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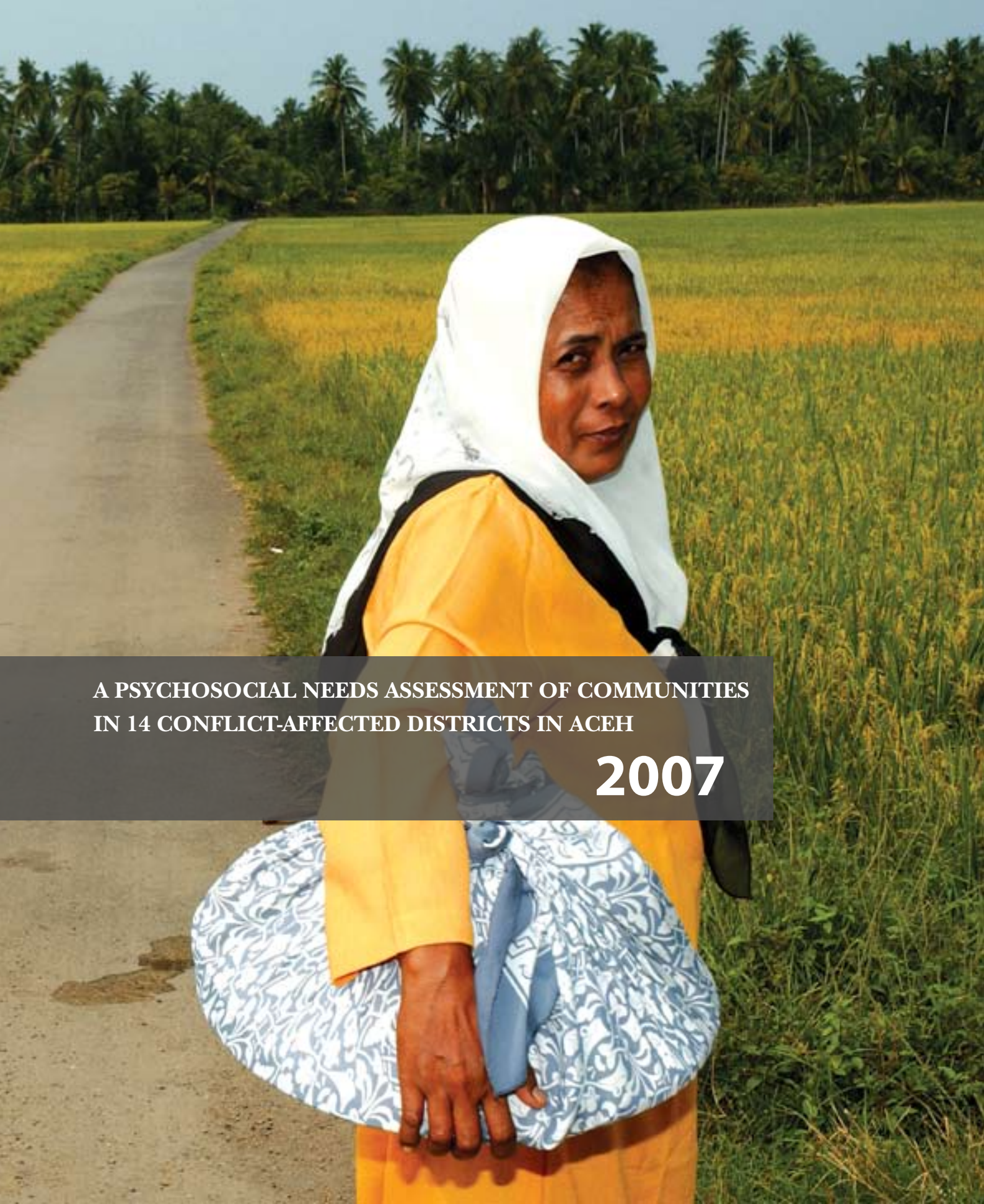
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**A PSYCHOSOCIAL NEEDS ASSESSMENT OF COMMUNITIES  
IN 14 CONFLICT-AFFECTED DISTRICTS IN ACEH**

**2007**



IOM • OIM



HARVARD MEDICAL SCHOOL  
DEPARTMENT OF SOCIAL MEDICINE



THE WORLD BANK



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## FOREWORD

### FOREWORD FROM THE MINISTRY OF HEALTH OF INDONESIA

The Indonesian Province of Nanggroe Aceh Darusalam (NAD) is a region which is facing a unique set of problems, including the conflict ended by the 2005 peace deal, and the 2004 tsunami.

These events have generated a widespread impact on the lives of the communities. One of the most crucial issues to be addressed aside from legal, security, social and economic problems is the matter of health, including mental health.

We are joyous that we have left these difficult times, and it is now our obligation to restore aspects of life that would otherwise bring adverse effect on the people, including the lingering effects of such events.

In regards to health issues, comprehensive steps have been formulated into various short-, medium-, and long-term programmes.

Specifically on mental health issue, whose impact is quite significant, the Indonesian Ministry of Health has collaborated with the NAD government and national as well international NGOs. With this aim in mind, a comprehensive mental healthcare model has been designed and commenced, targeting not only regions affected by the tsunami, but also other provinces in which this model may serve as reference in developing mental health.

Therefore, we are very happy to see the organizing of this psychosocial needs assessment in 14 high conflict districts, under a cooperation between the International Organization for Migration (IOM), the Department of Social Medicine from Harvard Medical School and the Syiah Kuala University (SKU).

I am convinced that the outcome of this assessment is in line with and significantly contribute to the programmes that we are currently developing, such as the capacity building project in the form of trainings for community health center and hospital physicians at the district level, as well as the development of the Community Mental Health Nursing (CMHN) concept. It is hoped that this partnership will be followed by other programmes.

To all the parties who have made this undertaking a reality, I express my highest appreciation.

Let us hope that it will bring great benefit to the Acehnese in particular, and the entire Indonesian people in general.

May God the Almighty grant His blessing upon us all.

**DR. Dr. Siti Fadilah Supari, Sp.JP (K)**  
Minister of Health of  
the Republic of Indonesia

## FOREWORD FROM THE DECENTRALIZATION SUPPORT FACILITY AND THE WORLD BANK

The Decentralization Support Facility (DSF) and the World Bank were pleased to support the important work of this Psychosocial Needs Assessment second phase, conducted by IOM, the Department of Social Medicine from Harvard Medical School, and researchers from Syiah Kuala University. The assessment highlights the importance of developing mental health and psychosocial services to support communities' efforts at full recovery following conflict situations. The study highlights the importance of understanding and responding to the psychological and acute mental health problems resulting from years of conflict and provides important lessons for mental health programming not only in Aceh province but in other post-conflict environments as well.

Based upon the findings from these assessments, the DSF and the World Bank have been supporting IOM's pilot mental health program in 2006-2007 to reach civilian populations in high conflict villages in Aceh and respond to acute mental health needs. This assistance forms part of our institutions' broader support to post-conflict reconstruction and sustainable peace-building within Aceh.

It is with great pleasure therefore that we congratulate our partners on this valuable report and their contribution towards a deeper understanding of psychosocial and mental health problems in Aceh.

### **Susan Wong**

Acting Sector Coordinator  
World Bank Social Development Unit  
and on behalf of DSF

## FOREWORD FROM THE DEPARTMENT OF SOCIAL MEDICINE, HARVARD MEDICAL SCHOOL

This project, the PNA2, represents a collaboration between IOM and members of the Department of Social Medicine, Harvard Medical School. It is supported by a contract from IOM to the Department of Social Medicine, enabling members of the faculty and staff of the Department to provide technical assistance to IOM projects and to collaborate in development of projects of community and mental health for post-tsunami and post-conflict Aceh. It represents a larger commitment of the Department of Social Medicine to programmes of global health and health and human rights, and more specifically a commitment to address health and mental health problems through science and the development of clinical and public health interventions. It has been our pleasure to collaborate with IOM in this shared mission.

This project was designed specifically as a "psychosocial needs assessment." Although the project has obvious human rights implications, the focus of the project was on mapping out levels of violence, traumatic experiences, and psychological symptoms in the communities of rural Aceh in order to identify levels of need for mental health and psychosocial services, establish priorities for such services, and provide base line data for those who might carry out projects or further research. Taken together, the PNA1 and PNA2 represent the most complete mapping of traumatic experience in high conflict districts and subdistricts of Aceh. We hope these data will be used by the government of Aceh and the government of Indonesia, as well as by the donor community, to support the development of programmes to address the needs for mental health services that follow years of sustained violence enacted against village communities in Aceh.

The PNA1 and PNA2 studies document widespread experiences of conflict across Aceh, as well as remarkably high levels of systematic violence against civilian populations in particular districts and subdistricts. These experiences will not easily be forgotten, and the mental health problems remaining – depression, PTSD, communal anxiety, head trauma – will be long-lasting. These "remainders of violence" deserve serious attention. They require the development of community mental health services for all of Aceh. They require explicit programmes aimed at providing services for the most highly affected communities, many of which are relatively isolated and outside of access to routine care. And the memories of violence will require an on-going commitment to programmes of reconciliation and 'trauma healing' at many levels.

We are delighted to be able to work with IOM in developing mental health outreach services to some of the most highly affected communities, and collaborate with IOM and many others to contribute to wider programmes aimed at addressing the remainders of violence. We hope these studies will bring attention to the continuing needs of those who have endured remarkable losses and personal violence during the conflict and will contribute to the larger goals of peace-building in Aceh.

### **Byron J. Good**

Professor Medical Anthropology  
Department of Social Medicine  
Harvard Medical School

### **Mary-Jo DelVecchio Good**

Professor of Social Medicine  
Department of Social Medicine  
Harvard Medical School

## ACKNOWLEDGEMENTS

1. First and foremost we would like to thank the gracious and brave Acehnese who agreed to the often difficult process of undertaking our questionnaire, as well as the key informants who provided additional qualitative data. Dozens of village heads and other local leaders welcomed our research teams and facilitated this process.
2. There were five team leaders and 30 interviewing staff spread out all over Aceh province for more than 13 days of intensive and exhausting fieldwork in former conflict areas. They came from diverse but topically related backgrounds such as nursing, counselling, public health, and education. Although too many to list here, we thank them for their hard work nevertheless.
3. The Ministry of Health supported IOM's psychosocial research in Aceh, especially the Provincial Health Office in Banda Aceh and the district health offices throughout the province. The psychiatric hospital in Banda Aceh provided nine psychiatric nurses to join the research staff, and several district health offices provided support with their community mental health nurses. The nurse contributions to this research were outstanding.
4. IOM's research partners at Harvard Medical School are responsible for the overall study design, questionnaire development, database management, statistical analyses and this report. Professor Byron Good and Professors Mary-Jo DeVecchio Good were the primary investigators of this project. Mathew Lakoma delivered efficient and creative statistical analyses.
5. IOM's Post-Conflict Reintegration Programme in Aceh has been an exceptional forum for planning and discussing the material contained in this report. Jesse Grayman was overall project manager and coordinator for this study. The Programme's medical team, under the leadership of Dr. Teuku Arief Dian and Dr. Dara Juliana, has been a reliable source of programming and material support. Thanks are most especially due to Hayatullah, who did an outstanding job of organising logistics for the field research, supervised data entry, translated Acehnese language interviews, and always provided reliable and invaluable assistance under pressure.

We would like to thank Dr. Ibrahim Puteh for his psychiatric expertise and for helping us navigate

the health and university systems in Banda Aceh. Saleh Amin carefully read and coded several batches of qualitative data. Su Lin Lewis provided crucial insight and background data for designing the sampling methodology.

