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**Historical Analysis of
Population Reactions to
Stimuli-A Case Study of Aceh**

Patricia Dexter

DSTO-TR-1592

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Historical Analysis of Population Reactions to Stimuli - A Case Study of Aceh

Patricia Dexter

Land Operations Division
Systems Sciences Laboratory

DSTO-TR-1592

ABSTRACT

This study provides a baseline investigation for determining population reactions to stimuli in a historical context. Historical data analysis and qualitative data analysis techniques are applied to the last 500 years of events in Aceh. Links and trends between events and stimuli as causes and triggers are produced giving a preliminary dataset for any future trends impact analysis. In addition some general population reactions for Aceh are established.

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Historical Analysis of Population Reactions to Stimuli - A Case Study of Aceh

Executive Summary

In military conflicts, the non-combatant population can have a significant impact on the outcomes, progress and effectiveness of the fighting or peacekeeping elements. This is particularly the case in urban areas where the non-combatant population is typically high. In addition, the Rules of Engagement (ROE) change in urban environments or where there is a risk to the population, and this can be exploited by threat forces or by elements in the population, such as insurgents, for their own cause. Additionally, the civilian population can be at risk from opposition forces with either different ROE to friendly forces or who exploit the ROE used by the other side. Although understanding the culture(s) of an urban population can significantly aid in communication and winning the "hearts and minds" of the population, understanding the **stimuli** (as **triggers** and **causes**) which have in the past caused (and hence might **cause**) the population to revolt or act in a particular way, can give insights into how they might react in the future (providing there are sufficient historical trends). These acts we will call **events**. They may range from insurgences¹ through assisting or supporting one side or another in fighting to mass popular support of a political party or regime.

This report is the second in a series of historical analyses of **stimuli** (as either **cause** or **trigger**) and effect (as **events**) trends between **triggers**, **causes** and **events** in regional populations. While the first study concentrated on East Timor this report is focussed on the population of the Indonesian Province of Aceh (Nanggroe Aceh Darussalam). It provides a baseline study of the reaction of the Acehnese population to imposed **stimuli** in this regional urban environment, which is similar to those likely to be encountered by Australian Military forces. The study is a fact based perspective with no attempt to understand the cultural or sociological behaviours. The intent is to identify probable "generic" **causes** of the population reactions over a large time period and determine if there are links or trends in these **causes** over the time period. This may provide valuable insights to the reaction of this population and provides a basic dataset for input to training and wargaming as well as any future trend impact analysis.

This report highlights several lessons of relevance to operations in urban environments. Of interest is the Acehnese societal "memory" (persistent **causes**), which appear to act as **causes** to new **events**. Aceh is the second regional country studied. It has a very different history, religious focus and population demographics to the first, of East Timor, but both studies identified a societal memory, which affects later **events**. Additionally, betrayal, disillusionment and disappointment are key **triggers** or features to the Acehnese population undertaking some insurgent event.

¹ Insurgences are defined as riots, rebellions or revolts by the Macquarie Dictionary 3rd Edition.

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Patricia commenced at DSTO in 1999 in Land Operations Division. Her background is in Chemistry and Spectroscopy. Her current interests lie in the analysis of urban environments, future environments and in historical data analysis. She is currently working as an Operations Analyst in Concept Studies and Analysis discipline of LOD.

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Glossary

ρ	density
Aceh [Acheh; Atjeh]	Alternative spellings for Aceh which may appear where referenced from a source using an older term.
ADF	Australian Defence Force
AGAM	Angkatan Gerakan Aceh Merdeka (Aceh Liberation Movement) – armed wing of GAM
ASNLF	Aceh/Sumatra National Liberation Front (GAM II)
Cause	Underlying factor which fuels an event
Darul Islam (DI)	House of Islam
Event	Insurgence; assisting or supporting one side or another in fighting; mass popular support of a political party or regime
GAM	Gerakan Aceh Merdeka (Free Aceh Movement) (GAM I)
ICG	Indonesian Central Government
Insurgence	Riot, rebellion or revolt
MOU	Memorandum of Understanding
Negative influence	Population reaction to stimuli where violence within the population or to others occurs (eg population attacks part of a town)
NEI	Netherlands East Indies
Positive influence	Population reaction to stimuli where no violence occurs or peaceful mass support or assimilation occurs. (eg new religion is accepted and adopted by the population and there is no violent reaction or changes to everyday life). This could be considered a non-negative influence.
ROE	Rules of Engagement
Stimulus	Trigger or cause of an event ; factor which prompts an event to occur
Sultan	Lord and ruling family of the kingdom
Trigger	Factor which forces an event to occur – may be the same as a cause
<i>Ulama</i>	Religious (Islamic) scholar (today called a guerrilla fighter) – leader of the Islamic community
<i>Uleebelang</i>	Trader-chief-judge (head of tribe / district / village)
UN	United Nations
WWII	World War II

1. Introduction

In military conflicts, the non-combatant population can have a significant impact on the outcomes, progress and effectiveness of the fighting or peacekeeping elements. This is particularly the case in urban areas where the non-combatant population is typically high. The Rules of Engagement (ROE) change in urban environments or where there is a risk to the population and this can be exploited by threat forces or by elements in the population for their own cause. Additionally, the civilian population can be at risk from opposition forces who either have different ROE to friendly forces or exploit the ROE used by the other side. Although understanding the culture(s) of an urban population can significantly aid in communication and winning the 'hearts and minds' of the population [1-5], understanding the **stimuli** (as **triggers** and **causes**) which have in the past caused (and hence might **cause**) the population to revolt or act in a particular way, can give insights to how they might react in the future (providing there are sufficient historical trends). These acts we will call **events**. They may range from insurgences¹ through assisting or supporting one side or another in fighting to mass popular support of a political party or regime.

This report is the second in a series of historical analyses of **stimuli** (as either **cause** or **trigger**) and effect (as **events**) trends between **triggers**, **causes** and **events** in regional populations. While the first study concentrated on East Timor [6] this report is focussed on the population of the Indonesian Province of Aceh (Nanggroe Aceh Darussalam). It provides a baseline study of the reaction of the Acehnese population to imposed **stimuli** in this regional urban environment, which is similar to those likely to be encountered by Australian military forces. The study provides a fact-based perspective with no attempt to understand the cultural or sociological behaviours. However, these cultural or societal factors are included as stimuli where they contribute to population reactions to events. The intent is to identify probable 'generic' **causes** of the population reactions over a large time period and determine if there are links or trends in these **causes** over the time period.

Aceh was selected for this second study as it is within the area of interest identified by the government White Paper on Defence in 2000 and the National Security update in 2003 [7, 8], and is typical of many neighbouring South East Asian states in terms of population and location. Aceh has a long history of population insurgences and military activity and well documented recent events as shown in the timeline of events in Appendix A. The **events** of interest are well documented and the history of the island of Sumatra (where Aceh is located) is reasonably well known. However, the level of detail is not as high as that obtained for the previous study on East Timor and hence the utility of this method for regions with less information will be tested. Even though there is not as much detailed information for Aceh, the behaviour and 'cultural' profile of the population is developed [9-15] and has allowed an understanding of the evolution of the **causes** of the **events** of interest to be developed and analysed. Trend Impact Analysis may allow future actions/reactions of the population to be assessed based on these historical trends. This

¹ Insurgences are defined as riots, rebellions or revolts by the Macquarie Dictionary 3rd Edition.

study provides valuable insights into the reactions to **stimuli** of this population and the resulting qualitative data could be used in war games or training exercises where the input of the reaction of an urban population is from a real environment.

2. Methodology

This study uses the same methodology as that of the previous study investigating East Timor, [6] and that report describes the approach in detail. Only a brief description and a minor addition is given here.

Due to the qualitative nature of the historical data used it is not what would be considered 'statistically valid', where the same **event** or sample is measured many times. Historical **events** occur only once and hence the data do not support statistical analysis to identify an average result. To obtain an 'expected' value in this type of study we can only compare 'similar' **events** and note trends in **causes** and **triggers** for **events**. However, as we are using real data points the results are defensible, as the **events** have actually occurred with the associated **stimuli** as **causes** and **triggers** given. While any anticipated reactions cannot be validated by this study, it provides a solid foundation for the arguments presented and for any future trends analysis on the problem space. For simulation, wargame or training support this historical data can ground or calibrate the simulation by using real data point/s in the environment.

This analysis was undertaken using a variety of 'soft' operations research approaches as well as techniques from qualitative historical analysis and the political and anthropological sciences [6, 16-22]. Data was obtained from a wide variety of sources including an extensive literature survey on Acehnese, Indonesian and Dutch history [9-15, 23-53]. An attempt was made to include all sources which detailed the environment of the population (politically, socially, culturally etc), as well as the **events** themselves in detail and any other relevant material which completed the picture. There are two differences between the previous methodology [6] and that applied here. The first is the extension of the generic colour code in the diagrams graphically linking **stimuli** and **events** to encompass the lines (previously all black) connecting **stimuli** with **events**, for clarity. The second is the use of a matrix system for visually comparing the links between **stimuli** the high level of interdependency. This differs from [6] where a simple diagram linking the causes over time was used.

The process involved determining the historical **events** of interest and elucidating the underlying **causes** and **triggers** as **stimuli**. An initial narrative of the data collected is composed but due to the complexity and detail of the information this is of little use for analysis and only provides a context. From these data the **causes** and **triggers** are determined and linked together graphically. The graphical representations used are at two levels, the 'detailed' level and the 'distilled' level. The detailed diagrams show a more

detailed list of **stimuli** associated with **events** and the distilled diagrams group these **stimuli** into a more manageable and generic dataset. This graphical process allowed trends to be identified and investigated in further detail. The graphical process also allowed low level quantification to be made with relation to analysis of frequency of **events** and **stimuli** and hence enabled further trend identification. In addition to linking the **causes** and **triggers** to **events**, the links between **causes** and **triggers** themselves over time were also investigated visually. Other information investigated at a quantitative level included population statistics of religion and ethnicity, where it was available. An additional item investigated (which not possible for the East Timor study [6]) was the time delay between **causes**, **triggers** and **events**.

3. Brief History of Aceh

Aceh is an Indonesian Province (Nanggroe Aceh Darussalam) located on the northern tip of the island of Sumatra in the Indonesian archipelago (Appendix B). Aceh has a long, documented history spanning 1500 years as shown in Appendix A and during this time it has developed a unique identity and fought to maintain its historical status in the archipelago. The brief history given here covers historical themes related solely to the analysis, and should not be taken as a standalone account of Acehnese history. The sources used [9-15, 23-53], describe the history in greater detail.

