Leadership and Management : Global Warming Impact on Policing: An analysis of security preparedness

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Introduction

In recent years a range of provocative thinkers have gathered in Canberra to debate the impact of climate change on law enforcement beyond the 21st century. For nearly a century, the police strategies have remained unchallenged. Police or security agencies interchangeably have engaged in parallel strategies to prepare for the emerging issues and enabled them to carry out their duties responsibly. Nowadays, the climate change concern remains as the most futuristic obstacle that will pose serious problem to policing. The law enforcement agencies previously have always enjoyed the privilege to acquire limitless information, share ideas and experiences worldwide, to have adequate education and training opportunities, and so developing a better understanding of police future conflict dimensions. However, the flip side of the coin is that the entire world is quickly confronted with climate change threats (Abbott, 2008), emerging security issues from various social, environmental and political influences which did not previously fall under conventional notions of "defence". Within the next two decades, the demands for policing and expectation will be far greater and more complex. Moreover, police leadership will be hit with high demands for multi skilled forces and resources constraints. In addition, operational ambiguity will contradict leadership strategic planning to achieve civility, order and security. The influx of climate change refugees from neighbouring islands may contribute to the causes of violence and unruly behaviour. In this situation, modern police skills, resources to high expectation to serve the community should not be overlooked. Therefore, it is vital for the future leadership in policing to identify those key trends that will demand law enforcement diligence in achieving maximum expenditure of efforts and resources.

Climate Change

While government often gives little attention to the threat climate change may bring to Australia, it became a centre stage issue during the Australian election in 2007. A study by Garnaut (2008) into the impacts of climate change indicated that the environmental changes present a core issue for national and international security. The report highlighted the emerging issues with the climate change which will present challenges to Australian security, such as people smuggling, terrorism, influx of global warming refugees, the spread of pandemic diseases, surge of xenophobia and social tension. The impact will manifest to a larger scale of civil unrest. The Garnaut report solidifies the call for comprehensive and sensible risk assessment of future security threats. Generally, the climate change impact on policing is gathering some momentum among experts in the field (McAdam, 2012). However, further examination of global warming can be rather vague about the pertinent nature of the security threat it poses to Australia. McAdam (2012, p.5) argued that some number of developed States have already 'flipped' the security discourse away from the human security of the displaced, towards an insular self-protection response. US Secretary Hagel argued that "climate change does not directly cause conflict but it can significantly add to the challenges of global instability, hunger, poverty and conflict, all will exert additional burdens on economies, societies, and institutions around the world' (US Department of Defence, 2014). In the midst of competing arguments, the police organisation ought to contemplate the worst case global warming scenario in the contingency preparation as they would do with rioting, terrorism acts, natural disasters and challenges to Australian's border security. It is paramount for the government and law enforcement organisations to work with international counterparts to develop policies to adopt in responding to global warming. However, more importantly, the Australian government must act appropriately now to encounter future climate change national security issues.

Global Average Temperature Increase

The Earth's atmosphere is changing. Global average temperatures are increasing, weather patterns are shifting, and more catastrophic climate events are constantly reoccurring (IPCC, 2013). For instance, some part of the world have experienced significant rainstorms others have registered high temperature. Scientists are highly confident that most of the observed global temperature changes are associated with the rising record level of carbon dioxide and other greenhouse gases in the earth's atmosphere. Some parts of the Australian

continent will become prone to prolonged and more severe draughts in the future, similar to the Millenium Drought which has affected major reservoirs in the Murray darling Basin from 2002 to 2007. Moreover, other regions of Australia will witness severe bushfires similar to the 2009 Black Saturday bushfire in Victoria (Australia.gov.au, 2015). A slight change on the average global temperature by one or two degrees can have serious adverse effects globally. The losses can range from billions of dollars for businesses, agriculture productions, community livelihood and loss of people homes. During the conference of *International Policing Toward 2020 (*Platypus Magazine, 2007) predicted that the climate change is already posing problems for Australian law enforcement agencies. For example, climate change may undermine human security and in aggregation with several non-climate specific factors, increase of violent conflict. Hot weather may contribute to more cases of intercommunal violence, and unruly behaviour. Furthermore, the consistent rural droughts may attribute to an increased suicides and domestic violence. However, the long term projection into the effects of climate change paints a bleak outlook for political stability in the region of South Asia. For instance any further increase in concerns of climate change may provoke a lack of public confidence in the government's ability to protect its population which can impact on the ability of police to maintain law and order.

