($497.40 per week). According to the 2006 census data only four permanent residents in Chillagoe earned more than $1600 per week (ABS Chillagoe Community Profile 2006). The mining sector employees are not permanent residents in Chillagoe and they receive a much higher wage than the permanent residents employed in service sectors. This wage is spent outside of the town and the economic leakages are very high. The mining sector employees are also not counted as residents in the Census and are therefore not included in the planning of government provided infrastructure and services, despite the fact that they account for more than double the estimated resident population.

All development is regulated via the FNQ Regional Plan and the Mareeba Shire Planning Scheme (2005). The town is surrounded by leasehold land (state owned). Tenure is the single greatest limitation to incorporating growth within Chillagoe and has not been adequately addressed in either local or regional planning initiatives.

Kagara purchased the Red Dome mine on the outskirts of Chillagoe and commenced mining in 2003. The labour associated with the mine at the time was initially housed in the township and commuted to their usual place of residence at the completion of their roster. Exploration activities increased in the area in about 2003, this saw drilling contractors utilizing low cost tourism accommodation facilities and Kagara Ltd purchasing a Motel to house staff. According to Elliott Whiteing and Associates (2007), Chillagoe’s housing stock was at capacity with exploration and surveying crews with no houses available for purchase or rent. The caravan park was also booked for the coming 18 months which in turn led to a reduction in tourist accommodation to service the tourism industry that employs local residents.

However in 2007 Kagara ramped up its development activity and constructed a 300 person workers camp on the outer boundary of the Chillagoe township. The leasehold tenure surrounding the township has been the main limitation to further growth in Chillagoe, despite attempts by the then Mareeba Shire Council (Elliott and Whiteing and Associates 2006) to have the state tenure converted. Any expansion of the township boundary would require consideration of tenure or alternative lease arrangements with the Queensland government to address growth.

In 2009 Mungana Open Pit Development (MGOPD) a wholly owned subsidiary of Kagara Ltd undertook a Voluntary EIS (pursuant to the Environmental Protection Act 1994) to develop an open cut gold mine above an already existing underground polymetallic mine. This new development would also utilise the existing camp accommodation. Public consultation associated with the Social Impact Assessment of the EIS (Cummings Economics 2010) confirmed the five aforementioned implications of resource development in close proximity to remote settlements. These are discussed in turn.

**Flyover effects:** The township has a limited range of retail outlets. As a consequence the fuel outlet and hotels receive the bulk of the benefits from the resource development and workforce. All other supplies and services are externally sourced and transported through the township to the camp and mine site.

**High social cost of development:** The township has limited social infrastructure and what is available is provided on the basis of the 226 resident population. This results in one police officer, one nurse at the community health facility, and volunteer ambulance bearers and emergency workers. In 2008 (July to November) construction activities were intensified in relation to processing infrastructure.
associated with existing approvals. A range of social disturbances were experienced at the height of this construction phase whereby the pre construction calls per month upon the police station increased significantly. These calls were related to alcohol and drug related disturbances, drink drivers, assault and willful and property damage. This necessitated an additional police officer to be called in to assist in keeping law and order in the township. The results of the consultation in relation to the MGOPD EIS expressed concern that these would be repeated. The behavior of the contractors (not to be confused with mine employees) confirms Carrington et al’s (2010) assertions regarding behavior of non local populations. The community’s proposed mitigation strategy to address this problem included greater opportunities for the community and employees to socialize such as through sporting fixtures.

**Inability to raise revenue:** The resource developments occur on leasehold land and any rates are paid to the Local Government, with royalties paid to the state. The LGA pay for the upkeep of the airport used for FIFO staff and all other local infrastructure such as water, parks and rubbish.

**Transport Infrastructure:** The road out of Chillagoe is not fully sealed despite the presence of Kagara and trucks that carry ore from Kagara to Mt Garnet on a daily basis in the dry season months. Results from consultation indicated that the community felt that with the addition of the MGOPD that the MGOPD should upgrade the road. This request was specifically made to ensure road safety of foreign and caravanning tourists to the Chillagoe caves was not compromised and that improved accessibility would in turn increase tourism visitation to the area and sustain the local economy subsequent to mine activity. However, the MGOPD proposed to use the airport to transport employees and gold bullions, and as a consequence there would be minimal impact on the road infrastructure.