Around the year 500 AD Chinese chronicles record that, in the region currently known as Aceh, a flourishing Buddhist state (called Po-Li) existed and was visited by Arab, Indian and Chinese merchants and pilgrims [30, 54]. It is also recorded that in 700 AD Islam arrived in Aceh (its first point of arrival in the archipelago) and from here Islam was spread via the Acehnese pilgrims and traders to other parts of the Indonesian archipelago [30]. In 804 the first Islamic kingdom was established in Aceh and was known as Perlak (this location is today known as Peureulak). Perlak became a prosperous trading port and was a busy and important centre for trade in the region as it controlled much of the trade through the archipelago [30, 37].

By the early 1200s the major trading port and dominant kingdom on Aceh was known as Pasai (Samudra Pasai), located near the trading port and old kingdom of Perlak. Most historians agree that the Samudra Pasai kingdom was a continuation and composite of both the old Perlak kingdom and another older kingdom called Pase [37]. From about 1500 through to 1614 the Acehnese fought many battles against the Portuguese in resistance to colonialism and to maintain their independent posture as a trading centre in the archipelago. During this period the Portuguese were among the first active colonialists in the region. The Portuguese wanted the trading centres (namely the Pasai ports and Malacca – rival friendly trading ports on the Malaysian peninsula) in order to control trade through the region and to Portuguese colonies. In 1511 Malacca fell to the Portuguese and after some strong resistance, in 1521 the Portuguese conquered Pasai as well and brought

that kingdom to an end. During this period from 1500 to 1521, on another part of Aceh (Aceh Besar), a smaller kingdom called Lamurai came to prominence and became known as Aceh Darussalam. In 1523 the Sultan of Aceh Besar continued the struggles of the previous Sultan of Pasai and attacked the Portuguese in Pasai and drove them from Aceh. It is said [9, 30, 37] that the height of Aceh's power came between the years of 1607 and 1636 during which there were frequent wars with the Portuguese at Malacca and the final defeat of the Portuguese fleet by the Acehnese at Bintan in 1614. After this defeat, the Portuguese did not attempt to take any part of Aceh or nearby trading ports [9, 12, 30, 34, 37, 50].

Following the death of the Sultan in 1641, both Dutch and British colonial forces attempted to conquer Aceh. From 1641 until 1811 the Acehnese successfully fought Dutch attempts to add Aceh to their colonial conquests in what was to become known as the Netherlands East Indies (NEI) and is currently the Indonesian Archipelago. In 1811 the Aceh-England friendship treaty was signed. This treaty provided for mutual defence for the two states with an attack against one state considered to be an attack against the other. At this point, the British had taken colonial possession of areas of the southern end of the island of Sumatra and Aceh had successfully resisted their advances while still allowing for this friendship treaty and for the trade it promoted. This also minimised conflict between the different kingdoms already in existence on the various parts of the island of Sumatra [9, 12, 30, 34, 50]. It is noted, however, 'that the Aceh-England Treaty was never revoked and hence under international law the United Kingdom is still obliged to defend aggression from foreign powers towards Aceh and her sovereignty' [30].

In 1824 the London Treaty (also known as the Anglo-Dutch Treaty) was signed. Under this treaty the British handed control of their colonial territories on the island of Sumatra to the Dutch in exchange for the NEI colonial territories in India and Singapore. Interestingly, this treaty included Aceh; however the Dutch agreed to Aceh remaining independent. In 1871 the Sumatra Treaty was signed, with Britain giving authorisation for the Dutch to invade Aceh – without revoking the Aceh-England treaty of 1811 which still required that England protect Aceh from invasion [9, 12, 30]. The Dutch invaded Aceh in 1873 triggering the Aceh War, which continued off and on until 1942. This war can be broken into two segments, from 1873 – 1903 when the last Sultan of Aceh surrendered to the Dutch forces, and then from 1903 – 1942 covering Dutch colonial rule, and retaliatory Acehnese guerrilla warfare, until the Japanese invaded Sumatra in 1942 (World War II (WWII)) [9, 30, 44, 45]. In 1942, the Dutch forces surrendered to the Japanese and then two major (amongst many smaller) rebellions against the Japanese occurred in 1942 and 1945. These were 'put down' by the Japanese military occupation forces [12, 30, 34].

Following the surrender of the Japanese forces at the end of WWII the Dutch colonial provinces (NEI) proclaimed themselves the new independent nation of Indonesia. From 1945 to 1949 Aceh continued at the forefront of the fight for an independent Indonesian archipelago. In 1945 with a new secular government of Indonesia self-established, the Cumbok Incident occurred where an Acehnese Islamic leader and his followers rebelled against a secular government in favour of an Islamic government, which they felt was

what they had fought/were fighting for [12, 15, 30, 48, 52]. In 1947 the Linggarjati Agreement was signed by Indonesia and the Netherlands with the Dutch recognising Indonesian sovereignty over the islands of Java, Sumatra and Madura, though many felt this was in disagreement with the 1945 proclamation of independence, in which Indonesia held sovereignty over additional islands. In 1949, under the auspices of the United Nations (UN), Round Table Conference Agreements were signed which allowed for the transfer of remaining NEI territory to the fully independent Indonesia. In late 1949 the NEI ceased to exist and the archipelago officially became the Federal Republic of Indonesia. The kingdom of Aceh was included in these agreements though it was not formally part of the NEI. In order to resolve the issue and retain the whole of the island of Sumatra, the new Indonesian Government forcibly annexed Aceh, proclaiming an autonomous province of Aceh would be established. In 1951 Aceh was incorporated into the Indonesian province of North Sumatra with the announcement of the dissolution of the autonomous Aceh province [12, 27, 30, 32-34, 37, 48, 50-52].

Two years later, in 1953, the Islamic Acehnese population openly supported the Darul Islam (House of Islam) rebellion on West Java, which pushed for an Islamic State Government for Indonesia rather than a secular one [12, 28, 30, 33, 49, 51]. Although the Indonesian Central Government (ICG) 'put down' this rebellion for the majority of the population, it took many years to do so. However, for certain elements within the Acehnese and West Javanese population, the rebellion has never ended and the battle is continued through other means. This is discussed in Section 6 [37, 52]. At the same time in 1953, Aceh declared itself an Islamic State independent from Indonesia. The ICG sent troops into the Aceh province to stop this rebellion and in 1959 the ICG agreed to 'special territory' status for Aceh in order to quell the population. This status allowed greater autonomy in religious, educational and cultural matters [30].

The next major milestone in the history of Aceh occurred in 1976 with the founding of Gerakan Aceh Merdeka (or GAM Free Aceh Movement) as a resistance group to pursue independence for the province. GAM's primary target (usually — though not solely — through violent means) was the Indonesian military and, after 1978, included Javanese transmigrants (see Section 4). Indonesia's response to this movement was to conduct mass arrests of GAM members and anyone with suspected affiliation and support to the organisation. This effectively stopped any major actions conducted by GAM in the following years and resulted in many GAM leaders continuing the fight from exile in Holland, Australia and Canada, amongst other countries [12, 14, 15, 29, 30, 37, 38, 47, 48].

After a relatively quiet period with no documented major **events**, in 1988 there were several **events** where the population reacted strongly. In the post transmigration era, the Acehnese felt strongly that corruption, prostitution and gambling (an affront to their Islamic beliefs) were becoming prevalent and some of the resulting actions included the bombing of a hotel, burning of a police station and many protests held against the Indonesian administration [29]. GAM was reincarnated as a new organisation, called the Aceh Sumatra National Liberation Front (ASNLF), as the new political front of GAM, and

Angkatan Gerakan Aceh Merdeka (AGAM) as the official military wing. Most sources however, refer to all the Acehese independence movements as GAM [12, 29, 47].

From 1990 to 1998 the ICG declared Aceh a military operations area under Operation Red Net in order to bring the province in line with the rest of the Indonesian Republic. As a result, in 1990 many Acehese fled the country to Malaysia (and other countries) seeking asylum. In 1995 Malaysia granted temporary residency to Acehese asylum seekers, but in 1996 threatened to terminate the temporary residency status of Acehese, resulting in a flood of refugees to a range of foreign embassies in Malaysia seeking asylum and recognition for their cause. This uncertainty for the refugees also caused Acehese being held in Langkap Detention Centre in Malaysia to riot. After some consideration, in 1997 Malaysia began deporting illegal Indonesians but excluded Acehese. However, in 1998, this deportation order was extended to the Acehese in Malaysia as well, which sparked further riots of Acehese in Malaysia. The following month, the Acehese refugees again flooded foreign embassies in Malaysia seeking asylum [30, 33, 37].

With a change in the ICG in August 1998, the head of the Indonesian Military, General Wiranto, apologised to Aceh for the conduct of his force during Operation Red Net. The ICG stated that Aceh was to be returned to its status as a normal province of Indonesia and Indonesian troops were pulled out of Aceh. As the Indonesian troops withdrew, however, they sparked anti military riots, which turned into anti Chinese riots (which is attributed to Acehese frustration at the relative prosperity of the Chinese under Indonesian military control). Eight weeks later these riots were still continuing and the Indonesian troops were sent back in to Aceh to return calm to the province [29, 30, 33, 37, 43].

Following the reinstatement of troops on Aceh, GAM, in the period 1999-2001, began to pressure ethnic Javanese transmigrants to leave Aceh and return to Java as part of their bid to return Aceh to an independent state [29]. From that time onward, there has been continued and increasing popular support to all wings of the independent Aceh movement – ASNLF, AGAM and GAM. In 1999 many workers demonstrated against corruption at the KRAF² factory in Lhokseumawe, a major industrial region. Shortly after this, a well respected Acehese religious leader, guru Bantaqiah, his followers and students were killed or tortured by the Indonesian Military for being suspected independence leaders. Late in 1999 the population of Aceh held a massive rally in support of a referendum for independence [13, 15, 29, 30, 32, 34, 46-48, 50].

After many years of fighting between the rebel Acehese forces and the Indonesian Military, a ceasefire was signed between the parties in May 2000. Indonesia subsequently reduced the numbers of non-Acehese forces in the province and in June 2000 a three-month ceasefire was implemented. In November 2000 Acehese travelling to the referendum for independence were killed or tortured by the military and in January 2001

² KRAF is the shortened form used for this pulp and paper plant whose Indonesian name is PT Kertas Kraf Aceh.

the ceasefire still in place was extended for another month. In May 2001 a Memorandum of Understanding (MOU) was signed between Indonesia and GAM for peace. Within three months there was a breakdown in the ceasefire with a major battle between GAM and Indonesian troops. The new Indonesian President apologised to the Acehnese and promised to work towards peace. In January 2002 a prominent GAM leader was assassinated and within six months the ICG announced tough action against GAM and branded all members as terrorists. In November 2002, the Indonesian military commenced forcing the population to sign peace agreements by surrounding villages and forcing the elders and leaders to sign. This has contributed in part to the increasing support to GAM. Today there is still no resolution to the issues on Aceh with ongoing population insurgences against the Indonesian Military and increasing support to the independence movements [13, 15, 30, 32-34, 50].