Rise in Sea Levels

The serious problem facing coastal communities and small islands in South Pacific region is the rising high seas. Higher seas mean major threats to more than 40 percent of the world population and ground water supplies. The Global climate change will alter the ocean sea waters in two ways causing the ocean water level to rise. On one hand, the melting mountain glacier and polar ice sheets will continue to melt and free significant volumes of waters into the ocean. On the other hand, as the ocean water temperature increase, the warmer water will get larger in volume. These changes will exert a potential force of disastrous consequences to human and natural habitats globally including Australia (Climate Change in Australia, 2010). The CSIRO and Bureau of Meteorology of climate change projections for Australia (2015), clearly place Australian communities among those worst affected areas. Naturally occurring sea rising patterns will becomes as normal routine due to climate change until the year 2030. The ocean water expansion will render Australia coastal communities and other low lying countries in the regions to danger of sea rise. Scientist predicted sea water to rise by 7.1 meter by the end of the century (Abbott, 2008, p5). In 2014, the South Australian Government endorsed policies which had made several recommendations on sea rise and on

standards for new coastal development. An allowance was made of 0.3m for sea level rise to the year 2050 (South Australian Government, 2014). These measures are consistent with the internationally agreed projections. A study by Blankespoor, Dasqupta & Laplate (2014) indicates East Asia and Pacific the region would experience the largest percentage impact sea level rises with 100, 96.0, and 70.7 percentage losses respectively. The predicted impact will pose serious threats to coastal property in Australia, low lying Asian rising mega cities and Pacific Islands (Chambers, 2011, p.54).

Social Economic Impacts

Experience with recent natural disasters highlights the dangers the climate change can inflict on people and to a greater extent on the world population. There will be social and economic damage of climate change, including loss of important infrastructure, resources scarcity and loss of lives, and over millions of people displacement (Abbott, 2008, p6). As records has showed with the Hurricane Katrina at the Gulf Coast of the USA a few years ago, Hurricane Katrina presented major of police concerns ranging from shifting duties involving crime control and emergency relief to the destruction of essential installation of the police infrastructure, communication, buildings, roads and transportation systems have either been inundated or completely destroyed. In 2006, *the US Association of Contingency Planners* (2006) reported that the official death toll has surpassed 1,200 and the damage estimates had surpassed 200 billion dollars. As well, Lord Stern of UK made headlines with a report warning that a least 5% and perhaps more than 20% of global GDP would be the cost annually (Jowit & Wintour, 2008). Major Asian economic megacities such as Philippines, Indonesia, Thailand, China, Pakistan and India will be the hardest hit due their proximity to the coastal areas (Maas & Tanzler, 2009, P10). Currently, Queensland Police Service (2015) has incorporated natural disaster into their strategic planning to mitigate the significant damage of economic, social, environmental and political impact on the community.

Arguably, the most noticeable impact of global warming relates to food, water and energy as these important commodities become scarcer. East Asian and Pacific agricultures and fishers producing communities are become more affected by unfavourable climate conditions. Weather pattern changes and severity of droughts can cause serious land degradation, flooding and soil erosion. Meanwhile, warmer water temperatures may cause several fish habitats and shellfish species to relocate which could destroy ecosystems. According to the Global Mechanism (2008), the production of rice, maize, and wheat in the

past few decades has declined in many parts of Asia due to increasing water stress arising mainly from increasing temperature, constant frequency of El Nino events reduction in the number of rainy days. The impact to agriculture is considered to be the most serious issue facing the farming communities. Most food produced comes from smallholders of farmers who are dependent on rainfall seasons. According to the *International Food Policy Research Institute* (IFPRI), 87 per cent of smallholder farmers are in the Asia and Pacific region. In India, where more than 50 per cent of total country's agricultural outputs come from small farming community, 72 per cent will be affected by lack of monsoon rain (International Fund for Agricultural Development, 2010). The remote indigenous communities in Northern and Western Australia will also be affected with natural resources scarcity (Australian Government, 2010). The water shortages in some part of Australia will prompt local authorities to restrict water usage in the future. As water becomes scarce in the regions where rivers are the only source of water drinking and food production, tension will increase. For instance, the Mekong River in South East Asia, the Nile River in North Africa and the River Jordan in the Middle East may be affected significantly in a few decades.