Mental health is a novel feature in post conflict programming and we thank Programme Director Mark Knight and Deputy Programme Director Luc Chounet-Cambas for recognising its importance. Marianne Kearney graciously undertook the editing of this report, Sandanila Fatharani who laid out this report, and Adi Nugroho provided an excellent translation for the Indonesian language version. Finally Dr. Nenette Motus wrote the original proposal to carry out this work and started the research process with a phone call to Harvard Medical School in October 2005. We thank Dr. Nenette for her patience and confidence in our work.

6. Professor Bahrein Sugihen and his team of researchers at the Centre for the Development of Regional Studies at Syiah Kuala University were key consultants on the study design and fieldwork for this research. In particular we thank Ibu Rosnani from the Centre who provided helpful assistance to the Harvard team in Aceh.
7. The World Bank and the Decentralization Support Facility (DSF), a multi-donor fund, provided crucial support and funding for the field research in ten districts in Aceh. The Harvard Medical School, in contract with IOM, provided funding for the field research in Aceh Besar, and the two organisations also funded the data analysis and writing of the report.
8. Results from the first phase of this research brought about the implementation of a pilot psychosocial and medical outreach programme to villagers in 25 high conflict villages in Bireuen district. We would like to thank everyone on the outreach team: Dr. Ira Aini Dania, Dr. Karliansyah, Dr. Riska Sofia, Dr. Enny Bahari, and the three nurses; Nifantoro Wau, Hafidh, and Bukhari. And we especially acknowledge the crucial support from and collaboration with Dr. Amren Rahim and Dr. Mursyidah at the Bireuen District Health Office.
9. The authors of this report are: Mary-Jo DeVecchio Good, Byron Good, Jesse Grayman and Mathew Lakoma.

## EXECUTIVE SUMMARY

Between December 2005 and November 2006, a team of researchers from the International Organization for Migration (IOM) and the Department of Social Medicine from Harvard Medical School, carried out a Psychosocial Needs Assessment (PNA) in high conflict sub-districts across Aceh, in two phases. Phase 2, or Psychosocial Needs Assessment 2 (PNA2) conducted research in 75 high conflict villages in 11 districts throughout Aceh. The PNA2 report is an extension of the research for Psychosocial Needs Assessment 1 (PNA1), which was conducted in high conflict sub districts in Aceh Utara, Bireuen and Pidie, Aceh in February 2006. Research for this second study was conducted in 10 districts in July 2006 with funding from the World Bank, Decentralization Support Facility (DSF), IOM, and the Harvard Medical School, and in Aceh Besar district in November 2006, funded by IOM and the Harvard Medical School. The primary focus of this report is to provide findings from the PNA2 data and to compare these data with data previously analysed and published in the first Psychosocial Needs Assessment (PNA1) report.<sup>1</sup> Research for PNA1 was funded by the Canadian Department of Foreign Affairs and International Trade, IOM and Harvard Medical School.

The basic goal of the overall project was to evaluate the psychosocial and mental health needs in communities which have been deeply affected by the years of conflict between armed forces of the Republic of Indonesia and the Free Aceh Movement (GAM), given the cessation of violence after the signing of the August 2005 Memorandum of Understanding. This report focuses on past traumatic experiences and current psychosocial and mental health needs in high conflict areas throughout Aceh. Although the peace agreement ended almost three decades of violence most of the traumatic experiences reported date from the early 1990's until August 2005. The report deliberately refrains from identifying groups or individuals instrumental in the violence visited upon these communities.

### PROJECT DESIGN

The project was designed to provide scientifically-derived, empirical data which can serve as a basis for developing mental health and psychosocial services to support these communities' efforts at recovery. Specifically, the two studies sought to determine the level of conflict-related traumatic experiences suffered by members of these communities, to map differences in these experiences across regions and communities, to assess levels of psychosocial and mental health problems, identify high risk subgroups in the population, to identify patterns of resilience and resources drawn on by communities in managing mental health problems, and to assess the urgency for particular forms of mental health interventions in areas affected by decades of violence. Given the findings of extraordinarily high levels of traumatic experience and mental health symptoms in the initial PNA1 study in Aceh Utara, Bireuen, and Pidie, PNA2 was designed explicitly to extend the needs assessment to all high conflict districts in Aceh, and to compare the findings in other parts of Aceh with those in the index communities studies in PNA1.

The study was designed by senior researchers from Harvard Medical School, led by Profs. Byron Good and Mary-Jo Good, and by Jesse Grayman, Ph.D. candidate at Harvard and IOM staff member. It included two components: a qualitative, key-informant study designed to explore how the conflict has affected particular communities and what community leaders feel should be the priorities for responding to the psychosocial effects of the conflict; and second, a formal survey of adult members of selected communities designed to measure levels of experience of trauma events associated with the violence, levels of psychological distress associated with these experiences, and perceived priorities for services. The field survey for PNA2 was carried out by a team of researchers hired and directed by the IOM field staff in Banda Aceh, led by

Jesse Grayman. Data were analysed at Harvard Medical School by Prof. Mary-Jo Good and Matthew Lakoma. This report was authored by Mary-Jo Good, Byron Good, Jesse Grayman and Matthew Lakoma.

The sample for the quantitative survey for PNA2 consisted of 1,376 adult, aged 17 or older (and for PNA1 the sample consisted of 596 adult respondents) randomly selected from rural communities that experienced the highest conflict since the early 1990's. Sampling procedures produced a well distributed and representative sample of adult men and women in these communities. In addition, key informants, consisting of leaders in the selected communities, were interviewed in all participating villages. The present report focuses on analysis of the quantitative survey.

For purposes of analysis, the communities in the survey are divided into 6 regions, grouping districts that share geographical contiguity, cultural similarity and common conflict histories. The six regions are; the North Coast (Aceh Utara, Bireuen, Pidie) Aceh Besar, the East Coast (Aceh Tamiang, Aceh Timur) the Central Highlands (Aceh Tengah, Benar Meriah and Gayo Lues), Southeast Highlands (Aceh Tenggara) and Southwest Coast (Aceh Barat, Nagan Raya, Aceh Barat Daya and Aceh Selatan). Findings may be generalized only to high conflict communities in these six regions.

### KEY FINDINGS

1. We expected to find that communities surveyed for PNA2 would have lower levels of violence than those surveyed for PNA1, i.e. North Coast, given the centrality of this district in the history of GAM and the conflict. But the first overwhelming finding was that two regions – the East Coast and the Southwest Coast – suffered terrible violence and traumatic events at a level equivalent to or even higher than that in the North Coast. In the East Coast communities, for example, 80% of the respondents reported having lived through combat experiences, 45% experienced having to flee from burning buildings and 61% having to flee from danger. 7% of women have had their husband killed in the conflict, 50% of respondents report having had a family member or friend killed, and 45% reported having a family member or friend kidnapped or disappear. Nearly half, or 47% reported having their property confiscated or destroyed, and 31% experienced extortion or robbery. Persons in the Southwest Coast region, where the violence was of much shorter duration, reported experiences of violence at nearly equivalent rates.
2. While the sampling employed for the PNA had in mind a broad stroke mapping of conflict events and psychological symptoms across Aceh, using the PNA data it is possible to pinpoint some exemplary micro-localities, such as the Kluet River valley case study from Aceh Selatan, which can not be captured by the regional aggregate data alone. These so-called hot spots with histories of intense, complex, and sustained bursts of violence may suggest priorities for the tailored design and delivery of psychosocial and other post-conflict reintegration services.
3. Given the extraordinarily high levels of traumatic events reported for PNA1, we were not surprised that our PNA2 survey found significantly lower levels of traumatic events, particularly in the Southeast Highlands and in Aceh Besar. But an equally important finding is just how many persons even in these relatively low conflict communities were deeply affected by the conflict and violence. 69% of respondents in the Southeast Highlands, and 68% of respondents in Aceh Besar and 62% in the Central Highlands reported experiencing combat. Even in the Southeast Highlands, 12% reported having a family member or friend killed, while 31% in Aceh Besar and 39% in the Central Highlands had lost a family member or friend to the violence. A quarter or 25% of men in the Central Highlands

<sup>1</sup> Good, B., M.-J. D. Good, J. Grayman, and M. Lakoma. 2006. *Psychosocial Needs Assessment of Communities Affected by the Conflict in the Districts of Pidie, Bireuen, and Aceh Utara*. International Organization for Migration.



and 32% of men in Aceh Besar reported being beaten on the body. Thus, while violence was localized in particular regions and villages, it was also widespread, affecting a remarkably high number of persons throughout these rural communities in Aceh and contributing to a consensus of collective memories of terrifying and sustained violence perpetrated against ordinary rural civilians across the entire province.

4. Both men and women experienced extraordinary levels of violence, but the level and type of traumatic events experienced as part of the conflict varied by gender. Men reported significantly greater physical violence than women. Across the PNA2 sample, 38% of men report having been beaten (9% of women), 19% report being attacked by a gun or knife (8% of women), 16% of men report being tortured (3% of women), 15% of men reported being taken captive (3% of women), and 44% of men (and 35% of women) report witnessing physical violence against others. Nonetheless, women suffered enormously. For example, in the Southwest Coast communities, 79% of women experienced combat and 56% had to flee danger, 52% were forced to witness physical punishment, 36% had a family member or friend killed, 43% had property confiscated or destroyed, and 32% were forced to search for GAM members in the forest. Although rates of reported sexual violence toward women are relatively low (1% raped, 4% other sexual assault), owing in part to stigma, stories make it clear that sexual violence by male combatants toward women was not uncommon.
5. Rates of head trauma and potential brain injury, suffered through beatings, strangulation, near drownings and other forms of torture or violence, were extraordinarily high and deserve clinical interventions and further research. Men, particularly those in the highest conflict regions, were at the highest risk. Remarkably, 43% of all men in the East Coast region and 41% in the Southwest Coast, report having suffered head trauma – rates equivalent to those found in PNA1 for the North Coast. Clinicians in the IOM mental health outreach programme to high conflict villages in Bireuen are finding that head trauma is indeed a common problem, with nearly one fourth of all patients who have clinically significant levels of mental health problems, displaying head trauma symptoms.
6. In nearly all of the high conflict areas sampled, between one-third and two-thirds of all respondents were displaced, usually by force, during the conflict. Almost every respondent who told us about their displacement experience during the conflict should be considered as a returned IDP. But there are still thousands of Javanese transmigrant IDP families still living in North Sumatra province just south of Aceh, and several thousand Acehnese refugees still in Malaysia, which the PNA data therefore does not capture. The common experience for IDP's was that they returned to find their whole village burnt, fields destroyed, houses ransacked and animals killed and these vulnerable economic conditions have significant bearing on their psychosocial condition.
7. The set of questions on current stressful or traumatic events occurring since the signing of the peace deal, were reported at a much lower rate in PNA2 than in PNA1. The pattern holds, even in the regions where the conflict was greatest, and is particularly true of reports of seeing perpetrators (47% in PNA1, 7% in PNA2), of experiencing assault (31% vs. 1%), experiencing robbery (21% vs. 1%), violence toward women (4% vs. 1%) and violence toward children (7% vs. 1%). These findings suggest a very significant change between February 2006, when the PNA1 survey was conducted, and when trust in the peace deal was limited and non-locally based Indonesian troops had only recently left Aceh, and July 2006, when the PNA2 survey was conducted. The PNA2 findings suggest that by July onwards residents experienced far less contact with perpetrators of the violence and far greater security.