4. Historical Population Demographics in Aceh

Historically, Aceh has had a relatively stable and homogenous population demographic in terms of religion, ethnicity and geographic location although in the last 30 years some of this has changed. For at least the last thousand years, Aceh has been a predominantly Muslim country with small elements of other beliefs such as animism³. Until the late 1970s, the ethnicity and geographic location of the Acehnese people has been very stable with the groups remaining fairly similar to the original ethnic groups at the northern end of the island of Sumatra. As a result, the geographic location of the population has also remained relatively constant with small increases in (the amount of) urbanisation through the population moving to regional centres for work. This stability and homogeneity was changed somewhat when, in 1978, the ICG commenced transmigration of ethnic Javanese to the province of Aceh. Transmigration has been a common practice of the ICG to relocate people from over-populated areas of the archipelago to those with lower density of population per square kilometre [10]. Table 1 compares both the population density (ρ) per square kilometre of Aceh with other Indonesian Provinces and the density per square kilometre of the island of Sumatra with other Indonesian islands using available data from the last twelve years [10, 24-26, 31, 39, 41].

³ The Macquarie dictionary defines animism as the attribution of a soul to animals, plants, inanimate objects or natural phenomena. Animist practice has ancient origins as one of the earliest forms of worship.

Table 1 Population density (ρ) per square kilometre for Indonesian provinces and islands [26, 31]

Province	ρ (km ²) 1990	ρ (km ²) 2000	ρ (km ²) 2002
Nanggroe Aceh Darussalam	66	76	78
Sumatra Utara	139	158	162
DKI Jakarta	12439	12635	12623
Bali	493	559	573
Sulawesi Utara	162	132	134
Island	ρ (km ²) 1990	ρ (km ²) 2000	ρ (km ²) 2002
Sumatra	76	90	93
Java	843	951	975
Bali dan Nusa Tenggara	139	152	155
Kalimantan	16	20	21
Sulawesi	65	78	80

Compared with the other Indonesian provinces listed, Aceh has a very low population density (per square kilometre). Similarly, at the island level, Sumatra still has a relatively low population density and it is this factor coupled with overcrowding on Java which, it is believed, fuels the Javanese transmigration policies – with most transmigrants arriving from either Java or Bali. In addition, the high population density provinces are highly urbanised. In 1978, when transmigration commenced to Aceh, the ethnicity of the province changed according to the data shown in Figure 1. This figure shows that after 1100 years of stable and relatively homogenous ethnicity, in a two year period the population demographics shifted to 2.3% of the total population as Javanese transmigrants, and in the following 15 years this increased to 4.8%. More recent data is not available [10, 24-26, 31, 41, 55].

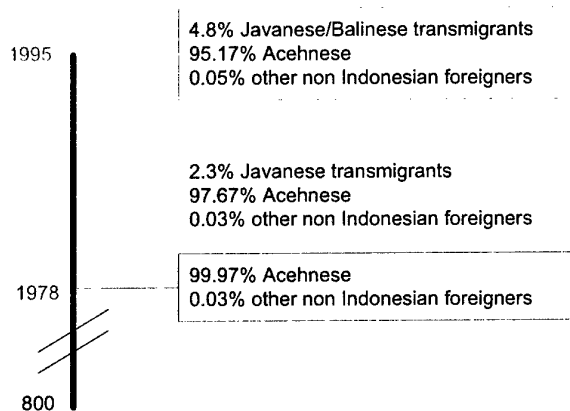


Figure 1 Ethnicity changes in the province of Aceh [10, 24-26, 31, 41, 55]

The effect of the transmigration policies resulted in traditional Acehnese land being given to the transmigrants. This displaced ethnic Acehnese from their traditional villages and forced them into urban centres so that they could gain employment and sustain their

families [12]. Some Acehnese were/are also required to resettle in 'villages' and urban centres which are controlled by the Indonesian Military forces. The violence against transmigrants and the ICG as a result of the transmigration program to Aceh can be seen in several of the **events** studied, such as the hotel bombing, police station attack and anticorruption protests in 1988-89 and the GAM expulsion of Javanese transmigrants in 1999-2001.

The current statistics for Aceh show that 97.5% of the population is registered as Muslim, 1.8% as Catholic and about 0.7 % as Hindu or Buddhist. However, with this religion data it must be recognised that the ICG requires every citizen to be registered under one of five recognised faiths (Islam, Catholic, Protestant, Hindu or Buddhist), which may not be a true reflection of the actual faiths worshipped [10, 24-26, 31, 39, 41, 55]. Prior to Aceh becoming an Islamic centre in the 800s, it was a Buddhist state and much of the population in the interior was animist. It is believed that the official data is skewed with some Acehnese registered as Muslim though practising animism in some form in the interior regions [56]. However, this animism aspect does not seem relevant to this study, as the historical analysis did not reveal religious violence. Most of the violence seen in this study (occasionally termed 'religious' violence by the media) has primarily been a push from a secular to an Islamic state or to an independent/autonomous state free to make independent religious and ethnicity governance choices, rather than fighting against other religious groups.

5. Trends Analysis

The trends analysis for this study was conducted using the methodology described in Section 2 and the East Timor report [6]. The results and further discussions are presented here.

The **causes** of the **events** which are identified in this trends analysis, are discussed in the sections below and are marked in the diagrams in Appendix C. The appendix contains 'detailed' **stimulus/event** diagrams and 'distilled' **stimulus/event** diagrams. The 'distilled' views of the diagrams have been used to minimise the numbers of links in the map and to allow **causes** of a generally similar nature or classification to be grouped together. There is also a very high dependency between **cause** relationships, which is highlighted in Appendix C.3. The terms used for both distilled and detailed analyses were a 'basis set' selected to cover the items of interest. Table 2 describes each of the general terms used to describe a **cause** in more detail. What is identified during the analysis are relationships and the recurrence or patterns of relationships, between **stimuli** and **events** as well as between **stimuli**.

Clearly noticeable is the extremely complex nature of **stimuli** links to **causes** as well as the repetition or persistence of **causes** throughout Acehnese history, indicating a level of

societal 'memory' similar to that found in East Timor [6]. Importantly, it is clear that the traditional structure and culture of Acehese society (including the 'memory') plays a large role in the causal chain of **events** even in the modern era. This is shown by many of the **causes** from its early history also appearing as **causes** for this period. For example, the **stimuli** behind the fight for an independent Indonesia⁴ evolved into the **stimuli** behind the independent Aceh declaration and eventually the formation of the resistance and independence movements such as GAM and ASNLF. This is often attributed to a feeling amongst the Acehese that Indonesia was not the country they had fought for, particularly when the original special autonomous status for the province was revoked in 1953 [12, 30, 51, 53].

Table 2 Definitions of **cause/trigger** terms used (terms with similar definitions are grouped together). The elements which are shaded are similar to those for East Timor shown in [6].

Term Used	Description
Corruption	Corruption at political, economic, trade, military and social levels of governing administrators
Power Plays	Elements such as <i>ulama</i> , <i>uleebelang</i> , Sultans, Dutch and Indonesian Administrators, and ethnic Javanese transmigrants vying for power at different periods in Acehese history. Includes changes to traditional village and societal leadership structures.
Sovereignty	Non-acceptance of trades in Acehese sovereignty from the breach of the Aceh-England treaty. Eventually the country was traded internationally to Indonesia although it was not a Dutch province to be traded. (Aceh-England Treaty; London Treaty; Sumatra Treaty; Linggarjati Agreement; UN Round Table discussions)
Disappointment & Disillusionment and Betrayal	The Acehese felt betrayed and disillusioned on several fronts. They felt betrayed by the English and Dutch over an 'illegal' trade in their sovereignty. They felt disappointed in the Japanese who promised to 'free them from their Colonial Oppressors' [6], and they felt disappointed, disillusioned and betrayed by the ICG after years of Acehese support and resource production for no return.
Historical Status & Perceived Past Success (Pride)	This encompasses the perceived successes of the pre and Acehese Sultanate eras as well as the provinces historical status in terms of events , trade and position as a focal point for Islam in the region. They consider their resistance to 'colonialism' a key feature of their history. This incorporates the role the Acehese played in forcing an independent Indonesia.
Unique Cultural Status and History	Linked to the Historical status and represents the importance the Acehese place on their cultural position and the important role they played in being a centre for Islam for the region amongst all their other cultural beliefs which are closely tied with everything they do.

⁴ The fight for an independent Indonesia was openly conducted and supported by ordinary Acehese (who had been fighting against colonialists for hundreds of years). These Acehese sold their gold and possessions to buy the new Republic its first airplanes and contributed financially and physically to the fight.

Term Used	Description
Courage & Fierce Sense of Independence	Traditionally the Acehnese have a very strong spirit. They will fight for what they believe in and are very independent people. They will fight against any perceived injustice or threat to their status.
Fair Share & Fair Go.	The Acehnese believe in fair and equal shares of contributions as shown by their traditional export and farming methods and the fact that, in more modern times, the peasants and traditional land owners, and not private corporations (as in other provinces), run and own many of the agricultural sectors. However, they do not feel that they are reimbursed appropriately for their contribution; they feel that most 'profits' are taken by the ICG and distributed elsewhere.
Recognition	Feeling by the population that the worldwide arena was not aware of their plight and their desire for external intervention.
Military control & Human rights	This refers to the now well documented use of force by the Indonesian Military to control the population and of the many human rights abuses [47]. Aceh has been designated a 'Military Operations Area' or 'special military zone for military operations on and off for many years since the 1950's.
Freedom	This includes the right to apply Islamic laws and codes and also covers general freedom to act and govern autonomously.
Land Issues	This involves traditional Acehnese land being forcibly taken from the owners and given to ethnic Javanese transmigrants with no compensation for the traditional owners and also includes the displacement of the traditional landowners from their homes/villages and employment.
Transmigration & Rapid Urbanisation	New settlements of transmigrants have been introduced to Aceh and as a result Acehnese are displaced from their traditional locations and moved closer into military districts for control. Many are forced into more urbanised locations to seek employment to replace lost provisions from their land.
Self Defence against Invaders	This covers a feeling of invasion from the Dutch and has continued and propagated into a feeling of invasion by ethnic Javanese transmigrants and the Indonesian Military.
Islamic State or archipelago, Independence & Autonomy	The Acehnese at various times have wanted an independent Islamic state or archipelago; autonomy to apply Islamic law and govern the province themselves as part of Indonesia or full independence if the above cannot be granted.
Anti Colonialism	This has stemmed from several hundred years of withstanding the Portuguese and Dutch colonialists (and many consider the Indonesians now colonialists) and from their past of having an Acehnese structure altered.
Pollution and Environmental Damage	This is a recent cause with traditional Acehnese sites becoming polluted through resource use (i.e. oil production) by offshore companies in collaboration with the ICG. This has affected the use of the land as well the general health of nearby populations [12].
Trade	Aceh has been a major trading centre in the archipelago since the 6 th Century. The Acehnese have fought many battles to maintain this status throughout history.
Economics, Education, Health, infrastructure, unemployment, etc.	Inequalities in many areas; commensurate proportion of revenue redistributed by the ICG to Aceh compared with Acehnese resource supply to the ICG; forced to use standardised teaching rather than Acehnese and Islamic methods etc.; transmigrants gaining administrative positions over native Acehnese.