In the future, the displaced people of mass climate change will impact on police work and the right of the public to be protected by police. The mass displacement of people will be attributed to resources scarcity, lack of inhabitable land and the expected world population increase from current six billion to over nine billion by 2050. The impact of climate change on Asia and the Pacific countries will lead to socioeconomic and physical infrastructure crises. These stresses may trigger change in demographic processes. According to the Intergovernmental Panel on Climate Change (2015), climate change will play direct role on demographic trends, stability and the size of population, while indirectly on food security and viability of natural resources based economic activity. Majority of densely populated areas in East Asia & the Pacific will experience extreme risks events on human settlement. For example, the magnitude of droughts and coastal flooding may increase the pressure on already over populated cities forcing others to seek asylum in neighbouring countries. Achim Steiner, an Executive Director of the United Nations Environment Programme (UNEP) reiterated that expert had argued that large numbers of people are already on the move, with million more expected to follow as evidence of climate change mounts (Couldrey & Herson, 2008). Most small island nations will be forced to evacuate their Islands due to rising sea levels and the extreme weather patterns. Australia's geographical location and proximity to

embattled climate change nations make it and New Zealand favourable destinations to the majority of climate change refugees.

Moreover, changing weather patterns are already and will continue to impact on food production, poverty, migration, and social stability. This will significantly increase the risk of conflict and instability in fragile climate change stricken countries including Australia. The climate change related instability the world is witnessing right now is related to unproductive farmland, high food prices, and lack of drinking water and overcrowding. These emerging issues are the results of the gradual triggers that will push people and countries into longstanding civil unrest. Recently, the Italian Ambassador to Poland, Alessandro de Pedys argued that an unidentified immigrant reaching Italy's a shore poses a threat to the whole of Europe in terms of terrorism and criminal infiltration (EurActive .com, 2015). The mass migration fleeing civil unrest and from sub-Saharan countries to Europe will increase substantially within the next few decades due to climate change. On other hand, human made conflict worldwide may impact the security and control over influx of migrants will continue to worsen as did the events of civil wars of the past years in Syria, Crimea, Ukraine and Libya. As at 5 September 2013, there were 6,579 illegal immigrants in closed immigration detention facilities in Australia, including 1,428 children (Australia Human Rights Commission, 2015). Similarly, organised criminal networks in North Africa have increase clandestine smuggling activities, and according the Global Initiative (2011) around 5,000,000 illegal migrants arrived in Italy in late 2011.This highlights the important of the concerns that citizens have for their country's welfare. The government must act now to protect their own population in the future. For example, the government responses to the influx of migrants to Australia and other European countries had inadequate measures to stop illegal migrants, then the public may begin to lose confidence in the government's ability to protect the nation. On the other hand, the measures taken by the law enforcement agencies to protect and provide the people security may not be popular with all the stakeholders.

Implications for Police and Security Services

Several nations worldwide are deeply concerned with the security implications that possible climate change may bring. Recently Australia invited experts from several disciplines including police leaders from more than 30 countries to present their individual visions of the not so distant future. *The International Policing Toward 2020 conference* has identified wide raging security issues pertaining to climate change. However, this paper will

focus on the crime and natural disaster implication to Australia and neighbouring countries in the region. On 17 April 2007, the British government convened a day long Security Council debate on the impact of climate change on security (Nautilus Institute, 2015, Ben, 2012, Barnett & Neil, 2007). The *US Department of Defence* (2014) indicated that Climate change will affect the Department of Defence's ability to defend the nation and poses immediate risks to U.S. national security. In 2006 Alan Dupont & Graeme Pearman discussed the impact of climate change on the future, claimed that the changes to the environment will have significant threat on human security, survival and the stability of nation states (Parliament of Australia, 2015). For instance, a former Australian federal Police commissioner argued that climate change, like many other potential issues to threaten our security, and therefore Australian community expects the AFP to do their job effectively to protect the public (Keelty, 2008). These non-traditional security issues of global warming, pandemic diseases and food security are not so distant for law enforcement to be confronted with in the future. They may be the next frontier which will spark risk in years to come. While these issues may not be of importance now, the current projection of climate change indicates security complications between countries. This would require Australian police to monitor climate security changes and formulating strategies to reduce or mitigate the incidents of violence in Australia according to police corporate plan.