The pattern of lower current stressful events scores found in PNA2, holds true for basic living conditions (lack of adequate housing 59% vs. 38%; water/ sanitation 75% vs. 55%; and food security 72% vs. 63%) and livelihood issues (difficulty providing for family 85% vs. 72%; finding work 89% vs. 75%; and starting a livelihood 71% vs. 56%). However, even though they are significantly reduced, these remained extremely high in the PNA2 survey. The qualitative interviews suggest that these current stressors reflect the devastation of the village economies from three decades of efforts to destroy the material foundations supporting GAM. Thus, recovery will require both that the terrible traumatic events suffered by these communities and the broken economy and destroyed community resources be dealt with in a timely fashion.

8. Levels of past traumatic events were substantially and significantly higher in villages which received IOM's Post-Conflict Community Reintegration Programme or MGKD programme, for both PNA1 and PNA2. Rates of some specific past traumatic events were 50% or more higher in MGKD communities in both samples (for events commonly experienced, these achieve high levels of statistical significance). These findings validate the designation

by IOM and the World Bank of these villages as high conflict communities requiring special assistance. On the question of current stressful events (post-peace agreement) PNA2 respondents reported current stressful events at rates significantly lower than in PNA1, with MGKD villages reporting higher rates than non-MGKD villages for only 4 of 18 events. There could be a small sampling bias towards less high conflict villages in the districts that did not have a MGKD village programme (Bener Meriah, Aceh Tengah, Gayo Lues and Aceh Besar districts).

9. Respondents from PNA2 suffer mental health problems associated with the violence at a significant level. Internationally accepted protocols for determining who suffers from psychological symptoms, indicate that 35% of the total PNA2 sample ranked high on depression symptoms, 39% on anxiety symptoms, and 10% on Post Traumatic Stress Disorder (PTSD) symptoms. Rates are substantially higher for respondents from the Southwest Coast, East Coast, and Central Highlands. For example, 41% of respondents from the Southwest coast suffered depressive symptoms above internationally recognized cutoff levels, 43% anxiety symptoms and 14% PTSD symptoms at such levels.

At the same time, a highly significant finding of PNA2 is that respondents in all districts surveyed in July and December 2006 reported substantially lower rates of major depression, anxiety disorders, and Post Traumatic Stress Disorder (PTSD) than those in PNA1. Given that the reported rates of psychological symptoms among the PNA1 (North Coast) respondents, were at some of the highest levels reported for post-conflict settings worldwide, we were not surprised to find that the percentage of PNA2 respondents who suffer high levels of symptoms for depression, anxiety, and PTSD (35%, 39%, 10% respectively) are much lower than comparable rates reported from PNA1 (65%, 69% and 34%). Because symptom levels, using these standard cutoffs were so high in PNA1, our study developed higher cutoffs to identify those at risk for the most severe forms of depression, anxiety and PTSD. While these rates are also very high in PNA1, they are substantially and significantly lower for PNA2 respondents.

This report documents continuing high levels of conflict-related psychological symptoms in all parts of Aceh, and the urgent need for mental health services to be provided as a part of the peace-building and post-conflict recovery process. It suggests that priority should be given to the North Coast, the Southwest Coast, the East Coast, and the Central Highlands, in this order. Significantly many respondents suffer the effects of complex trauma – many years of repeated experiences of violence and insecurity, not just a single episode of trauma, followed by a return to a situation of safety and security. In some cases this will require sustained mental health services. At the same time, this report finds substantially lower rates of psychological symptoms in PNA2 than in PNA1, which raises important questions about resilience and recovery.

10. Although symptoms for depression and PTSD found in PNA2 are lower than for those found PNA1 symptoms, the total amount of traumatic events a person lives through is still the most predictive variable for suffering symptoms of depression and PTSD. The odds analysis (a statistical predictor of risk) shown in this report proves the association. Although odds ratios are lower in PNA2 than in PNA1, higher numbers of reported experiences of conflict-related events greatly increase the likelihood that persons will suffer symptoms of depression and PTSD or diagnosable mental illnesses. Women have greater odds than men for suffering depression and anxiety. Men and women have almost equivalent odds of suffering PTSD. And age effects show no clear patterns. The oldest respondents (aged 54-82) are at greater risk for depression and general anxiety. Some of the younger groups who had particularly high risk for psychiatric symptoms in PNA1 do not show excess risk in PNA2.
11. In an attempt to measure effects of psychological symptoms on social functioning, this study added a social functioning scale, and found that overall rates of expression of difficulty in carrying out basic daily routines, such as manual labour, housework, were extremely low. However, even with this limited instrument, analysis demonstrated highly significant relationships between social functioning and depression, anxiety and PTSD. Most striking were relationships between psychological symptoms and expressed difficulty in basic livelihood activities – earning money, manual labour, farming and fishing. Although causal directionality cannot be established, this study provides evidence that persons who are depressed or chronically anxious find it particularly difficult to maintain livelihood activities. Mental health problems have real consequences for social functioning, and mental health and livelihood interventions need to go hand in hand.
12. The finding that psychological symptoms were substantially lower for PNA2 respondents, even those in areas that suffered quite high conflict, in comparison with PNA1 respondents was unexpected and raises a series of questions.

First, does this simply reflect lower rates of trauma among those respondents? Our findings show this is not the case. Symptoms are lower for those districts in which trauma levels are equal to those in PNA1. Do the differences reflect exposure to violence for a shorter period of time for those in the PNA2 districts? Again, this is not supported by the study. PNA2 found symptoms to be lower both in Aceh Timur, where the conflict was as long as in Bireuen and Aceh Utara (PNA1), and in Aceh Selatan, where it was more recent. Do the differences that something changed between February and July of 2006, and that symptom levels reflect this? Clearly, our data show that current levels of stressors were greatly reduced by July. At that time, reported rates of current violence (experiencing assault and robbery, seeing former perpetrators) were much, much lower for all PNA2 regions than they had been for the PNA1 districts at the time of that study.

This study thus suggests that with increased security and reduced levels of current stressors, general psychological symptoms and collective anxiety were reduced significantly. Clearly, individuals in these communities are resilient, and collective processes of recovery can move forward when there is security. At the same time, anxiety, depression, and PTSD remained quite high in the PNA2 communities. The research showed this is closely related to past experiences of violence. And our clinical work has shown that mental health problems related to the conflict remain very significant in these communities, and that these problems are treatable using innovative approaches to providing medical care to these communities.

13. Despite the history of terrible violence levied against village populations in high conflict regions of Aceh, these communities and most individuals within them remain remarkably strong and highly resilient. The PNA2 study surveyed some of the local religious, cultural, and community resources, which people draw on to overcome conflict experiences. 91% report using prayer and 54% report consulting a religious specialist for this purpose. 68% report talking with a friend or family member, and 56% report trying to forget about the experience. At the same time, 33% report looking for medical help specifically for these purposes. Rates for many of these activities were highest in the East Coast region, where violence was particularly intense. These are only small indicators of the local resources and psychological processes used in efforts to recover from the violence, larger scale political processes are almost certainly equally important in the long term efforts for community and personal recovery.
14. Although mistrust of government services remains quite significant, respondents expressed a high level of willingness to accept mental health assistance, whether administered through GAM or the Indonesian government. This distinction is of less importance today, where the governor and heads of many district governments are former GAM members. The PNA2 survey found that there is widespread agreement throughout high conflict areas that mental health problems, affect both respondents and their families, and high level of recognition of problems associated with stress and trauma in these communities (referred to in this way in both Acehnese and Indonesian).
15. Clinicians from IOM's pilot mental health outreach programme in Bireuen, are finding that problems identified in the PNA surveys are extremely prominent among persons diagnosed as suffering mental health problems. PTSD symptoms are ubiquitous, with nearly a quarter (23%) of all patients meeting criteria for PTSD, and 42% of all persons treated for diagnosable mental health problems saying that their illnesses are related to conflict-related trauma experience. Head trauma appears as an important clinical phenomenon, with patients reporting continuing symptoms dating back to being beaten or tortured. Clinical depression is common and is often associated with traumatic memories of the conflict, with social isolation and community divisiveness, and with the losses of property and economic devastation inflicted on these communities.

Although the PNA2 study found reduced levels of symptoms in comparison with PNA1, treatable mental health problems directly associated with the conflict are very real in these communities, and a continued urgency should be felt to provide care for these populations. This Norwegian Embassy funded pilot mental health project has demonstrated successfully one approach which is effective in treating the mental health problems identified in this study.

## RECOMMENDATIONS

1. All programmes undertaken in rural Aceh should take account of the ubiquity and complexity of violence and its psychological and social remainders in the affected communities. The legacy of accumulated traumatic events all across Aceh as shown by the PNA data poses unique challenges even for programmes such as housing and school reconstruction that are not specifically designed for psychosocial assistance. Consultative processes and key informant interviews, early and often, and at the most local level, should inform the development of any intervention. From these, an understanding of the historical experience and current social dynamics in sites of post conflict assistance will help refine priorities for the programme and ensure smooth implementation.
2. The international community should recognize the continued urgency to provide mental health services to the communities most affected by the conflict. This report documents remarkable levels of traumatic violence enacted against ordinary civilian populations in rural Aceh, particularly in the highest conflict districts, sub-districts, and villages. The report, as well as findings from the pilot mental health intervention undertaken by IOM, show that this violence is closely associated with high levels of depression, anxiety, PTSD, and neuropsychiatric conditions in these communities. These problems have not gone away. Nearly two years after the signing of the MoU, which ended the military violence in Aceh, acute mental health problems remain a critical legacy of the violence. There is urgent need to provide medically-based mental health responses, as well as psychosocial and livelihood programmes, for victims in these communities.
3. Provision of mental health services will require sustained investment in the long-term development of the health and mental health system of Aceh. Aceh has over 4 million people. It has three psychiatrists. Building a mental health system that will reach the widely dispersed communities of Aceh should be recognized as an immediate and urgent need and as a domain requiring sustained, long term investment. The mental health needs in these communities can only be met through the development of a competent and effective health system that gives special priority to mental health care. International, national and provincial agencies should collaborate in strengthening the capacity of the public health system in general, and specifically in developing innovative solutions to the difficult task of providing community-based mental health services.
4. Specialized outreach services should be supported to meet the most urgent mental health needs in high conflict areas of Aceh. While the long term needs for mental health care in Aceh can only be addressed through investment in improving the public mental health system, persons suffering the mental health consequences of violence, torture, and displacement should not be made to wait. Specialized programmes that provide mental health and psychosocial services to the victims of the conflict should be given immediate support. The Norwegian Embassy funded Mental Health Outreach programme developed jointly by IOM and Harvard Medical School has been shown to be one effective mechanism for addressing acute and urgent needs in relatively isolated communities. Serious investment should be made in programmes that bring services directly to these communities.
5. Focused efforts to treat persons suffering the effects of complex trauma should be undertaken in the context of the development of specialized mental health and psychosocial programmes. In communities in which 15-18% of the total population and 25% of all men report being tortured, in which 50-70% of young men report being beaten on the head, suffocated, or submitted to near drowning, in which 50-65% of all men and 15-20% of women report being beaten, complex trauma is a common and important remainder of the violence. Managing mental health and psychosocial problems associated with PTSD and complex trauma in relatively isolated settings with limited access to mental health care is extremely challenging. It should be explicitly recognized that there is no single therapeutic modality which is certain to be effective and sustainable. Instead, a commitment should be made to developing innovative therapeutic programmes in selected settings, to documenting each programme, and to careful evaluation of the efficacy of therapeutic approaches.
6. Special attention needs to be given to the problem of head trauma, brain injury, and long-lasting disability resulting from torture and violence associated with the conflict. Both this report and the PNA1 documented remarkably high levels of head trauma – beatings to the head, strangulation and suffocation, and near drowning – that were a routine part of torture, particularly of men, in high conflict communities. Head trauma can cause brain injury and anoxia (lack of oxygen to the brain) that can cause long lasting emotional, cognitive, and behavioural effects. These may include reduced ability to concentrate and participate in livelihood training, impaired judgment leading to what may appear to be routine acting

out or even criminal behaviour, as well as personal suffering. Research should be undertaken to determine whether specialized programmes are needed to respond to these problems. The medical, legal, and educational systems should be made aware of the importance of these issues for persons who have suffered traumatic violence in the conflict.