5.1 Relationships between Causes and the Acehnese Societal Memory

It is interesting to note from this analysis that the majority of the **causes** are similar throughout the period investigated and that it is very simple to see trends repeating. Even though the **trigger** to the **event** may have changed over the years a new **trigger** results in similar Acehnese reactions to **stimuli**. There are some additional **causes** which are based in more modern times; to some extent these can be traced back to relationships with previous **causes** and past societal reactions by conducting further historical investigations into the **events** through the literature and by linking the **causes** and trends. Many of the **causes** (either recurring or with past relationships) can be classified as persistent **causes** as they recur throughout documented Acehnese history and often the persistence results from the Acehnese societal ‘memory’. In other words, past **causes** have been identified as **stimuli** for later **events** through this ‘memory’. These are included in the persistent **causes** shown in Table 3. Some examples include betrayal by various authorities, non acceptance of Aceh’s sovereignty having been traded by other powers and anticolonial/autonomy/independence sentiments.

Table 3 Persistent causes over time

Detailed Persistent Causes	Distilled Persistent Causes
<ul style="list-style-type: none"> • Trade • Anti-colonialism • Islamic State • Self Defence against ‘invaders’ • Autonomy (independence) • Freedom • Historical status & perceived past success • Betrayal • Disillusionment • Non acceptance of sovereignty trade • Power plays 	<ul style="list-style-type: none"> • Trade • Independent State (incl. Islamic and anti-colonialism) • Transmigration issues • Power plays • Betrayal/disillusionment • Non-acceptance of sovereignty trade • History, culture and societal features

For this study it was difficult to distinguish between **causes**, as many are interdependent, which can make it difficult to distinguish true **causes** – or identify major **causes** or **triggers**, as shown in Appendix C. 3. This can be seen by one example in Figure 2. Some of these examples are discussed below in further detail. The high interdependency in the appendix is shown at both the detailed and distilled levels using a traffic light system where red indicates high level of dependency; yellow indicates a medium level of dependency and green indicates a low level of dependency. No colour indicates no or negligible dependency.

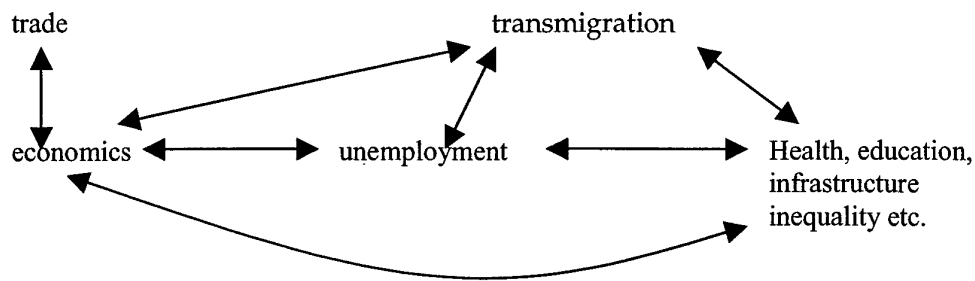


Figure 2 Short example showing a causal chain link and a good example of the complexity of the problem. Derived from Appendix C.3.

An example of societal cause evolution tied to Acehese memory is the change in the complex balance of traditional Acehese socio-political power which has seen GAM in recent times replacing village elders to reflect more traditional roles. For about 800 years the Acehese had a complex socio-political system, which consisted of a Sultan (or Sultans) acting as a figurehead (and mostly holding power) over a 'loose' confederation of local villages and districts. Then each tribe/village or district (depending on time and location) was headed by an *uleebelang* for that area. These *uleebelang* were loyal to the Sultan. In addition *ulama* (religious Islamic scholars who today are often called guerrilla fighters) maintained the Islamic orders and codes within the region and advised the Sultan and *uleebelang*. The general population learned from the *ulama* and lived under the *uleebelang*. In addition to this structure (described very simply here) there were ties of Islamic Brotherhood, ties of kinship and ties at the village level. At the end of the first part of the Aceh War in 1903, when the last Sultan surrendered, the Dutch altered this complex socio-political structure by installing a Dutch governor and changing the power of the *uleebelang* by raising them to the status of district heads. This included the power to collect taxes, which had never been their role in the past. The overall effect altered and strained many of the lineage and familial relationships including leadership (and succession), traditional leadership beliefs and kinship/village ties. During the period post 1903 the *ulama* took up the anti-colonialist fight and many of the population rallied to them, continuing the Aceh War until 1942 [9, 12, 44, 45]. In an attempt to rebalance the population, in 1918 the Dutch allowed native courts to run in Aceh (which followed the traditional processes) except for the area immediately around the capital Banda Aceh, which held native courts under the direct rule of the Dutch colonial Governor. However, the new *uleebelang* (heading up the courts as the old ones did) with different rules of succession and powers influenced by the Dutch, created a new 'technocratic elite' which came into conflict with the traditional *ulama* and hence the population and traditional socio-political structures [9]. In other words, the tradition is the role played, not who plays it.

Once Aceh was incorporated into the Republic of Indonesia and the special autonomy of the province revoked, it was also required to institute ICG secular laws, which conflicted with Aceh's traditional customary laws concerning land and marriage amongst other issues [12, 30]. This has been another driver for autonomous status or independence for

the province. The official socio-political structure of Aceh is ICG provincial administrators and military control with sanctioned *ulama* 'leading' the people but holding no real power. However, many Acehnese still obey and follow traditional law and *ulama* and hence support GAM replacing village elders with traditional pre independence succession elders similar to traditional *uleebelang*, and support the *ulama* that are in favour of a move either to independence or autonomy with Acehnese law. This has all contributed to the continuing support to GAM and ASNLF and of the population continuously revolting against the ICG [12, 13, 15, 46-48, 50, 51, 53]. In addition, some sanctioned *ulama* support the ICG position, which in turn influences other elements of the population, or political position adding further to the complexity.

A reduced simple example of how one complex causal link (evolution) was developed is shown in Figure 2. This illustrates how the complexity of the problem can develop very quickly. This relates to Appendix C.3 by showing a greater level of detail of the relationships between **causes** at the specific detail level, and **stimulus/event** relationships and relationships between **stimuli** shown in Appendices C.1 and C.2 are derived from this level of detail. In the example in Figure 2, we show the high interdependency between five causes. The trade and economics of Aceh are closely linked with the revenue generated by the substantial trade out of Aceh underpinning the economy of the province. This has been the case since Aceh started controlling trade through the archipelago early in 800 AD. However, much of this revenue is not redistributed by the ICG back into Aceh resulting in a depressed economy and consequent loss of employment, infrastructure, health facilities, education etc. The transmigration policy of the ICG has also resulted in fewer employment opportunities for the Acehnese with transmigrants winning the urban based jobs and taking over the traditional land worked by the Acehnese villages and landowners. Finally, there are substantial financial, employment and education inequalities between the transmigrants and the Acehnese. Due to the high interdependency of these **causes** they have the potential to feed off one another and end up in a negative feedback cycle.

An interesting outcome of this analysis has been the identification of the motivation or impetus for change in the population. It appears that over the history of the province, if there was no **stimulus** to the population, there was no change in the status quo. A good example is the stability of the Acehnese socio-political system (even though it was very complex) over a long period until a colonial power — the Portuguese, Dutch or British — attempted to intervene and gain control of the area. This impetus/motivation was the threat to Acehnese status, sovereignty and successful status quo in the region.

An important outcome of this analysis is the identification that different 'populations' (in terms of urbanisation and modern education and demographics) in Aceh over the last 500 years have had similar reactions to applied **stimuli**. That is, for a similar or related set of **causes**, the different populations have reacted in the same way. This may be due to the insurgent nature of Acehnese history resulting in the **events** for this study sitting in the violent end of the spectrum of documented events. The outcome however might indicate that any future **stimulus** applied to the Acehnese which is similar to those seen in the past, may result in an insurgence by the population. It might also indicate that any future

triggers might also cause a population insurgence if the societal 'memory' and underlying past **causes** are not understood and allowed for.

It is interesting to note that, throughout the history of Aceh, most insurgences were put down and not actually 'resolved'. In some cases, amendments were made, such as the reinstatement of the native courts by the Dutch and the provision of special territory status by the Indonesians. However, in the main the underlying **causes** were not addressed as part of the resolution. This may be a factor which has allowed the Acehnese 'memory' to become such an important factor of their society and why the **stimuli** are extremely complex and highly dependent.

5.2 Frequency Analysis of Causes and Events

Utilising the diagrams showing the relationships between **events** and **causes** (Appendix C) it was possible to extract some limited (and subjective) quantitative data allowing a simple frequency analysis comparing numbers of **events** to **causes** and vice versa. Figure 3 shows the number of separate **causes** attributed to each **event** and also gives an indication of the complexity of the relationships. Figure 4 shows the number of separate **events** associated with each **cause** and further demonstrates the complexity in the relationships with freedom and betrayal featuring in many **events**.