There have been small studies revealing the linkage between civil conflict and warfare that are influenced by the changes in climate (Hsiang, Meng, & Cane, 2011). Short term studies pertaining the relationship between weather and crime indicate that higher temperature causes substantial increases in crime (Horrocks & Menclova, 2011), asserting that climate change may have the potential impact on criminal activity. Ranson (2014) predicted that between 2010 and 2099, there will be an additional 22,000 murders, 180,000 cases of rape, 1.2 million aggravated assaults, 2.3 million simple assaults, 260,000 robberies, 1.3 million burglaries, 2.2 million cases of larceny, and 580,000 cases of vehicle theft, as a result of climate change. Almost all these climate change crime rate are significantly at a 5% threshold. The Future climate change scenario for Australia temperature is predicted to continue rising by 0.6 to 1.5 Celsius by 2030. Decreases in average rainfall are expected over Southern Australia with largest decreases in winter and spring (Australian government, 2014). While the consequences climate changes continue to exalt significant changes crime rates, there will be a great deal criminal offences manifestation; some could be classified serious offences in nature. Police leadership and government action on climate change must

be formulated to address future climate change crimes by providing cultural liaison officers to deal with new influxes of immigrants rather than following the current model of managing symptoms. The policy should be tailored toward educating the public about the law enforcement role rather than empowering people to act contrary to the law.

Natural disasters have dominated the early 21st century and more deadly; there have been 308 human induced natural disasters incidents recorded worldwide in 2013. Swiss Re (2013) reported that one third of these disasters occurred in Asia, with significant loss of lives, over 21, 000 people victims and with 62 billion dollars economic damage. In the environment where death, damage, injury will become prevalence during natural disasters. The law enforcements will be required to provide effective leadership in prevention, preparedness, response, recovery efforts of disasters. Population relocation in response to climate change may as well expose people to new hazards. Climate displaced population may suffer complex emergencies and strife as people abandon their communities, territories, national and international boundaries (O'Brien, O'keefe , Rose, & Wisner, 2006, p.68). Police leadership will be expected to prepare to designate home shelters for the displaced population with the facilities well stocked with adequate food, water, medical supplies, and sanitary facilities. In 2005, Hurricane Katrina exposed the New Orleans Police Department's gross lack of transportation and communication between police leadership and officers at scene of the aftermath of this hurricane (Deflem & Suzanne, 2009). The chain of command was deemed ineffective; many officers were left to salvage the police work themselves. This highlighted the need for Australian police leadership to prepare to carry on disaster related operations while maintaining law and order in the future. Alternatively, the Australian police organisation should work collaboratively with non-governmental organisations to plan and simulate natural disaster response exercises. These exercises which may be required to work in 20 years should be done with greater robust partnership with other emergency organisations locally and in the region.

Conclusion

Australia police and law enforcement agencies will face an uncertain future as climate change continues to complicate police work coupled with internal and international population civil unrest. The likelihood of climate change may present dramatic changes to the policing and law enforcement environments. However, the climate change presents an opportunity for law enforcement to prepare for prevention, mitigation and adaption strategies

that will meet the security arrangement in the future. This requires national government working in conjunction with law enforcements, regional organisations and international institutions to start working together now in order to put in place the necessary policies that will counteract the adverse climate changes related crimes. In today's globalised world, the scarce resources and recruits retainment should be the priority for police appropriate response. Although Chris Abbott (Lautensach, 2010) suggested that the prevention is the only real cure to climate change induced crimes, Abbott further reiterated that police must resist the temptation to use force to control insecurities and maintain the status quo.

The law enforcement and emergency organisations should always prepare resiliency plans in collaboration with the states and regional countries. The police should have extensive training programmes to handle non-policing tasks and other natural disaster protection measures, with a particular focus on protecting essential supply network infrastructure. In addition, police organisations should be able sustain their operation with a little funding the government can award to support the development of police capability infrastructures and resource conservation projects. Moreover, Australian law enforcement organisations consensus and regional agreements must be rapidly reached on the status, protection and management of environmental refugees, in case of climate within the next 10-20 years from now. Nonetheless, police should always focus on conflict prevention, sustainable development. Australia Federal Police working with foreign aid programmes need to take into account the likely effects of climate change and build in a range of adaptation measures. However, Australia government must not simply divert foreign aid from these programmes in order to address climate change. Climate change by itself will not be the main factor that will trigger civil unrest or the surge of crime in the western countries, but a host of several factors fuelling insecurity - including factors of marginalisation, poverty, population growth and poor governance. This reinforces affirmative action needs to be taken by government and police leadership to evaluate current approaches to policing and innovate cooperative methodologies and sustainable ways of attaining security. Whilst focusing on preventative measures rather than depending reactive strategies.

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