7. Special attention needs to be given to the mental health problems of older persons in the high conflict areas. While young people were submitted to particular violence during the conflict and rightly deserve specialized attention, this report suggests that older men and women may continue to experience the highest rates of mental health problems in these communities. Little attention has been directed to the effects of the conflict on the elderly. This finding suggests the need for further research and the development of programmes to address the mental health and psychosocial needs of older men and women in these communities.
8. Those districts and villages that suffered particularly egregious violence should be provided special attention in the development of mental health and psychosocial services. Exposure to traumatic events during the conflict is the single largest predictor of current mental health disability in both PNA1 and PNA2. A mapping of conflict events across Aceh shows where the priorities are for mental health and psychosocial services. These include the north and east coast districts of Bireuen, Aceh Utara and Aceh Timur, as well as the Southwest coast district of Aceh Selatan. Additionally, the mapping of conflict events can be taken down to the sub-district and village level, revealing the micro-localities where service providers are most likely to find the highest conflict-related mental health burden.
9. National and international agencies should recognize the continued need for livelihood interventions in high conflict areas. These should be linked specifically with mental health and psychosocial programmes. Damaged or lost livelihoods are more than just an unfortunate by-product of the conflict. In most cases, there was a deliberate and systematic attempt to destroy local economies that were seen by military forces as a strategic material base for continued rebellion. These are devastating losses for the civilians in these communities and their recovery is invariably identified by respondents as a first priority. But the worst affected communities in need of livelihood recovery are also the communities with the highest mental health burden, which may hinder the success of programmes designed for material recovery. Transitional assistance for the rehabilitating destroyed fields and forest gardens, capital inputs for restarting local business, livelihood training and the development of small trade cooperatives can all be seen as psychosocial interventions on their own, but those with the most disability will need explicit mental health assistance to accompany their livelihood support.
10. The development of programmes for rural Aceh should include a systematic awareness of the long term effects of displacement in the high conflict communities. Nearly half the sample reported displacement due to conflict. In many villages, this figure is between 90% and 100%. The people living in former high conflict areas must be recognized as IDPs with all the vulnerabilities and needs that accompany their recent displacement experience. Displacement recovery programmes – in particular the reconstruction of damaged and destroyed houses, schools, roads and other infrastructure, and the recovery of lost livelihoods – are a prerequisite for any kind of broad psychosocial recovery in these communities.
11. There is an enormous and lasting reservoir of memories of torture, violence, and displacement enacted against communities and individuals in Aceh. Profound loss and a potent sense of injustice are remainders of the violence. Careful consideration should be given to specific efforts to work through these memories as a part of the on-going peace process in the context of rebuilding Aceh. These efforts will in turn have consequences for the larger goal of trauma healing for individuals and communities. This report documents remarkable levels of violence enacted against civilian communities in Aceh. As a psychosocial needs assessment, the report focuses on specific clinical and mental health problems associated with this violence. However, the ubiquity of violence documented in this report has broader social and political implications which are critical to the larger goal of trauma healing for the people of Aceh. Special consideration should be given to finding mechanisms for commemoration, for working through painful and contested memories, for dealing with loss, and for reconciliation. These efforts have the potential to contribute to trauma healing and ultimately to addressing the painful remnants of violence in the communities who contributed to this report.

## INTRODUCTION

Between December 2005 and November 2006, a team of researchers from the International Organization for Migration (IOM) and the Department of Social Medicine, Harvard Medical School, carried out a Psychosocial Needs Assessment (PNA) in high conflict sub-districts in 14 districts across Aceh. The study was designed to support the work of IOM in responding to the psychosocial and mental health needs of individuals, families, and communities deeply affected by years of violence Aceh. More specifically, it was designed to provide high quality empirical data to determine levels of traumatic events and mental health problems in high conflict communities throughout Aceh and to assess priorities for the development of mental health services and psychosocial interventions.

The PNA study was undertaken in two phases. PNA1 (the Psychosocial Needs Assessment Part 1) was conducted in Aceh Utara, Bireuen and Pidie funded by the Canadian Department of Foreign Affairs and Trade, IOM and Harvard Medical School.<sup>2</sup> PNA2 (the Psychosocial Needs Assessment Part 2) was the extension of the PNA1 project to high conflict sub-districts in 11 further districts throughout Aceh. Interviews were conducted in 10 districts in

July 2006, with funding from the World Bank, the multi-donor funded Decentralization Support Facility (DSF), IOM and the Harvard Medical School, and in Aceh Besar in November 2006, funded by IOM and the Harvard Medical School. The primary purpose of the current report is to provide analysis of findings from the PNA2 data; these data are compared throughout the report with data previously analysed and published in the report on PNA1.<sup>3</sup>

The basic goal of the overall project was to evaluate the psychosocial and mental health needs in communities deeply affected by the years of conflict between armed forces of the Republic of Indonesia and the Free Aceh Movement (Gerakan Aceh Merdeka, GAM), given the cessation of violence following the signing of the Memorandum of Understanding of August 15, 2005, and to determine priorities for developing programmes to respond to these needs. This report focuses on mapping out levels of past traumatic experiences, psychological symptoms, and mental health needs in the specific regions of Aceh, each of which had quite different histories of violence. The report deliberately refrains from identifying groups or individuals instrumental in the violence visited upon these communities.

<sup>2</sup> The Department of Social Medicine, Harvard Medical School, has entered a collaborative agreement with IOM to provide technical consultation on mental health and community and environmental health projects aimed at supporting recovery from the tsunami and the conflict in Aceh, and at investing in human resource development for health and mental health in N.A.D. Jesse Grayman is the IOM staff scientist responsible for the PNA project. Professor Byron Good and Professor Mary-Jo DeVecchio Good, Department of Social Medicine, Harvard Medical School, are senior scientists on the project, and Matthew Lakoma biostatistician and data analyst.

<sup>3</sup> Good, B., M.-J. D. Good, J. Grayman, and M. Lakoma. 2006. *Psychosocial Needs Assessment of Communities Affected by the Conflict in the Districts of Pidie, Bireuen and Aceh Utara*. International Organization for Migration.

# RESEARCH DESIGN AND METHODOLOGY

## GOALS OF THE RESEARCH

The study set forth nine goals:

1. To understand how specific communities and distinct regions in Aceh have been affected by the conflict.
2. To determine levels of specific traumatic events suffered by the general population and by specific social groups within each of these regions.
3. To determine levels of specific types of social and psychological problems resulting from the conflict within each of these regions.
4. To observe and document the way community members speak about the conflict and about the demilitarization and reintegration processes.
5. To map out and compare levels of psychological symptoms and mental health problems in the distinct regions of Aceh, as a means to establish priorities for the development of post-conflict interventions.
6. To determine the priorities of community members and leaders concerning which psychosocial and mental health problems are regarded as requiring the most urgent response.
7. To determine levels of displacement experienced by communities within these high conflict regions.
8. To determine what groups are at special risk for traumatic experiences, psychological symptoms and mental health problems, and to assess the need for the provision of community based mental health services.
9. To identify resources in the community that may be useful for collaboration in developing particular psychosocial interventions.

## STUDY DESIGN

This PNA 2 study is a quantitative and qualitative survey conducted in villages in high conflict subdistricts across 11 districts of Aceh. Villages were selected using a random stratified procedure, and individuals were selected using a randomizing procedure within the selected villages. The survey used both standardized instruments to determine individual respondents' experiences of violence and current levels of psychological symptoms, as well as open-ended questions designed to elicit information about community history and individual and community priorities for developing services. Here we describe the structure of the interviews, the sampling of communities and respondents, the

research teams, and the regions that were included in the study. PNA2 interviews used the same instruments as used in PNA1, with some questions added to address questions raised by PNA1. PNA2 sampling procedures followed those of PNA1 to the extent possible, allowing for comparisons across high conflict regions of Aceh.

### • The Interview Structure

The study included two components: key informant interviews and a formal survey of randomly selected adults aged 17 years and older.

The key informant qualitative interviews were designed to explore the historical context of the conflict in specific regions and

communities, to discuss how the conflict affected communities over time and whether certain segments of the population were more vulnerable than others. Community leaders were asked to assess their community's priorities for psychosocial and mental health services, and to describe their views of the best ways to respond to the effects of the conflict.

The formal survey interview was designed to measure levels of past experiences of traumatic events associated with the conflict, to assess experiences of current stressor events, and to identify levels of current psychological distress associated with these experiences. The survey combined open-

ended questions, designed for Acehnese populations who have experienced decades of conflict and a tsunami, and widely used validated scales allowing for comparability with previous studies of psychosocial needs of conflict and post-conflict populations in other parts of the world.

The interview began with basic demographic questions followed by open questions. Respondents were asked if they were affected by the tsunami, whether the conflict affected their life and that of their family, and whether anyone in the family, including the respondent, was a victim of the conflict. These open questions were followed by quantitative measures drawn from the validated Harvard Trauma Events scales, adapted specifically to represent typical forms of traumatic events common in the communities being surveyed. Scales included a yes/ no checklist of traumatic events experienced during the conflict and a yes/ no checklist of experiences of current stresses and traumatic events in the post-conflict period. Levels of emotional and psychological distress were assessed with a set of general self-assessment questions.

These elementary questions were followed by a 25 item version of the Hopkins Symptom Checklist for Depression and Anxiety, a scale used widely in disaster and trauma community assessments of emotional distress, and the

42 item Harvard Trauma Questionnaire (HTQ). The HTQ is a broad measure of trauma-related symptoms, which includes 16 items which can be used to assess Post Traumatic Stress Disorder (PTSD). In addition, items designed to capture popular discourses about disturbing post-tsunami and post-conflict experiences were integrated into the quantitative measures to elicit experiences of nightmares, ghosts, spirits and hearing voices of people who had died.

A four item measure was included from the Harvard Trauma Questionnaire to assess presence and severity of head trauma that might have produced brain injury; the questionnaire asks specifically about beatings to the head, suffocation or strangulation, near drowning and other physical injuries to the head.

The survey concluded with closed and open questions regarding the respondent's perceptions of what community mental health services are most needed, their opinions about which groups suffered most trauma due to the conflict or are at the greatest mental health risk, assessments of who provides care and to whom community members can turn to overcome bad experiences that remain from the conflict, attitudes about the public health care services, and comments and suggestions about the post-conflict peace process and

community rebuilding.

The survey was designed to facilitate comparability with other studies of conflict-affected populations with the intention of drawing lessons concerning useful mental health interventions from previous cases. A significant part of the survey was also devoted to open questions allowing for the specificity of Acehnese experiences to determine the interpretation and meaning of comparative analyses and lessons.

Lessons learned from the PNA1 research in Pidie, Bireuen and Aceh Utara allowed for some revisions in the questionnaire before the PNA2 research. Two sections were added to the formal questionnaire. The first was a social functioning scale adapted to rural Aceh, which it was hoped might help assess to what extent psychological symptoms are accompanied by actual psychosocial dysfunction in the community. The second was devoted entirely to conflict-related displacement experience of communities and individuals, an issue which emerged in the PNA1 research, and which is important to the larger mission of IOM.