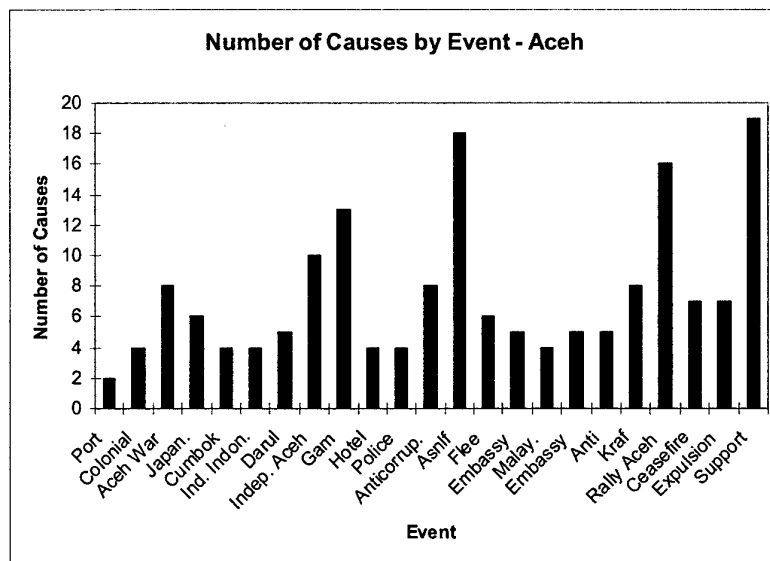


Figure 3 Histogram showing number of causes by event with event listed from left to right in chronological order.

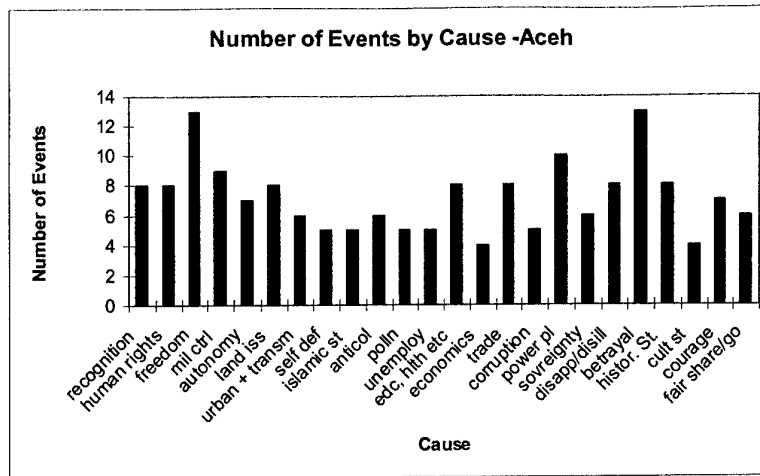


Figure 4 Histogram showing number of events by causes

Of note from these two figures is the cyclical nature of the **cause** complexity over time. In particular, Figure 3 indicates that the number of **causes** contributing to an **event** cycles from relatively low to a maximum and down again over periods of time. This might imply that over time there is a 'memory' or build up of **causes** that contribute to some 'boil over' **event**, which then results in a lower number of **causes**. There are few examples where concessions were made to relieve the built up of anger of the population at the end of these cyclical periods, which may be a factor in the repetition of the effects. This might indicate two things. the first is that as this data is taken from what could be considered 'modern' times, then the overall greater complexity of a 'modern' society is fuelling the increased distribution of **causes**. The second is that the greater 'morality' of the modern era raises issues such as 'human rights' that in earlier times would not have featured so strongly, from the viewpoint of those documenting the events at the time.

From the figures, it is clear that the support to the independence movements is extremely complex with an excess of 17 causes attributed to these **events**. This might indicate that the solution to the **events** arising through these movements will not be simple and will require significant (historical) concessions or recognition as well as consideration of a wide range of the factors in the **stimuli**.

It is interesting to note from Appendix C and the figures above, that for Aceh, politics and changes to society including frustration and feelings of betrayal are the most frequent contributors to **stimuli** for **events** which is not the case for East Timor [6]. For East Timor economics and politics were the most frequent contributors with external influences becoming more important as time progressed. For Aceh there was no clear change in **stimuli** (or categories of) over time though this may be masked by the complexity of the **stimuli**. This may indicate that the various societies have different key drivers for reaction and that these may be very different for different countries.

It is interesting to note that the number of separate **causes by event** in Figure 3 demonstrates a similar cyclical pattern to that seen in East Timor [6] and which might indicate some trend amongst countries which have had insurgences put down rather than resolved. This also indicates a level of Acehnese societal memory as was seen very strongly in East Timor.

5.3 Positive and Negative Influences

As a part of this analysis it was possible to undertake a very simplistic look at the apparent positive and negative influences on the population over the time period investigated. Table 4 shows a list of these influences which for simplicity have been kept as generic as possible. Both long and short term influence considerations are incorporated into this analysis. They have been incorporated into this general table as part of the analysis and are not distinguished – however this could be achieved in a more ‘detailed’ analysis. The definition and analysis of positive and negative influences is, of necessity, extremely subjective. The definitions used in this study are:

- Negative Influence: population reaction to **stimuli** where violence within the population or to others occurs (eg population attacks a part of a town)
- Positive Influence: population reaction to **stimuli** where no violence occurs or peaceful mass support or assimilation occurs (e.g. new religion is accepted and adopted by the population and there is no violent reaction or changes to everyday life) could be considered to be a non-negative influence.

The positive and negative influences are different from the **causes** in that they are more specific influences on the society, which in some cases do correspond to **causes** and in some cases are **triggers**. They are merely a comparative list of items, which caused either positive or negative reactions from the population and can be correlated with the **stimuli** discussed elsewhere in the report.

Table 4 Generic Positive and Negative Influences over time for Aceh

Positive Influence	Negative Influence
<ul style="list-style-type: none"> • Trade (incl. Indian, Arab, Chinese etc) • Arrival and adoption of Islam • Attempt to re implement traditional ruling and court systems • Creation of an independent archipelago • Education of the population • Decree of special autonomy for the province • Fair distribution of revenue, goods & services and recognition 	<ul style="list-style-type: none"> • Betrayal and disillusionment of broken promises • Inequality • Insensitivity to complex socio-political system esp. by Dutch, Japanese and Indonesians • Non-recognition of local customary law • Controlled government and state • Unequal proportion of revenue return compared with resource provision (ICG) • Transmigration effect on employment, location and village ties • Corruption and affronts to Islamic beliefs

Positive Influence	Negative Influence
	<ul style="list-style-type: none"> • Breach of treaty on sovereignty • 'Invasion' by colonial forces • Annexation of Aceh and incorporation into Indonesia • Violent military control operations • Forced peace agreements • Human rights abuses

5.4 Time Delays between Causes, Triggers and Events

This analysis did not show any correlations between the **causes**, **triggers** and **events** with respect to time delays between the factors.

There were, however, a few items of interest that resulted from this analysis. Firstly, in those cases where an identifiable **trigger** is present and can be dated, it appears that the time delay between the **trigger** and **event** has decreased in more recent times. Since the 1980s this delay has become days and weeks compared with the months and years which were previously seen. It is suggested that modern communications, transport and education play a part in reducing this timeframe. This could also be attributed to a more established and organised resistance movement, taking advantage of modern communications to pursue their cause. Further investigation of this was not within the scope of this study. Secondly, the **cause trigger** delay is similar to the Timorese 'memory' discussed in an earlier report [6] and shows more evidence for the Acehnese societal memory discussed earlier. This is in respect to **causes** from the past being persistent and appearing as **causes** again at a later date. In addition, it is noted that some of the **causes** and **triggers** have no specific time frames, as they appear to be ongoing. This may be a result of many **events** (specifically insurgences) being 'put down' militarily rather than being resolved which in itself may contribute to strong underlying resentment.

6. Events of Interest

In this section we will describe in further detail six of the **events** which were used to derive the causal trends. They are examples of the potential escalation of situations, and further illustrate the complexity involved and highlight the nature of the reactions of the population to the **stimuli**. They also highlight the causal chain and Acehnese 'memory', and some show how putting down and not resolving an **event** can lead to a worse situation such as in the case of the Darul Islam rebellion.

6.1 Portuguese Resistance (1500-1614)

In the early 1200s the major trading port and dominant kingdom on Aceh was known as Pasai (Samudra Pasai), located near the trading port and old kingdom of Perlak. Most historians agree that the Samudra Pasai kingdom was a continuation and composite of both the old Perlak kingdom and another older kingdom called Pase [37]. From about 1500 through to 1614 the Acehnese fought many battles against the Portuguese in resistance to colonialism and to maintain their independent posture as a trading centre in the archipelago. Additionally, the Acehnese were not prepared to convert to Catholicism, wanted to protect their trade and power in the region, and were also fuelled by pride in their perceived very successful past history and culture. Early in the 15th century the Malacca kingdom on the Malayan peninsula became more prominent with its trading ports and rivalled those in Aceh. Malacca wanted traders from Java and other areas of the archipelago to trade through its ports, but these traders already had agreements with the powerful Pasai ports and said they would need the leave of the Acehnese to do so. Through an agreement with Java, Pasai allowed the Javanese traders to use both Pasai and Malacca ports and hence both Malacca and Pasai became even stronger and friendly rivals in terms of control of maritime trade [9, 10, 12, 30, 34, 44, 45, 50, 54].

During this period the Portuguese were some of the first active colonialists in the region. The Portuguese wanted the trading centres (namely Pasai and Malacca) in order to control trade through the region and to their colonies. In 1511 Malacca fell to the Portuguese so trade focus for the region and the straits moved back to Pasai. After some strong resistance, in 1521 the Portuguese also conquered Pasai and brought that kingdom to an end. During 1500-1521 on another part of Aceh, (Aceh Besar), a smaller kingdom called Lamurai came to prominence and became known as Aceh Darussalam. In 1523 the Sultan of Aceh Besar continued the struggles of the previous Sultan of Pasai and attacked the Portuguese in Pasai and drove them from Aceh. It is said [9, 30, 37] that the height of Aceh's power was from 1607 to 1636 during which time there were frequent wars with the Portuguese at Malacca and the final defeat of the Portuguese fleet by the Acehnese at Bintan in 1614. After this defeat, the Portuguese did not attempt to take any part of Aceh or nearby trading ports [9, 30].

Some of the primary **causes** of this colonial resistance include:

- Trade (Malacca relationships/prosperity from trade control)
- Anti colonialism
- Self defence (protection of trade, power, sovereignty and cultural interests)
- Power and control
- Independence (retaining sovereignty)
- Historical status and courage
- Established Islamic faith versus attempts at catholic missionary conversion

6.2 Aceh War (1872-1903/1903-1942)

From 1641 until 1811 the Acehnese successfully fought Dutch attempts to add Aceh to their colonial conquests in what was to become known as the NEI and is currently the Indonesian Archipelago. In 1811 the Aceh-England friendship treaty was signed. This provided for mutual defence for the two states — an attack against one state was considered to be an attack against the other. At this time, the British had taken colonial 'possession' of areas of the southern end of the island of Sumatra. Thus far Aceh had successfully resisted their advances but did allow this friendship treaty and the trade it promoted. This agreement also minimised conflict between the different kingdoms already in existence on the various parts of the island of Sumatra. It is noted 'that the Aceh-England Treaty was never revoked and hence under international law the United Kingdom is still obliged to defend aggression from foreign powers towards Aceh and her sovereignty' [30].