**Cumulative Effects:** Chillagoe is within the highly prospective North East Minerals Province (Welters 2010). Resource developments that are subject to either the Voluntary EIS (Environmental Protection Act) and Significant Project status under the (State Development Public Works Organisation Act 1971) are required to address cumulative impacts. The social and economic impacts associated with exploration activities are not regulated or mitigated, nor are the opportunities to supply services to this industry able to be realised due to limited available land and associated infrastructure. There are literally hundreds of exploration permits within a 100km radius of Chillagoe.

**Discussion**

One of the major limitations to quantifying the population impacts of temporary or FIFO populations is in the collection of ABS data. This data collection does not recognize the impost that ongoing temporary residents have upon community infrastructure and is not used to investigate or support the need to accommodate growth through residential development. Planners and policy makers utilise estimated or enumerated population figures to project population and plan for infrastructure. In this instance it is the cities or the areas that the temporary residents come from that receive the infrastructure benefits and not where they work. Remote settlements are typically characterised as being highly disadvantaged because of their location due to their ability to access goods and services and opportunities for social interaction (ABS 2001). The disadvantage is further exacerbated by the increased pressure placed upon the limited range of social and physical infrastructure by the workforce associated with resource developments and an inability to capture the benefits associated with an established residential population.

The state government through the various pieces of legislation associated with exploration and mining foster industry development and concentrate on mitigating environmental impacts. The resource sector is highly vulnerable to metal and commodity market fluctuations and require flexible
regulations. Similarly remote resource settlements require flexibility in planning mechanisms to capture benefits from the resource sector.

The regionalisation strategies proposed by the Queensland and Australian governments does not address how these resource regions will be planned to take advantage of development opportunities. The FNQ Regional Plan and the Mareeba Shire Planning Scheme (2005) preclude the expansion and contraction of the spatial boundaries associated with the remote settlement of Chillagoe. The current approach undertaken in planning and through the EIS process reinforces the ‘deregionalisation’ of resource regions and the growth of urban areas. This application of urban theory reinforces the growth of the urban based industrial resource economy and further exacerbates the dependency of remote communities on external capital transfers (welfare) and business development.

Opportunities for creating self sustaining and resilient remote communities are impeded through conflicting policy approaches to regional development. Remote settlements become increasingly dependent upon capital transfers from governments to address escalating pressures upon limited social infrastructure from the impacts of resource developments. These are rarely addressed as the ABS census data is unable to capture the population dynamics of the resource workforce upon remote settlements. The resident population numbers are applied to determine budgets for limited government revenue expenditure in remote areas and the community suffers as a consequence which further reinforces perceptions of marginality and helplessness.

An integrated government policy approach is required to address how the opportunities associated with resource developments can be accessed by remote communities to reverse their economic decline. These policies should as a matter of priority address:

- Policy approach to location that recognises different needs of remote, rural and urban areas to avoid the misapplication of urban theory.
- Creation of tenure and policy approach to incorporate mine workers accommodation within settlements consistent with community aspirations.
- Flexibility with land use planning approaches to permit the expansion and contraction of townships and the inclusion of industrial and commercial designations to reduce economic leakages from remote resource regions.
- Integrated policy approach to regional planning – particularly regionalisation strategies.
- Local planning scheme review should inform the regional plan and address the local limitations to growth

Conclusion

Regional planning and regionalisation policy initiatives undertaken by the state have failed to consider the dynamics of the relationship between resource industry and the remote regions in which they operate. This paper has argued that this failure is in part attributed to limited theoretical and policy analysis of the characteristics of remote communities, the settlements they inhabit and the regional economic system that they sustain themselves within. The attention of policy is focused upon gaining efficient utilisation of infrastructure within city boundaries through the intensification of land within the city boundary and the redirection of population growth to the regions. The case study of Chillagoe illustrates the social and economic implications of a ‘one size model fits all’ approach to an entire region that ultimately exacerbates inequities rather than redressing these. To create and support sustainable regions, particularly remote resource regions require an integrated approach to planning and the spatial designation of regional boundaries.
References


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