The survey was designed as a mental health needs assessment. The questionnaires did not focus on determining who was primarily responsible for committing violence against Acehnese communities and individuals. The results of this study thus do not meet the specific

criteria usually required in human rights investigations. Instead, the research attempted to connect past traumatic experience with current health needs as a means to informing the development of mental and psychosocial health services in conflict affected communities across Aceh.

**• Phases of Fieldwork and Geographic Coverage**

The planning and implementation of the PNA research spanned all of the year 2006. Phase One research (PNA1) focused on three districts on the north coast of Aceh – Pidie, Bireuen and Aceh Utara – because they were known to be central to the historical development of the Free Aceh Movement and a site of some of the longest and most intensive conflict. Planning for Phase One began in December 2005, led by teams from Harvard Medical School and IOM, and the field research was conducted during February 2006. Syiah Kuala University's Centre for the Development of Regional Studies, in Banda Aceh was the implementing partner for the field survey.

Phase Two research – PNA2 – was designed to extend the survey to all of the remaining districts of Aceh which experienced significant levels of conflict and in which field research was feasible. The primary PNA2 field interviewing was carried out in July 2006 in ten districts throughout Aceh (see Sample Description by Site and Dates, Chart 1). In November 2006, interviewing was conducted in Aceh Besar, in order to improve the geographic scope of the research. Thus, excluding the island districts and urban municipalities of Aceh province, the only mainland districts not included in the PNA research are Aceh Jaya (which still poses transportation challenges

due to tsunami damage) and Aceh Singkil (which was not a high intensity conflict area). Data analysis and reporting for all three phases of the psychosocial needs assessment are conducted and paid for by the Harvard Medical School and by IOM's contract with the Harvard Medical School.

**• Researchers and Fieldwork Teams**

The overall PNA was conducted as a collaborative project between IOM and members of the Department of Social Medicine, Harvard Medical School. In addition, PNA1 research featured significant collaboration with faculty, staff, and field researchers from Syiah Kuala University's Center for the Development of Regional Studies, under supervision from sociologist Professor Bahrein Sugihen. IOM and its staff coordinated the study and provided a project director. The Harvard Medical School team was responsible for overall scientific design of the project and for analysis of the quantitative data. The Harvard and IOM teams share responsibility for the writing of project reports.

Permission to carry out social science and public health research in Acehnese villages, was secured from the Community Protection and State Unity Board at Aceh's Governor's Office. Subsequent phases were supported by MoU agreements between IOM and the Ministry of Health, and also between IOM and the Department of Social Welfare for IOM's work in Post-Conflict activities in Aceh. The project was reviewed and approved by the Institutional Review Board of Harvard University.

The Harvard team and the IOM field coordinator developed the design of the overall study and

the survey in December 2005. Questionnaires were translated and back translated, then pre-tested in Banda Aceh in January 2006. Field staff trainings preceded each phase of the fieldwork, presenting opportunities for more questionnaire testing and revisions. Revisions of the questionnaire for the PNA2 study included the addition of a social functioning scale and questions on displacement and internal migration, as well as minor changes aimed at clarifying a few questions. Village selection strategies were also tailored to the wider reach of the second phase of the study and are explained below. Field research for PNA1 was conducted by a team of researchers under the direction of the Center for the Development of Regional Studies at Syiah Kuala University, supervised by the IOM project coordinator. Field research for PNA2 was conducted by a team hired directly by IOM and supervised by the IOM project coordinator.

For both PNA1 and PNA2, every village was visited by one team, which during the course of one day conducted key informant interviews and survey interviews, mostly resulting in 18 interviews with randomly selected villagers. Each team consisted of six survey interviewers and a team leader responsible for managing the survey, liaising with local government and community leaders to ensure smooth entry into the villages, and conducting the key informant interviews. Additional key informant interviews were conducted by the Harvard and Syiah Kuala teams, the IOM coordinator and IOM technical assistants. The IOM coordinator interviewed doctors, nurses, and/or midwives from the nearest public health clinics where research teams were visiting and also traditional

healers. Harvard and Syiah Kuala teams held group discussions in several communities, particularly among women, and together with the IOM coordinator convened a focus group discussion with GAM members, including commanders, ex-combatants, amnestied prisoners and civilians. The PNA2 study included a supplemental qualitative case study of the history of the conflict in Aceh Selatan and the enduring psychosocial and economic consequences of the violence.

**• Selection of Villages – Design and Implications of PNA Sampling Strategies**

A total of 75 villages in 11 districts were surveyed during the PNA 2 research. 30 villages were surveyed during PNA1, 65 villages during the primary phase of PNA2 and 10 more during the survey in Aceh

Besar. The sampling procedure was designed to select a representative sample of villages from high conflict areas in each district surveyed, not a random sample of all villages in each district. Selection methodology in four districts surveyed during PNA2 was somewhat different from the selection procedure used in the other ten districts, as will be described below.

Selection criteria depended upon the identification of high conflict sub-districts (*kecamatan*) and villages within each district. Both PNA1 and PNA2 based the sampling of high conflict sub-districts and villages on the methodology previously used by IOM to determine recipient villages for its European Commission-funded Post-Conflict Community Reintegration Programme (Makmue Gampong Kareuna Damai – MGKD), which made

use of the World Bank *Kecamatan* Development Programme (KDP) staff as facilitators. The MGKD programme determined high conflict sub-districts based upon a conflict stress assessment previously conducted by the World Bank, supplemented by anecdotal reports from sub-district government officials, local NGOs, local GAM leaders and the IOM staff working for the MGKD programme in the area. After identifying high-conflict sub-districts in this way, the Post-Conflict Community Reintegration Programme then identified between five and ten high-conflict villages within these high-conflict sub-districts.

For the three districts in PNA1 and the seven districts in PNA2 that had MGKD programmes, 50% of the villages selected for the survey were randomly sampled from the short

**CHART 1: IMPLEMENTATION OF PNA1 AND PNA2**

Phase	Districts	Fieldwork Dates	Implementing Groups	Donor	Analysis & Reporting
<b>PNA1</b>	Aceh Utara Bireuen Pidie	February 2006	IOM & Syiah Kuala University	Canada & HMS-IOM Contract	HMS & IOM
<b>PNA2 (A)</b>	Aceh Barat Aceh Barat Daya Aceh Selatan Aceh Tamiang Aceh Tenggara Aceh Tengah Aceh Timur Bener Meriah Gayo Lues Nagan Raya	July 2006	IOM	World Bank, the Decentralization Support Facility (DSF), HMS & IOM	HMS & IOM
<b>PNA2 (B)</b>	Aceh Besar	November 2006	IOM	HMS-IOM Contract	HMS & IOM
<b>Mainland Districts Not Covered</b>	Aceh Jaya Aceh Singkil				
<b>Municipalities and Island Districts Not Covered</b>	Banda Aceh Langsa Lhokseumawe Sabang Simeuleu				

list of high conflict villages that participated in the programme. The other 50% of the villages in the sample were randomly selected from the remaining villages in these same high conflict sub-districts that did not receive the programme benefits. (Analysis of trauma experiences by respondents in MGKD and non-MGKD villages thus provides an opportunity to evaluate the validity of the World Bank and IOM designation of these villages as high conflict). However, four districts in the PNA2 study – Bener Meriah, Aceh Tengah, Gayo Lues and Aceh Besar – were not recipients of the MGKD programme, so another village selection methodology had to be employed. Qualitative information from IOM staff working in these districts was collected and a short list of high conflict sub-districts in these four districts was generated. Villages were then randomly selected from these sub-districts for inclusion in the PNA2 survey. This difference in sampling procedure leads to the chance of a small sampling bias toward less high conflict villages in these four districts.

The village selection methodology and the phased administration of the survey have several implications, which should be clear to the reader of this report. First, the findings of the PNA study cannot be generalized to the whole populations of the districts in our sample or to Aceh as a whole. The findings are representative of the high conflict sub-districts of these 14 districts only. This survey was intentionally designed to assess psychosocial needs of members of high conflict communities, not of all communities of Aceh. Second, the phased administration of this survey means that findings of differences between PNA1 and PNA2 districts

may reflect not only by differences among districts but also by differences across time. Although it is not obvious that there would be a strong effect of interviewing persons in February versus July 2006, it should be remembered that February 2006 was only 6 months after signing of the MoU (15 August 2005) when many people may have doubts that the peace process would hold.

The peace process continued actively through this period, leading to a quite different level of security in many regions by July 2006. Findings of this research thus require quite nuanced interpretation. Third, the lack of MGKD programmes in four districts, including three in the Aceh highlands, introduces the possibility of a small bias toward less high conflict villages, as noted above. Fourth, some districts had very widespread violence, while others had intensive violence but only in very specific "hot spots." In the latter case, sampling procedures based on sub-districts may not account for such localization of violence, allowing for difficulties in generalizing the findings of the research in these districts. And finally, to make sense of the data from 14 districts, it has been necessary to group districts into regions, as will be described below. Such groupings allow for overall comparisons and the establishing of priorities for mental health services, but they may not highlight the presence of smaller areas of intensive need for trauma-related services.

#### • Selection of Respondents

Upon arrival in a selected village, teams would report first to the village head or the village secretary to explain the reason for their research visit. Team leaders

would work together with these community leaders to generate a random sample of 18 households in the village. Most villages keep a record of the households, and so random selection was typically an easy process. Each surveyor thus conducted three interviews on average in a village. Upon arrival at a household, surveyors would select a random respondent from the residents aged 17 and older. There were no stratification criteria at the village level.

#### • Interview Mechanics

If the selected respondent agreed to the invitation to participate in the survey, a consent form with a description of the project was read together with the respondent, covering procedures, risks and benefits, questions or concerns, confidentiality, and the voluntary nature of participation, using Acehnese language or another dialect when preferred. The form was then signed and dated by the interviewer only and a copy was provided to the interviewee including a list of organizations helpful in dealing with psychosocial problems. Each questionnaire was assigned a numerical code leaving no personal identifiers in order to ensure the anonymity of all respondents. Researchers followed standard consent protocols that were approved by the Harvard University Faculty of Arts and Sciences' Institutional Review Board for the Protection of Human Subjects.

Team leaders' interviews with key informants were less formal. Consent was obtained, and team leaders held conversations, usually in the meunasah – the community center used primarily by the men of the community but also by women when receiving outside research teams. Field notes on each

interview were prepared daily by the team leaders. Topics covered local conflict history, local understandings of trauma and mental illness, stories of stress, trauma and mental illness in their community related to the conflict, local resources and priorities for managing such conditions and opinions about the peace process.

#### • Data Entry and Analysis

After completion of each phase of the research, data from the survey instruments were entered into a database in Banda Aceh and then transferred to the team at Harvard Medical School for cleaning, development of variables, initial descriptive analyses and more complex statistical analyses (using SAS). All quantitative data analysis has been conducted by the Harvard research team, as part of the Harvard - IOM collaboration. Analyses are designed in particular to identify levels of traumatic experiences, psychological distress and psychiatric disorders, risk factors associated with these disorders and priorities in the community for mental health and psychosocial interventions.

Open-ended, qualitative responses on the interview forms were also entered into the database, sorted by district and gender, coded for emergent themes and used for more culturally sensitive analyses. The team leaders wrote extensive notes (in Bahasa Indonesia) about each key informant interview, as well as summary analyses about each village. These data have also been important for the analyses

outlined in the following pages of this report.