In 1824 the London Treaty (also known as the Anglo-Dutch Treaty) was signed. Under this treaty the British handed control of their colonial territories on the island of Sumatra to the Dutch in exchange for NEI colonial territories in India and Singapore. Interestingly, this treaty included Aceh, but Aceh retained independence. Aceh never signed a treaty with the NEI and the Netherlands refused to negotiate with the Acehnese leaders and Sultan in Banda Aceh. In 1871 the Sumatra treaty was signed, with Britain giving authority to the Dutch to invade Aceh, without revoking the Aceh-England treaty of 1811. The Dutch declared war and invaded Aceh in 1873, triggering the Aceh War which continued off and on until 1942. It was the most difficult and longest war ever fought by the Dutch [9, 12, 30, 34, 44, 45, 50].

During the first part of the Aceh War, 1873 – 1903, the Acehnese fought a style of warfare unfamiliar to the Dutch colonial forces – today known as guerrilla warfare. With little understanding of the complex Acehnese socio-political environment and distribution of power, the Dutch attempted to end the war by taking the residence and seat of power of the Sultan. The Sultan escaped and the fight continued. In 1903 the last official Sultan of the kingdom of Aceh surrendered to the Dutch forces. The Dutch then implemented a colonial Governor and administrative system [9].

The second phase of the Aceh war, from 1903 to 1942, began when the last Sultan of Aceh surrendered in 1903 and new 'Sultans' or leaders rose to lead the population in the fight against the Dutch. In 1907 the guerrilla warfare fight was intensified dramatically by Sultan Muhammad Daud who, after being captured by the Dutch and exiled, led much of the fight from offshore. The *ulama* then became the leading force for the people to follow in resisting the Dutch. The *ulama* continued the fight after Sultan Daud was removed as the Dutch had abolished the Sultanate system in 1903 and changed the role of *uleebelang* to district chiefs. The *ulama* considered the Dutch administration to be *kaphee* – or the unbeliever according to Islamic teachings. Towards the end of the Dutch occupation, the reformist *ulama* and new *uleebelang* worked together to continue fighting the Dutch [9, 12, 30, 34, 44, 45, 50].

Some of the primary causes of this colonial resistance include:

- Trade (and protection of)
- Anticolonialism
- Autonomy/independence (and a sovereign state/Sultanate)
- Freedom
- Self defence against the Dutch invasion of *kaphee*
- Breach of treaty (Aceh-England, London and Sumatra treaties)
- Betrayal by both the British and the Dutch
- Historical status
- Local traditions and customary law ignored and changed by colonial powers
- Dutch having no/little awareness of Acehnese socio-political structure
- Dutch didn't understand or try to use Acehnese socio-political system, or ties at the Islamic, village or kinship level
- Dutch introduction of taxes and change in role of *uleebelang* (taxes, landowners, distance from the population, forced labour)
- Dutch confining *ulama* to purely religious matters and fuelling intent to return to 'traditions'

6.3 Japanese Rebellion (1942-1944)

The Japanese invaded the island of Sumatra and hence Aceh in 1942. On the arrival of the invasion forces, the Dutch forces surrendered to the Japanese. Prior to their arrival, the Japanese had run a campaign of propaganda claiming they would be a 'big brother' for the Acehnese and would free the island from their 'colonial oppressors', similar to the campaign which they had run on the island of Timor [6]. Hence most Acehnese were looking forward to and welcomed the arrival of the Japanese in order to get rid of the Dutch and return to traditional ways. However, when the Japanese took control of the area, they did not change anything and continued the Dutch practice of using *uleebelang* to run the government, maintained a colonial style military administration and treated the *ulama* as purely religious figures. The *ulama* were used for propaganda dissemination to the population and *uleebelang* were used to collect crops, taxes and organise labour, which stirred up further resentment. The Acehnese became disillusioned with the Japanese very quickly as they did not meet expectations or return to the traditional socio-political system. As a result, the first of two major (amongst many smaller) rebellions against the Japanese occurred near Lhokseumawe in 1942. This was 'put down' by the Japanese and in 1945 the second major rebellion occurred in Jeunieb [12, 30, 34, 51]. It is difficult to find detailed documented data of this period on Aceh and most sources do not detail the rebellions.

Some of the primary causes of this resistance include:

- Sovereignty of the kingdom of Aceh
- Disappointment and disillusionment
- Power plays (traditional leaders versus relatively newly empowered *uleebelang*)
- Anti colonialism
- Self defence from the next 'invaders'

- Freedom
- Japanese didn't meet expectations and didn't fix the socio-political problems

6.4 Darul Islam (1953 – today)

In 1953, the Acehnese population supported the Darul Islam (House of Islam, DI) rebellion on West Java, which pushed for an Islamic State Government for Indonesia rather than a secular one. Although the ICG 'put down' this rebellion for the majority of the population, it took many years to do so. However, for certain elements within the Acehnese and West Javanese population, it has never ended and the battle continues through other means [37, 52]. Even after the ICG announced it was over, the resentment fuelling the rebellion still simmered on West Java through the DI movement (also known as NII Negara Islam Indonesia) and its armed wing called the Tentara Islam Indonesia (TII). The official ICG designation for the group is DI/TII. Over time, this group has evolved into what is currently known as the terrorist group Jemaah Islamiah (JI) [49, 57].

Although the primary rebellion occurred on the island of West Java, Aceh also rebelled against the secular state and supported/financed the rebellion on Java. Aceh proclaimed its independence as an Islamic State. With the rebellion spreading and Aceh apparently fuelling much of it, the ICG sent troops into the Aceh province to stop this rebellion [10, 12, 14, 28, 30, 33, 34, 37, 49-51]. To further assist in ending this rebellion, in 1959 the ICG agreed to 'special territory' status for Aceh in order to quell the population. This status allowed greater autonomy in religious, educational and cultural matters.

Some of the primary causes of this resistance include:

- Islamic state (return to a Sultanate and push for an Islamic Indonesia)
- Power play (traditional, reformist, administrative)
- Historical status
- Betrayal (after support for Independence for Indonesia, Aceh felt betrayed)
- Disappointment/disillusionment

6.5 Anticorruption/antiprostitution/anti gambling events (1988-1989)

After a relatively quiet period with no major events, 1988 saw many events where the population reacted quite strongly to stimuli. In the post transmigration era, the Acehnese felt strongly that corruption, in the form of prostitution and gambling, which are an affront to their Islamic beliefs, were becoming prevalent activities undertaken by Indonesian officials (including the military) and transmigrants. The first event was the bombing of a hotel in Lhokseumawe where the local population believed that Indonesian officials were carrying out prostitution. The second event was the riot and burning of the Idi Cut Police Station in Aceh Timur after reports were released of a police officer sexually assaulting a local woman. Finally, throughout 1988 and 1989 there were many anti corruption and anti gambling protests held against the Indonesian administration and transmigrants [13, 30, 33, 36, 38, 43, 48, 53].

Some of the primary causes of this resistance include:

- Disappointment/ disillusionment in the ICG (lack of respect for traditional beliefs)
- Courage and sense of independence
- Corruption
- Economics (effects of gambling and corruption)
- Unemployment (effects of gambling and corruption)
- Trade (effects of gambling and corruption)
- Affront to beliefs
- Education, health, infrastructure etc (effects of gambling and corruption)
- Land issues – corruption with ICG/transmigrants
- Recognition
- Human rights
- Transmigration

6.6 Continued and Increasing popular support to GAM (1999 – today)

Since 1999 there has been continued and increasing popular support to all wings of the independent Aceh movement. After many years of fighting between the rebel Acehese forces and the Indonesian Military, a ceasefire was signed between the parties in May 2000. Indonesia subsequently reduced the numbers of non-Acehese forces in the province and in June 2000 a three-month ceasefire was implemented. In November 2000, Acehese travelling to the independence referendum, which was fuelled by the referendum in East Timor, were killed or tortured by the military, and by January 2001 the ceasefire was extended for another month. In May 2001 a MOU for peace was signed between Indonesia and GAM. Within three months there was a breakdown in the ceasefire with a major battle between GAM and Indonesian troops. It is difficult to ascertain the cause of the breakdown. The new Indonesian President apologised to the Acehese and a promise was made to work towards peace. In January 2002 a prominent GAM leader was assassinated and within six months the ICG announced tough action against GAM and branded all members of the independence movements as terrorists. In November 2002, the Indonesian military commenced forcing the population to sign peace agreements by surrounding villages and forcing the elders and leaders to sign. This has contributed in part to the increasing support to GAM. Today there is still no resolution to the issues on Aceh with ongoing population insurgences against the Indonesian Military and increasing support to the independence movements. The Acehese independence movements see themselves in a similar light to the East Timorese independence movements and as such are also driven by the Timorese successes [12-15, 30, 33, 34, 36, 46-48, 50, 51, 53].

Some of the primary causes of this resistance include:

- Fair go (revenue redistribution of funds commensurate with resource supply)
- Courage and sense of independence
- Perceived historical status
- Betrayal and sovereignty
- Disappointment/ disillusionment
- Power play

- Corruption
- Education, health, infrastructure etc.
- Trade
- Economics
- Unemployment
- Pollution and environmental damage by offshore and ICG companies
- Land issues from transmigration
- Military control by Indonesian troops
- Autonomy/freedom
- Human rights
- Secular versus Islamic laws

7. Lessons Learned

This report highlights several lessons of relevance to operations in urban environments. Of interest is the Acehnese societal 'memory' (persistent **causes**), which appear to act as **causes** to new **events**. For countries with this societal memory, if it is not accounted for, it may be used by the population (or used by other elements to stimulate the population) in some **event** against a force operating in that environment. Although Aceh has a very different history, religious focus and population demographics to East Timor [6], this study has still identified a societal memory similar to that of the East Timorese, which impacts on later **events**.

Before any military operation, there is a need to understand the history of a region as issues, which may relate to **events** occurring many years earlier, can lead to insurgences or negative reactions by the local population if a **trigger** is applied. This **trigger** may bear no relation to the underlying **causes**. Indeed the time gap often observed between **event** and **causes** in these societies may make it exceedingly difficult to predict. This 'memory' and the positive influences are also open to manipulation by external influences but could also be used to advantage by friendly forces.

Of particular import from this study is the impact of perceived betrayal. An example is disappointment and disillusionment by the population with other elements (such as colonial or governing powers) for not delivering promised changes in exchange for support. Indeed much of the complexity in the **stimuli** relationships for Aceh resulted from these **causes**. It is also proposed that the use of modern communications in Aceh has contributed to a decrease in the time to reaction by the population when stimuli are applied.

For the environment in Aceh, it is clear that **stimuli** for the support to the independence movements are extremely complex. This might indicate that the solution to the **events** arising through these movements will not be simple and will require significant historical

concessions or recognition as well as consideration of a wide range of the factors in the **stimuli**. Additionally, the cyclical nature of the **stimulus** input to **events** is evident in Aceh with a clear pattern of **events** building up in **stimuli** complexity to some 'boil over' point then subsequent **events** having lower numbers of causes contributing to them. This makes the **events** following a 'boil over' **event** less complex in nature. This might indicate that timing of operations and knowledge of the event history on the island could determine the success of an operation or even allow additional points for manipulation.

Even though the **stimulus** relationships were significantly more complex than the previous study of East Timor and there was less detailed information available, the analysis using this methodology has still proved valuable, giving clear insights into the population reactions. The utility of this methodology in fact allowed this analysis to be undertaken with relative ease.

8. Conclusions

This study identified a series of trends which have been consistent over the last 500 years as **causes of events** in the Indonesian province of Aceh (Nanggroe Aceh Darussalam). In addition to the trends, the research also identified some important lessons for both urban operations and Aceh to add to those determined from the East Timor analysis [6]. We have further shown the utility of this type of historical analysis in providing insights to population reactions to given **stimuli** even where complex **stimuli** relationships and less detailed information exist. This may also provide potential data in an appropriate format for any forecasting techniques such as trends impact analysis. There is clear evidence of betrayal, disillusionment and disappointment being key **triggers** or features to the Acehnese population undertaking some insurgent event.

An important outcome of this analysis is the identification of a societal memory in the Acehnese population similar to that found in a similar study of East Timor [6] – even though the history, demographics and cultures of the populations are different. The societal memory of **causes** can be linked to many **events** studied.

It was not possible to determine how often the **causes** occurred without **triggering** an **event** as these situations are of little general interest and hence not reported or recorded throughout history. This information would also provide valuable insights to the reaction and behaviour of the population for comparison.

The utility of the information provided from this type of historical analysis will allow future work to undertake case studies of a similar nature for other regional areas of interest.

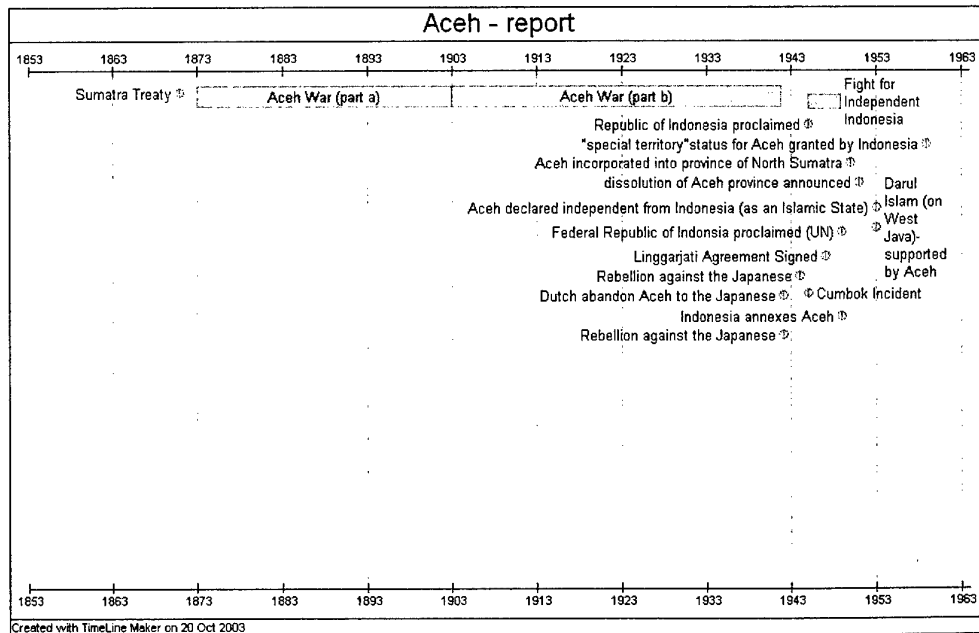
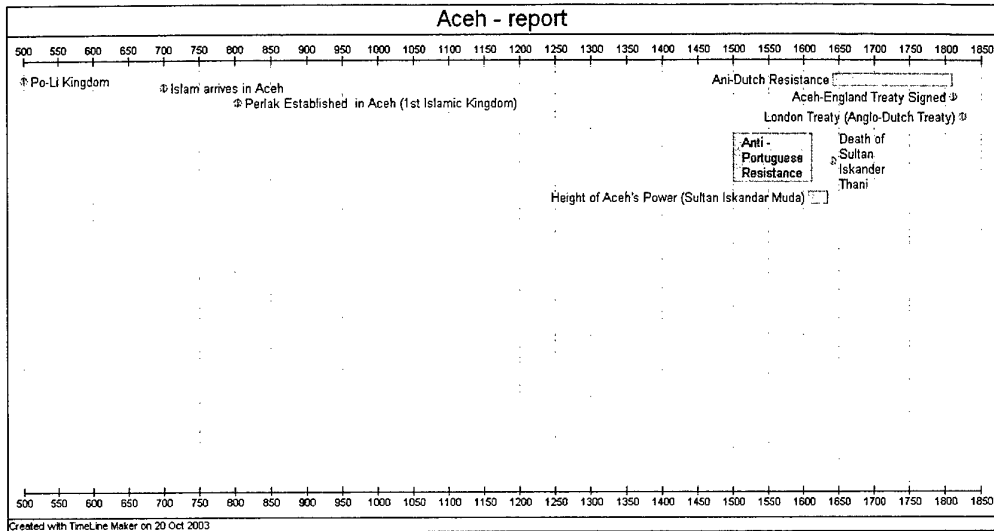
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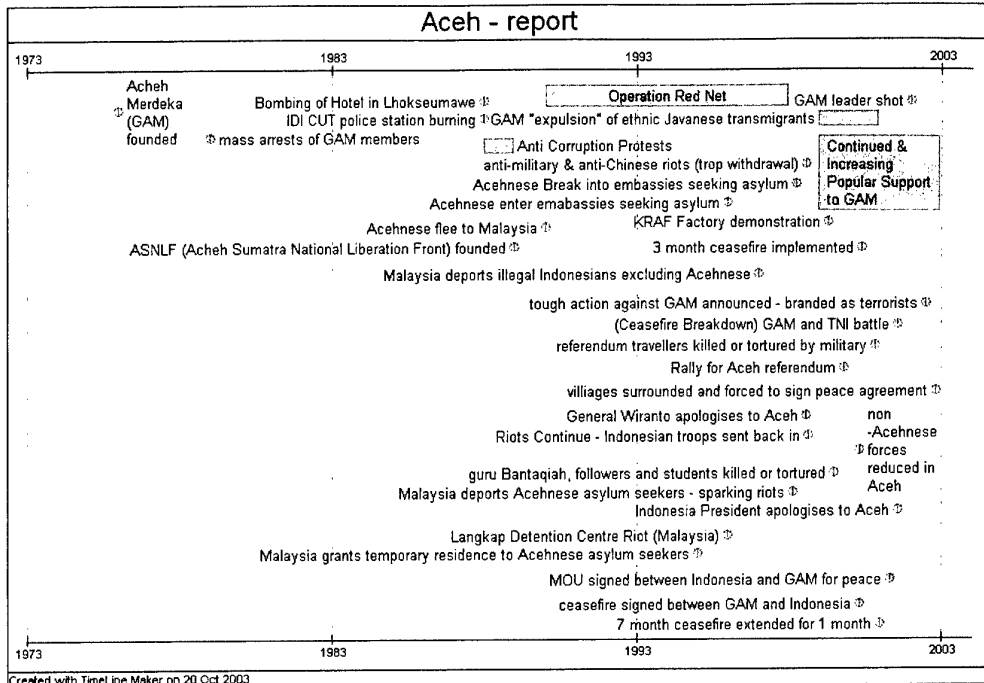
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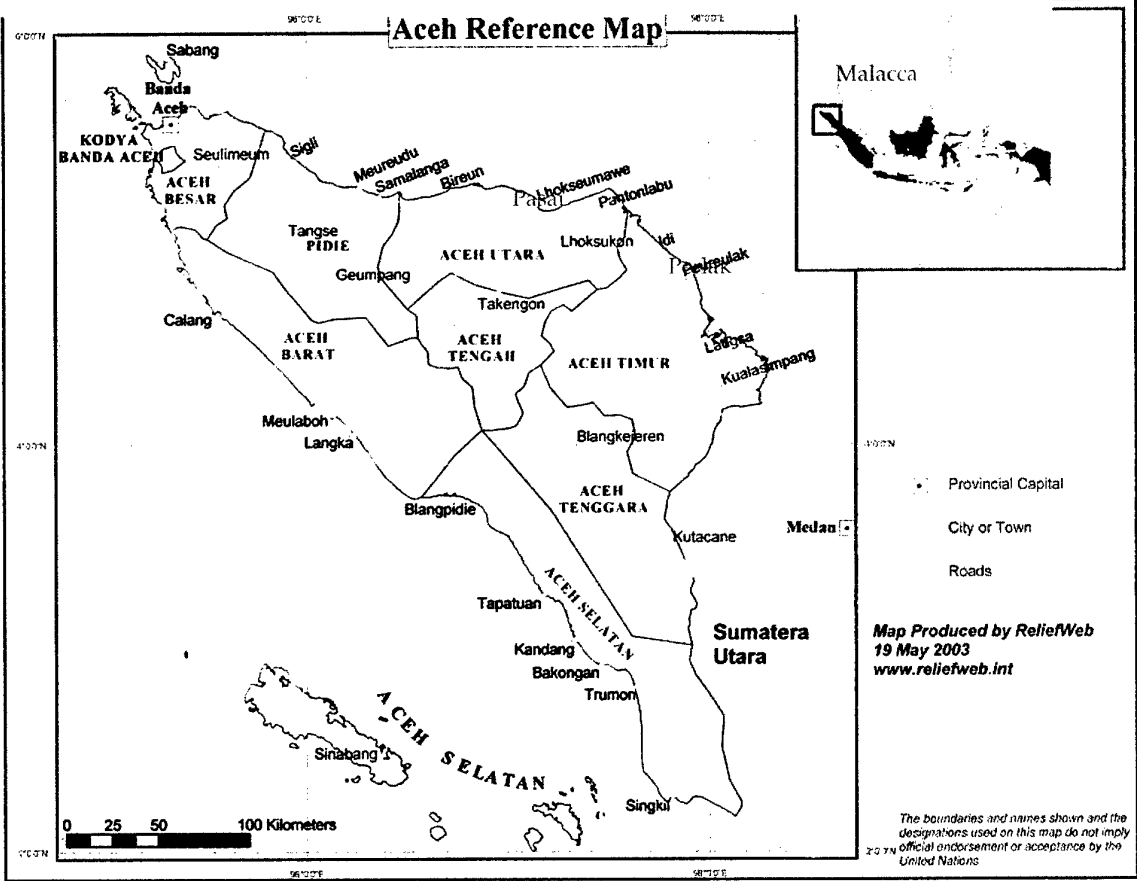
Appendix A: Timeline of Events