### REPORTING BY SIX GEOGRAPHIC REGIONS

Analyses of the survey data are reported by gender, age groupings, and by PNA1 versus PNA2. However, to make sense of data collected in 105 villages in 14 districts of Aceh for both PNA1 and PNA2, we have grouped districts into six meaningful geographic regions based on conflict history, geography, ethnicity, and the methodological differences in time and village selection described above. Here we describe the six geographic regions that serve as the basis for many of the comparative analyses in this study.

#### • North Coast

The historical and ideological roots of the conflict in Aceh are found along the North Coast districts – Pidie, Bireuen, Aceh Utara (North Aceh), the original districts included in Phase One of the psychosocial assessment (PNA1). Tiro, a sub-district in Pidie, is particularly historically important, as it was from this area, that GAM's leader, Hasan Di Tiro, launched the Aceh Free Movement (GAM) in 1976.

The North Coast districts are also the most densely populated and developed, with Aceh's main highway from Banda Aceh running along the coastline through these districts to Medan in North Sumatra province, the economic hub and largest city in Sumatra. Lhokseumawe, in Aceh

Utara, home to Exxon-Mobil's hugely profitable oil and natural gas facilities, and a source of revenue for Jakarta throughout the 1980s and 1990s, became a symbol of center-periphery inequalities between Jakarta and Aceh and a flashpoint for rebel activity.<sup>4</sup>

After dozens of GAM troops were trained in Libya from 1986 to 1989, the organization consolidated its command structure in these districts. Starting in 1989, the Indonesian government declared Aceh a Military Operations Zone (Daerah Operasi Militer, DOM) and until the resignation of President Soeharto in 1998, the Indonesian military's counter-insurgency effort – in which thousands of civilians were killed – was concentrated along these North Coast districts.<sup>5,6</sup>

#### • East Coast

Heading Southeast from the north coast, the East Coast districts of Aceh Timur (East Aceh) and Aceh Tamiang on the way toward Medan share the same historical and geographic features as the north coast districts in our sample, but the population density decreases to less than a third of the north coast region. Aceh Timur in particular spans a long stretch of the Sumatran coast and reaches deep into a vast mountainous interior to meet the borders of the mountain districts of Bener Meriah and Gayo Lues. Travelling through the rural sub-districts of Aceh Timur between Lhokseumawe and Langsa municipalities, one passes the well-known conflict regions of Idi and Peureulak.

<sup>4</sup> Kell, T. 1995. *The Roots of Acehnese Rebellion, 1989-1992*. (Publication no. 74). Ithaca, N.Y.: Cornell Modern Indonesia Project Southeast Asia Program Cornell University.

<sup>5</sup> Ibid.

<sup>6</sup> Schulze, K. E. 2004. *The Free Aceh Movement (GAM): Anatomy of a Separatist Organization*. *Policy Studies*, 2. Washington, DC: East-West Center Washington.

Villages far off the main highway, whether heading towards coastal fishing villages or towards the mountains, and palm oil plantations formerly settled by Javanese transmigrants, still retain the qualities of a rogue, isolated frontierlands, not least because Aceh Timur is so far away from the reach of provincial government in Banda Aceh. During the conflict, whole villages of Javanese transmigrants were emptied and the local economies of entire sub-districts have been crippled by the mass exodus.

To date, most transmigrants have not returned, and many former transmigrants have chosen to sell their land in Aceh Timur rather than return in spite of the improved security environment. Population density in Aceh Tamiang, a recently formed district which split from Aceh Timur, increases as one approaches Medan in North Sumatra and ethnic identifications among the population shift from Acehnese to Melayu. Conflict activity in Aceh Tamiang was not insignificant along the provincial border areas here, but reduced in comparison with all coastal districts to the west. One important reason why the PNA analysis separates the east coast districts from the north coast districts is because these districts were surveyed as part of PNA2 in July 2006, nearly six months after the PNA1 research in the north coast districts.

#### • **Central Highlands**

The mountainous Central Highlands of Aceh separating the North from Southwest coasts have

the most ethnic diversity. A great majority of respondents from the districts of Bener Meriah, Aceh Tengah (Central Aceh) and Gayo Lues self-identify as Gayo, the largest highland ethnic group in Aceh with a history of mixed support for GAM or Indonesian forces during the conflict.

Many respondents from the central highlands self-identify as Javanese, an important transmigrant demographic cited by GAM as evidence of Indonesia's colonial expansion into Aceh and a justification for recruiting membership in the mountains during a period of rapid GAM expansion after DOM. Vulnerable transmigrant groups and many Gayo were easily recruited by the Indonesian military to form pro-Indonesia militia groups in these districts which introduced a unique and complicating conflict dynamic in the central highlands that differed significantly from the coastal regions. All three districts defined as "central highlands" in this research used the alternative village selection methodology described above due to the absence of a Post-Conflict Community Reintegration Programme at the time of the fieldwork.

#### • **Southeast Highlands**

The majority of respondents from the mountain district of Aceh Tenggara, (Southeast Aceh), self-identify as either Gayo or Alas, the second largest indigenous minority group in Aceh. Southeast Aceh experienced the least violence relative to the other five regions described in this report. Many

conflict IDPs from other parts of Aceh found temporary safe haven in this region. For example, less than 10% of respondents in Aceh Tenggara described themselves or someone in their family as a victim of the conflict, whereas in all other districts at least 40% answered yes to the same question. For this reason, Southeast Aceh is a useful reference point of comparison against other regions that experienced significantly higher conflict intensity.

#### • **Southwest Coast**

All 461 respondents from the Southwest Coast districts of Aceh Barat (West Aceh), Nagan Raya, Aceh Barat Daya (Southwest Aceh) and Aceh Selatan (South Aceh) self-identify as Acehnese except one Javanese respondent in Aceh Barat.

These districts were targeted for heavy recruitment by GAM during two separate cease fire agreements after 1999, most probably due to shared ethnic identification with the north and east coast GAM strongholds. Membership increase here, sometimes under duress, occurred too rapidly for new recruits to develop strong ideological identification with GAM's struggle, and often attracted a thuggish criminal element, among other opportunists, who were easily convinced to defect or become informants for the Indonesian military or police intelligence units.

All the key informant interviews detail how the response by

Indonesian forces to GAM's expansion along the Southwest coast districts from 2000 until the peace agreement was swift, brutal and spectacular. This region's more recent and chaotic conflict history created particularly terrifying security conditions and paralyzing mutual suspicion within communities.<sup>7</sup>

#### • **Aceh Besar**

Finally, Aceh Besar district has a unique geographic orientation, being the district at the north tip of Aceh province (and the whole of Sumatra island), and also surrounding the provincial capital of Banda Aceh, arguably the most cosmopolitan area of the province.

Aceh Besar is distinguished in the PNA2 study because it was the last district to be included in the study and the only district to be interviewed in November 2006, over a year after the signing of the peace agreement. Aceh Besar is

also the fourth district in the sample that used the alternative sampling methodology described above due to the lack of a Post-Conflict Communities Reintegration (MGKD) Programme there. Inclusion of Aceh Besar ensures nearly complete geographic representation across mainland Aceh for this research.

### **REPORTING RESULTS**

The overall strategy for analyzing results of the PNA2 data is as follows. First, as with the PNA1 report, the focus is indeed on assessing needs for mental health and psychosocial services. After a demographic overview of the sample, levels of traumatic events experienced by persons in high conflict communities are reported, then levels of psychological symptoms and mental illnesses, evidence suggesting which groups are at particular risk, local perceptions of needs for services, and local resources used for coping with the

remainders of traumatic violence. Second, running throughout is a comparison of PNA2 results from those of PNA1. Differences both in levels of traumatic events and in psychological symptoms allow us to ask why overall PNA2 finds lower level of psychological symptoms than PNA1, and to raise questions about the implications for the need for continued investment in mental health services.

Third, results of PNA1 and PNA2 are joined to ask questions about which regions should be given special priority in the development of mental health services in post-conflict regions of Aceh. Although there are a number of scientific and academic questions that can be pursued through analysis of these data, the primary focus here remains on the need for mental health and psychosocial services to respond to the mental health consequences of traumatic violence inflicted on civilian populations of Aceh.

<sup>7</sup> The authors acknowledge the important contributions to our PNA research by anthropologist John MacDougall during two weeks of fieldwork in Aceh Barat Daya and Aceh Selatan in July 2006. His work helped us understand, in graphic detail, how this region's messy and recent onset conflict history created particularly terrifying security conditions throughout this region and mutual suspicion within communities.

## SAMPLE DEMOGRAPHICS: COMPARING PNA1 AND PNA2

TABLE 1.1 DISTRICT LOCATIONS AND SAMPLE SIZE OF PNA1 AND PNA2 RESPONDENTS

Location	% PNA 1 N = 596	% PNA 2 N = 1,376	% PNA Total N= 1,972
<b>North Coast Districts (PNA1)</b>	<b>100</b>	-	<b>30.23</b>
Aceh Utara (North Aceh)	30	-	9.08
Bireuen	30	-	9.13
Pidie	40	-	12.02
<b>Aceh Besar (PNA2)</b>	-	<b>13</b>	<b>9.13</b>
Aceh Besar		13	9.13
<b>East Coast Districts (PNA2)</b>	-	<b>18</b>	<b>12.48</b>
Aceh Tamiang		3	1.83
Aceh Timur	-	15	10.65
<b>Central Highlands Districts (PNA2)</b>	-	<b>23</b>	<b>16.57</b>
Aceh Tengah	-	7	4.61
Benar Meriah	-	10	7.40
Gayo Lues	-	6	4.56
<b>Southeast Highlands Districts (PNA2)</b>	-	<b>12</b>	<b>8.22</b>
Aceh Tenggara	-	12	8.22
<b>Southwest Coast Districts (PNA2)</b>	-	<b>34</b>	<b>23.99</b>
Aceh Barat (West Aceh)	-	14	9.69
Aceh Barat Daya (Southwest Aceh)	-	4	2.74
Aceh Selatan (South Aceh)	-	13	9.13
Nagan Raya	-	3	1.83

The two Psychosocial Needs Assessment surveys (PNA1 and PNA2) included 1972 adults over the age 17 from 105 villages in 14 districts in Aceh. Tables 1.1 through 1.6 present the demographic characteristics of the PNA1 and PNA2 sample. Table 1.1 indicates the groupings of districts into regions for PNA1 and PNA2 and sample size for districts and regions.

Table 1.2 provides gender and age breakdown by region for the PNA2

sample. The overall sample was equally divided between men and women. There was some gender variation by region, with a slight over sampling of men, except in Aceh Besar where 63% of respondents were women. Given that men and women often differ in types of traumatic events suffered and levels of symptoms, many subsequent tables include gender as a critical distinguishing variable. The overall gender and age distribution shows that the sampling procedure

produced a good, representative sample of adults in these high conflict communities for both PNA1 and PNA2, and that overall, the samples are largely comparable, as is indicated further by Table 1.3.

The PNA2 sample includes a somewhat younger population, with 68 percent of respondents age 40 and under, in contrast to 56 percent of the sample in PNA1. Otherwise the two samples are remarkable similar in terms of

TABLE 1.2 SAMPLE CHARACTERISTICS: GENDER, AGE AND ETHNICITY BY REGION

	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% PNA2: Overall Total N=1376	% PNA1: North Coast N=596	% PNA1+ PNA2: Overall Total N=1972
<b>Gender</b>								
Male	37	51	55	58	49	50	53	51
Female	63	49	45	42	51	50	47	49
<b>Age</b>								
17-29	38	36	37	36	33	35	25	32
20-40	27	28	33	35	36	33	31	32
41-53	16	23	17	16	18	18	24	20
54-109	19	13	13	14	13	14	20	16
<b>Ethnicity</b>								
Acehnese	99	80	9	8	100	64	99	75
Gayo	0	0	80	30	0	23	0	16
Alas	0	0	<1	54	0	7	0	5
Javanese	0	15	10	4	<1	6	<1	4
Melayu	<1	4	<1	2	0	<1	0	<1
Batak	0	<1	<1	1	0	<1	<1	<1

marital status and housing ownership. A greater percentage of PNA2 respondents have achieved middle and high school education, indicative of the larger number of younger respondents; yet the percentage of respondents with no schooling (8% PNA1/ 9%PNA2) or with advanced education (5% PNA1/ 6% PNA2) is similar.