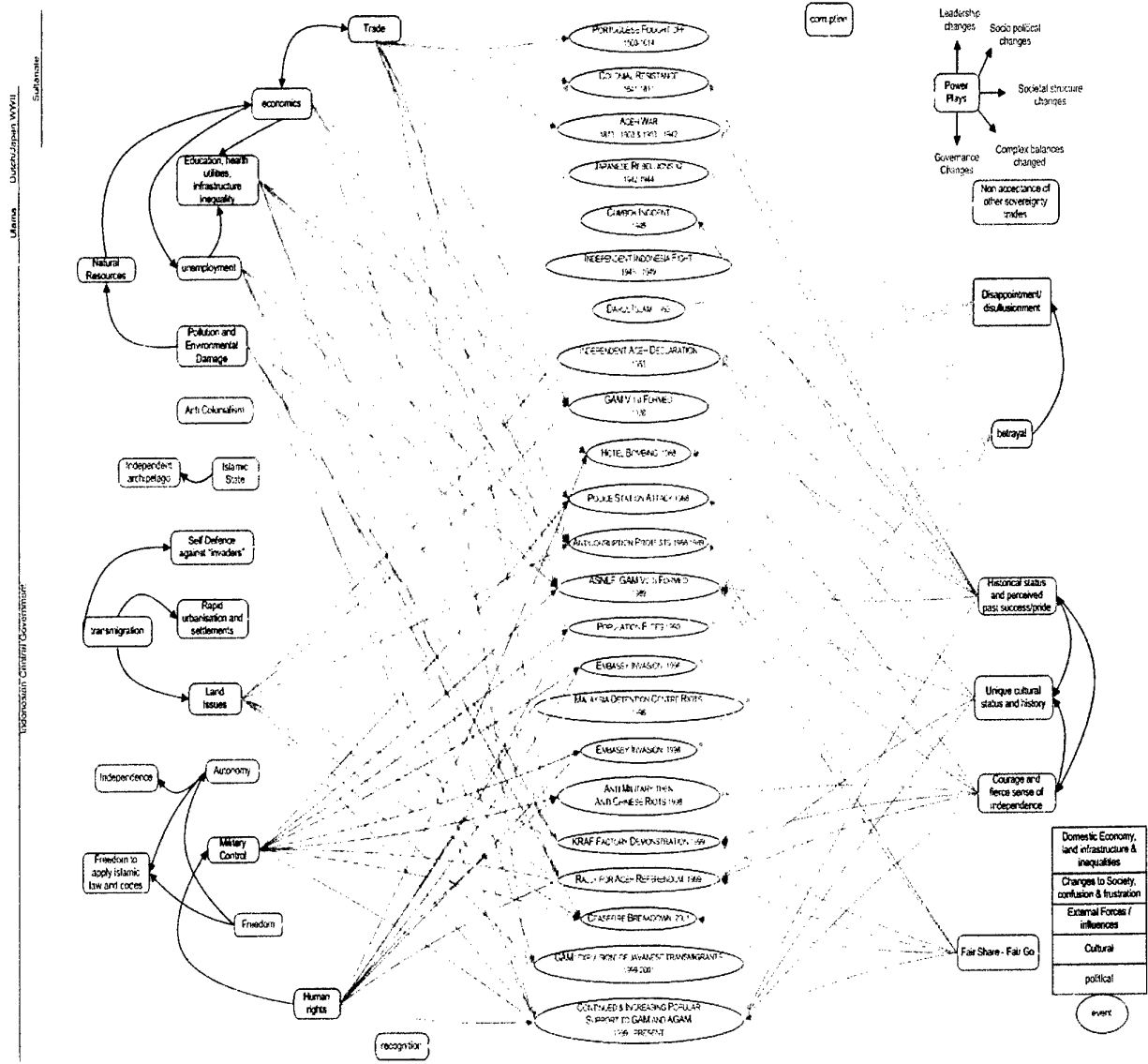
Appendix B: Map of Aceh

Map of the province of Aceh (2003) after [58] on the Northern end of the island of Sumatra

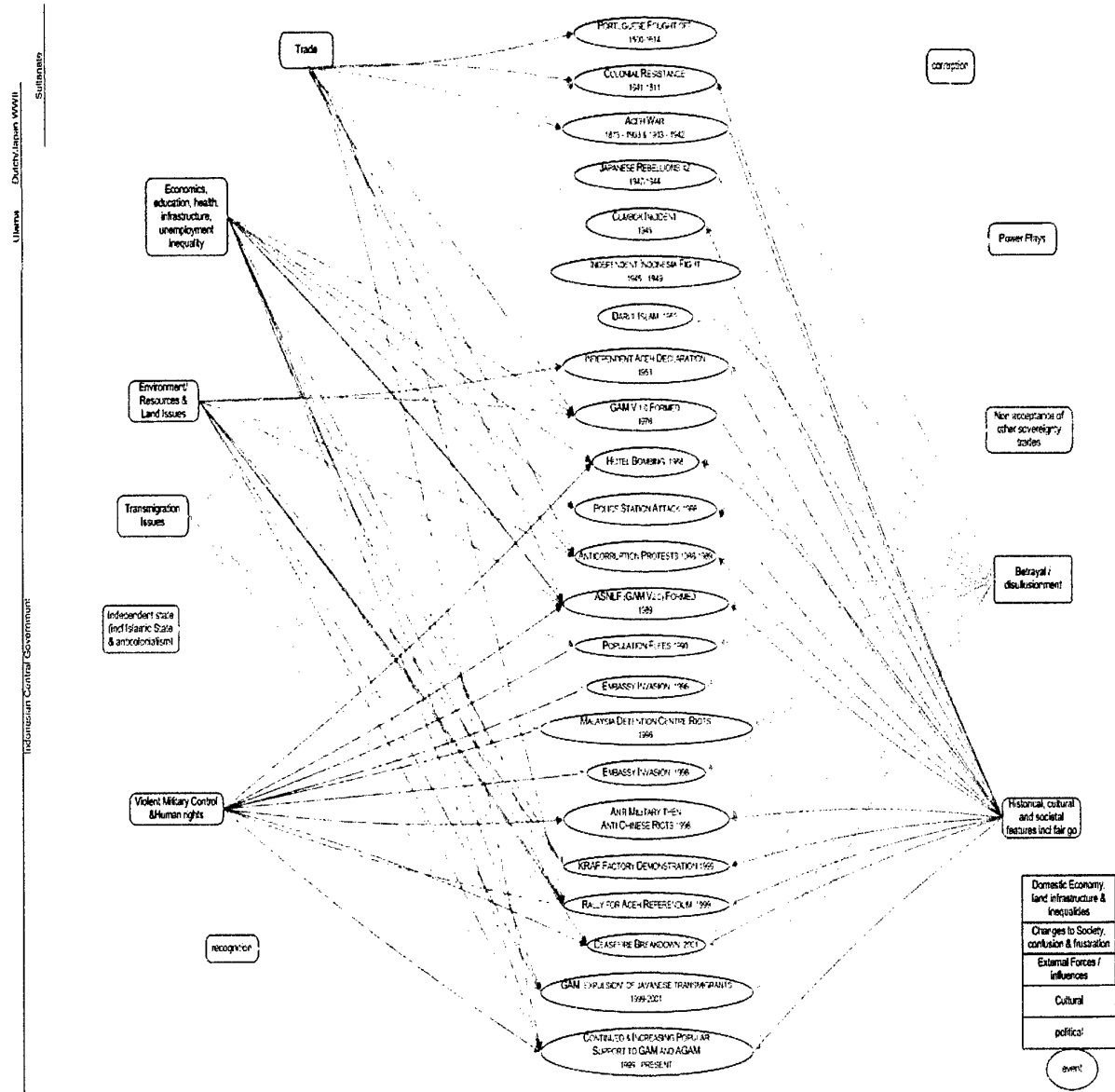


Appendix C: Events and Causes for Aceh

C.1. Stimuli Event Relationship diagram – detailed



C.2. Stimuli Event Relationship diagram – distilled




C.3. Relationships between Stimuli (detailed and distilled)

(detailed)

Causal Relationships for Aceh


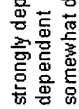

	trade	economics	infrastr./hth. educ. & ineq.	unemployment	natural resources	envy damage	anticolonialism	independent incoh.	islamic state	self defence	urbanisation	land issues	transmigration	independence	autonomy	military control	freedom	human rights
cause																		
trade																		
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freedom																		
human rights																		
recognition																		
corruption																		
power plays																		
sovereignty issues																		
disappointment																		
betrayal																		
history																		
cultural history																		
courage																		
fair go																		

Legend


(distilled)

Causal Relationships for Aceh

cause	trade	economics education, hth, infrastr, unemploym, inequal	env / resources & land issues	indep state incl islamic & anticolonial	transmigration issues	violent military control & human rights	recognition	corruption	power plays	sovereignty trades	betrayal/dissu- sionment	historical, cultural & societal features incl. Fair go
trade												
economics education, hth, infrastr, unemploy, inequal												
env/resources & land issues												
indep state incl islamic & anticolonial												
transmigration issues												
violent military control & human rights												
recognition												
corruption												
power plays												
sovereignty trades												
betrayal/dissu- sionment												
historical, cultural & societal features incl. Fair go												

Legend
 strongly dependent
 dependent
 somewhat dependent

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19. ABSTRACT This study provides a baseline investigation for determining population reactions to stimuli in a historical context. Historical data analysis and qualitative data analysis techniques are applied to the last 500 years of events in Aceh. Links and trends between events and stimuli as causes and triggers are produced giving a preliminary dataset for any future trends impact analysis. In addition some general population reactions for Aceh are established.					