The ethnicity data reported in Table 1.2 are self-identifications by the respondents in the sample. For example, mixed ethnicity respondents from Acehnese and Javanese parents, particularly by parents who are second

and third generation Javanese in Aceh, may very well self identify as Acehnese. Likewise, the diversity of ethnic minorities and speakers of different local languages in Aceh are not always reflected in respondents' self-identified ethnicities. Residents in Aceh Tamiang, for example, may self-identify as either Melayu or Acehnese, but speak Bahasa Tamiang. This is especially evident in the data from Aceh Selatan Aceh Selatan where the majority of respondents do not speak Acehnese as their first language. Most residents of Aceh Selatan speak either Bahasa Aneuk Jame, Bahasa Kluet, or Bahasa Singkil as their

first language, but everyone in the sample self-identified as Acehnese, thus highlighting the especially complicated relationship between language and ethnicity in the constitution of self-identity in a country as vast and diverse as Indonesia. In the highlands of Aceh, on the other hand, ethnic minority groups there more readily identify themselves as Gayo and Alas. Javanese transmigrant populations are heavily represented in the east coast and central highland districts in the sample. The inconsistent distribution of ethnic groups across Aceh were one of many complicating factors



**TABLE 1.3. PNA1 AND PNA2 RESPONDENT CHARACTERISTICS BY SEX, AGE, MARITAL STATUS, EDUCATION AND HOUSING**

Demographics	PNA1: N=596			PNA2: N=1376			PNA1+PNA2: N=1972		
<b>Gender</b>									
Male	53			50			51		
Female	47			50			49		
<b>Age</b>									
17-29	25			35			32		
20-40	31			33			32		
41-53	24			18			20		
54-109	20			14			16		
<b>Marriage Status</b>									
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Never Married	20	12	16	21	14	17	20	13	17
Currently Married	77	70	74	77	70	73	77	70	73
Divorced or Separated	2	3	2	<0	3	2	1	3	2
Widowed	2	16	9	2	13	8	2	14	8
<b>Schooling</b>									
	Male	Female	Total	Male	Female	Total	Male	Female	Total
No Schooling	6	11	8	7	12	9	7	12	9
Primary School	48	48	48	42	41	41	44	43	43
Middle School	23	21	22	25	25	25	24	24	24
Secondary School	20	13	17	21	16	19	21	15	18
Associates Degree or Professional	2	5	3	2	3	3	2	3	3
University Education	2	2	2	3	3	3	2	3	3
<b>Housing</b>									
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Live in Own Home	84	87	85	89	90	89	87	89	88
Live with Friend or Relative	8	3	6	5	6	6	6	5	6
Live in Abandoned/ Destroyed Home	4	2	3	2	1	1	3	2	2
Rent Housing	2	5	3	3	2	3	3	3	3
Live in Barracks or Tent	2	3	3	<0	<0	<0	1	1	1

affecting the patterns of violence during the conflict.

As described above, one of the mechanisms for sampling high conflict villages was to draw on the data from IOM's EC-funded Post-Conflict Community Reintegration Programme (*Makmue Gampong Kareuna Damai* – MGKD). In those districts with a MGKD programme, approximately 50% of the villages were drawn from those included in the MGKD programme sample, and approximately 50% were drawn randomly from other villages in the

high conflict sub-districts. However, four districts – Aceh Besar and the Central Highlands districts – did not have MGKD programmes.

Although all villages were sampled from high conflict sub-districts, and other means were utilized to identify high conflict villages in the four districts with no MGKD programme, it is possible that this difference in sampling procedure might have led to a bias toward less high conflict villages in Aceh Besar and the Central Highlands, and thus for the PNA2 sample overall.

Tables 1.4 and 1.5 show the distribution of respondents living in villages selected for IOM's MGKD programme. Forty-six percent of the PNA1 respondents resided in villages with a Post-Conflict Community Reintegration Programme (MGKD), whereas only 33 percent of PNA2 respondents lived in such villages. A careful examination of respondents living in villages with MGKD programmes in each district shows that the sampling strategy did not lead uniformly to 50% of all respondents living in villages with and without MGKD programmes.

**TABLE 1.4 RESPONDENTS BY PRESENCE OR ABSENCE OF POST-CONFLICT COMMUNITIES REINTEGRATION PROGRAMME (MGKD) BY PNA1 AND PNA2**

IOM Dataset (N)	MGKD	
n	%	%
row percentage	MGKD+	MGKD-
PNA1 (N=596)	n=275 46%	n=321 54%
PNA2 (N=1376)	n=454 33%	n=922 67%
Total (N=1972)	n=729 37%	n=1243 63%

**TABLE 1.5 RESPONDENTS BY PRESENCE OR ABSENCE OF MGKD PROGRAMME BY REGION AND DISTRICT**

Location	% PNA1: N=596		% PNA2: N=1,376		% Total N=1,972	
	MGKD+	MGKD-	MGKD+	MGKD-	MGKD+	MGKD-
North Coast (PNA1)	46	54	-	-	13.94	16.28
Aceh Utara	18	12	-	-	5.58	3.50
Bireuen	15	15	-	-	4.56	4.56
Pidie	13	27	-	-	3.80	8.22
Aceh Besar (PNA2)	-	-	-	13	-	9.13
Aceh Besar	-	-	-	13	-	9.13
East Coast (PNA2)	-	-	8	10	5.78	6.70
Aceh Tamiang	-	-	-	3	-	1.83
Aceh Timur	-	-	8	7	5.78	4.87
Central Highlands (PNA2)	-	-	-	24	-	16.57
Aceh Tengah	-	-	-	7	-	4.61
Benar Meriah	-	-	-	11	-	7.40
Gayo Lues	-	-	-	6	-	4.56
Southeast Highlands (PNA2)	-	-	7	5	4.56	3.65
Aceh Tenggara	-	-	7	5	4.56	3.65
Southwest Coast (PNA2)	-	-	18	15	12.68	10.70
Aceh Barat	-	-	8	6	5.38	4.31
Aceh Barat Daya	-	-	1	3	0.91	1.83
Aceh Selatan	-	-	8	5	5.48	3.65
Nagan Raya	-	-	1	1	0.91	0.91

## TRAUMATIC EVENTS

### TRAUMATIC EVENTS DURING THE CONFLICT

This survey found that respondents from PNA2 in the 11 districts suffered remarkably high levels of traumatic events. However these were somewhat lower than the extraordinary high levels of traumatic events experienced in PNA1. In PNA2, 73% of the sample report experiencing combat (compared with 78% of PNA1 respondents), 33% forced to flee burning buildings (38% PNA1), and 45% forced to flee danger (47% PNA1). Nine percent of the PNA2 sample were forced to hide (16% PNA1); 23% suffered beatings to the body (39% PNA1); ten percent were tortured (18% PNA1); 37% had a family member or friend killed (41% PNA1); two percent had a spouse killed (4% PNA1); and three percent a child killed (5% PNA1).

Table 2.1 summarizes past traumatic events experienced by respondents in the total sample, comparing between both PNA1 and PNA2 studies and the six geographic regions defined in the Research Design and Methodology section above.

### VARIATION IN TRAUMATIC EVENTS BY REGION

The survey was designed to map differences across regions and communities in their experiences with violence. For nearly every traumatic event reported in Table 2.1 the total PNA2 sample reports slightly fewer experiences of traumatic events than the PNA1 sample despite the widespread experience of combat across all of Aceh. The footnote

beneath Table 2.1 (“\*”) shows that the differences between PNA1 and PNA2 are statistically significant for nearly every item at  $p < .0001$ . However when one examines reported traumatic events by geographic region, location emerges as a critical element in understanding which respondents were most affected by the conflict. The sections below report some of the outstanding regional variations in the sample, puts these variations into context, and then highlights how a macro-regional approach to documenting traumatic experience can obscure the intensity of traumatic events in very particular local settings.

#### • High Prevalence Regions

It was anticipated that PNA1 had surveyed communities with the highest levels of violence over the longest periods of time, given the centrality of the North Coast in the history of GAM and the conflict, and that overall, other regions would be found to have suffered lower levels of violence during the conflict. Somewhat contrary to expectation, then, was the overwhelming finding that two regions – the East Coast and the Southwest Coast – suffered terrible violence and traumatic events at a level equivalent to or even higher than that in the North Coast. In the East Coast communities, for example, 80% of the respondents reported having lived through combat experiences, 45% experienced having to flee from burning buildings in their community and 61% having to flee from

danger. Seven percent of women have had their husband killed in the conflict, 50% of respondents report having had a family member or friend killed, and 45% reported having a family member or friend kidnapped or disappear. Almost half, or 47% reported having their property confiscated or destroyed and 31% experienced extortion or robbery. Persons in the Southwest Coast region, where the violence was of much shorter duration, reported experiences of violence at nearly equivalent rates.

The distinctive experiences by region are highly significant at  $p < .0001$  for most events, with lesser levels of significance for others  $< .01$  to  $< .05$  (see footnote “†” beneath Table 2.1). Events that show no significant difference between regions are those with low reporting in both the PNA1 and PNA2, and across all regions. Qualitative research, a small portion of which is described in the following sections, supports the quantitative data in finding a history of extreme violence toward civilian populations in many villages in these regions.

#### • Hot Spots: Local Specificity Within Regions and Districts

One of the most puzzling results from the PNA1 data was the striking difference in levels of traumatic experience (and psychological symptoms) between Pidie district on the one hand and Bireuen and Aceh Utara districts on the other.

Respondents from Bireuen and Aceh Utara reported a prevalence two times as high as Pidie for nearly all significant items on the traumatic events checklist. To economize in the reporting of data from all across Aceh province, all 14 sampled districts have been grouped into the six regions as described in the Research Design and Methodology section above.

The PNA1 data from Pidie, Bireuen, and Aceh Utara in this report, for example, is aggregated into the North Coast region. The data here reported from the North Coast does not capture the remarkable variability between the three districts. Herein lies an important shortcoming in presenting the results of this PNA research at a macro-geographic level that describes data collected from 105 villages across Aceh—each with its own particular history of conflict—aggregated into six broadly defined regions.

Findings from the qualitative research suggest a wide range of factors that may contribute to intense variations among villages within the regions defined in this report, within districts (*kabupaten*), and even within sub districts (*kecamatan*). In several coastal districts, for example, there is broad consensus that as one traveled away from the main highway, either toward the mountains or toward the sea, the security situation during the conflict increased in danger. In Aceh Selatan the

chances that someone evacuated to safety during the conflict increases if his or her village is closer to the mountains. Residents of certain sub-districts in Aceh Selatan can describe patterns of population displacement during the conflict simply as, “everyone from village X and all the villages past it up into the mountains evacuated during the conflict.” The reasons for evacuation are described as an often intolerable litany of traumatic experiences, similar to the itemized events in the PNA questionnaire, which left no other choice but to leave.

But why do some sub-districts in Aceh Selatan have patterns like this while others that feature similar geography do not? Military intervention by Indonesian forces typically followed GAM’s recruitment activities along the Southwest Coast, but recruitment was hardly uniform across such a vast and relatively sparsely populated region. Upon arrival, the various regiments of Indonesian military and police units imported reputations for their unique styles of intervention. Some battalions were known for their paternalistic and sympathetic kindness toward civilians, while others were infamous for their spectacular and inhumane brutality. GAM operations could be equally inconsistent in their treatment toward civilians, especially among the districts of the Southwest Coast, the East Coast and the Central Highlands. Entire

villages of Javanese transmigrants were emptied by GAM forces, thus highlighting ethnicity as another factor that determined specific patterns of violence within the regions.

Levels of violence could also vary by economic interests in natural resources by both sides. Competition over small scale gold mining operations in the upper reaches of the Kluet River valley in Aceh Selatan may explain why Kluet villages suffered through a more highly concentrated blast of violence and terror from 2001 through 2003. But like the internal variations in the North Coast districts, stories with such local specificity that vary within a single district such as Aceh Selatan, can not be reported as a Southwest Coast phenomenon.

While the sampling employed for the PNA had in mind a broad stroke mapping of conflict events and psychological symptoms across Aceh, an understanding of the local specificities that determine conflict traumatic experiences such as those described above is essential for the development of programmes that target areas with greatest need. The PNA data, dependent on a sample drawn from 105 villages across 14 districts, can not map all of the micro-local hot spots in Aceh’s long history of conflict, but can be used to pinpoint some exemplary localities not described by the regional aggregate data.

TABLE 2.1 PAST TRAUMA EVENTS BY PNA STUDY AND REGION

Traumatic Events	*PNA1 Data	†PNA2 Data						PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Experienced combat (bombing, fire fights)	78	68	80	62	69	79	73	74
Forced to flee burning buildings	38	13	45	37	6	42	33	35
Forced to flee danger	47	33	61	40	12	57	45	46
Forced to hide	16	3	7	8	2	17	9	11
Beating to the body	39	16	42	15	3	30	23	28
Attacked by knife or gun	26	6	19	8	3	21	14	17
Tortured	18	3	15	5	2	15	10	12
Serious physical injury from combat	13	4	16	6	3	13	10	11
Witnessed physical punishment	54	35	51	22	9	57	39	44
Humiliated or shamed in public	17	4	12	3	3	18	10	12
Rape	1	0	1	1	0	1	1	1
Forced to rape a family member	<1	0	1	1	0	1	1	<1
Other sexual assault	3	2	4	4	1	3	3	3
Spouse killed	5	4	4	1	1	2	2	3
Spouse disappeared, kidnapped	3	2	3	3	0	2	2	2
Child killed	5	2	1	4	1	4	3	4
Child disappeared, kidnapped	3	1	2	4	0	2	2	2
Family member or friend killed	41	31	50	39	12	40	37	38
Family member or friend disappeared	33	22	45	38	11	28	31	31
Kidnapped	5	3	7	3	1	4	4	4
Captured, held by TNI/POLRI or GAM	12	5	14	5	4	12	9	10
Sent to prison	3	1	5	3	2	5	4	3
Forced separation from family	9	8	7	4	2	13	8	8
Forced isolation	8	1	3	4	1	10	5	6
Confiscation, destruction of property	45	26	47	33	15	47	37	40
Extortion, robbery	33	17	31	13	6	27	21	24
Forced labor	29	19	21	22	3	30	22	24
Forced to give food, shelter to TNI or GAM	27	12	15	10	5	25	15	19
Forced to fight against TNI or GAM	23	14	20	7	3	26	16	18
Punished for not fighting against TNI or GAM	12	5	15	3	3	18	10	11
Forced to search for corpses	12	5	6	11	3	10	8	9
Not allowed to provide Muslim burial	6	2	11	3	0	2	4	4
Forced to injure family member	6	0	1	1	0	4	2	3
Forced to injure non-family member	7	0	3	1	0	5	2	4
Forced to destroy someone's property	3	1	3	5	1	4	3	3
Forced to betray/endanger family member	7	3	6	2	0	6	4	5
Forced to betray/endanger non-family	7	5	4	1	0	6	3	4
Someone forced to betray/endanger you	7	3	7	4	0	11	6	6
Forced to humiliate another person	8	1	3	3	0	7	4	5
Forced to search for GAM member in forest	35	14	29	12	1	37	22	26
Lack of shelter because of conflict	24	21	29	34	7	31	27	26
Lack of food, water because of conflict	82	56	75	85	65	79	75	77
Sick, lack of access to health care	60	46	60	69	39	71	62	61

\* PNA1 VS. PNA2 district locations: Statistically significantly different at p< 0.0001 [All Events]

Except....

Rape	NS
Forced to rape family member	NS
Other sexual abuse	NS
Sent to prison	p<0.01
Kidnapped	p<0.01
Forced to destroy s.o.'s property	p<0.05
Spouse killed	p<0.05
Child killed	p<0.01
Spouse kidnapped or disappeared	NS
Child kidnapped or disappeared	p<0.01

† PNA2 district locations comparison: Statistically significantly different at p< 0.0001 [All Events]

Except....

Rape	NS
Forced to rape family member	NS
Other sexual abuse	NS
Sent to prison	p<0.01
Kidnapped	p<0.01
Forced to search for corpses	p<0.01
Forced to injure family member	p<0.01
Forced to destroy s.o.'s property	p<0.05
Spouse killed	NS
Child killed	p<0.05
Spouse kidnapped or disappeared	NS
Child kidnapped or disappeared	p<0.01

## HOT SPOT CASE STUDY: THE KLUET RIVER VALLEY

Travelling southbound out of Aceh Barat Daya (Southwest Aceh) district into the district of Aceh Selatan (South Aceh), the main highway hugs the shoreline on the approach to the sleepy district capital of Tapaktuan. The foothills of the mountainous interior fall flat immediately to the left of the highway, leaving a narrow margin for coastal farming and fishing communities. In Aceh Selatan, all respondents in the PNA sample self-identified their ethnicity as Acehnese. But in fact, in this district far from the provincial capital of Banda Aceh and the densely populated north coast districts classically identified as the centre of Acehnese culture, the number of residents here who speak Acehnese as their first language are the minority. Coastal communities in Aceh Selatan speak Bahasa Aneuk Jame, a language more closely related to the languages spoken in Sumatra Barat (West Sumatra) province further south down the west coast of the island. Highland groups, such as the Kluet described below, speak their own languages as well.

Tapaktuan is not much more than a narrow strip of shophouses and a harbour between the foothills and the Indian Ocean. The margin between the foothills and the ocean ends at Tapaktuan's southern city limits, and the highway then snakes up through a mountain pass with stark cliffs down to the ocean below with fabulous views along the way. A rest stop at the top of a majestic outcropping marks the spot where Indonesia's first Vice-President, Mohammad Hatta, stopped in 1953, during his diplomatic tour of the province to end the Darul Islam Rebellion - a different conflict against the newly independent Indonesian republic that preceded the government's conflict with GAM by two decades.

Upon descent to the south side of the mountain pass the highway turns inland from the coast a bit as the flat land between the hills and the ocean widens out by several kilometres width. After passing a prison and a state agricultural training institute, both of which were burned down during the conflict, a few dozen kilometres south the highway meets the intersection at Kota Fajar, a market town on the north side of the Kluet River that empties into the Indian Ocean. A left turn at Kota Fajar follows a road in

disrepair that parallels the Kluet River into the mountainous interior. Residents of the Kluet River valley speak Bahasa Kluet, similar to Bahasa Alas spoken in the mountains of Aceh Tenggara (Southeast Aceh) and distantly related to Bahasa Karo spoken by the Karo Batak in the mountainous interior of Sumatra Utara (North Sumatra) province.

The formal economy of the Kluet River valley thrived in the 1990s on patchouli (*nilam*), a cash crop whose leaves are boiled down to extract patchouli oil, a raw material used as a base for a wide range of products in the perfume industry. The informal economy of the Kluet River valley thrives on illegal logging and the aforementioned gold mining interests. Logging and mining provided strategic sources of income for whoever could control it, thus creating a lucrative and devastating contest between GAM and Indonesian forces, particularly from 2001 to 2003, when the Indonesian military and police forces arrived in the region in order to neutralize the sudden and massive GAM recruitment.

In the random sample of villages selected for the team of researchers that surveyed Aceh Selatan and Aceh Barat Daya, 50% were randomly selected from a short list of known high conflict villages in high conflict sub-districts that received IOM's Post-Conflict Community Reintegration Programme (see "Selection of Villages" in the Research Design and Methodology section above). The remaining 50% of villages sampled in these districts were randomly selected from villages in the same sub-districts that did not receive the benefit of IOM's Post-Conflict Community Reintegration Programme. Five out of the 13 villages visited by the research team were in the Kluet River valley where the residents primarily speak Bahasa Kluet as their first language.

The high number of Kluet villages in the PNA sample is likely due to the fact that many villages in the Kluet River valley met criteria for inclusion in IOM's Post-Conflict Community Reintegration Programme, i.e. an intensive history of conflict, with large numbers of ex-combatants and former political prisoners returning home to these villages after the

TABLE 2.2 PAST TRAUMA EVENTS IN THE KLUET RIVER VALLEY

Traumatic Events	% Southwest Coast Districts (N=461)	% Aceh Selatan District (N=180)	% Kluet River Valley (N=90)	% Total Sample (N=1972)
	MGKD+	MGKD-	MGKD+	MGKD-
<b>Experienced combat (bombing, fire fights)</b>	79	91	92	74
<b>Forced to flee burning buildings</b>	42	53	62	35
<b>Forced to flee danger</b>	57	79	93	46
<b>Forced to hide</b>	17	27	30	11
<b>Beating to the body</b>	30	43	46	28
<b>Attacked by knife or gun</b>	21	31	38	17
<b>Tortured</b>	15	20	25	12
<b>Serious physical injury from combat</b>	13	23	32	11
<b>Witnessed physical punishment</b>	57	76	85	44
<b>Humiliated or shamed in public</b>	18	33	40	12
<b>Rape</b>	1	2	3	1
<b>Forced to rape a family member</b>	1	1	2	<1
<b>Other sexual assault</b>	3	6	12 *	3
<b>Spouse killed</b>	2	3	4	3
<b>Spouse disappeared, kidnapped</b>	2	2	2	2
<b>Child killed</b>	4	3	5	4
<b>Child disappeared, kidnapped</b>	2	2	0	2
<b>Family member or friend killed</b>	40	39	40	38
<b>Family member or friend disappeared</b>	28	34	38	31
<b>Kidnapped</b>	4	6	7	4
<b>Captured, held by TNI/POLRI or GAM</b>	12	16	17	10
<b>Sent to prison</b>	5	9	8	3
<b>Forced separation from family</b>	13	24	29	8
<b>Forced isolation</b>	10	16	22	6
<b>Confiscation, destruction of property</b>	47	62	77	40
<b>Extortion, robbery</b>	27	35	45	24
<b>Forced labour</b>	30	49	61	24
<b>Forced to give food, shelter to TNI or GAM</b>	25	30	44	19
<b>Forced to fight against TNI or GAM</b>	26	41	46	18
<b>Punished for not fighting against TNI or GAM</b>	18	26	29	11
<b>Forced to search for corpses</b>	10	10	17	9
<b>Not allowed to provide Muslim burial</b>	2	3	7	4
<b>Forced to injure family member</b>	4	6	12 **	3
<b>Forced to injure non-family member</b>	5	8	13	4
<b>Forced to destroy someone's property</b>	4	5	7	3
<b>Forced to betray/endanger family member</b>	6	5	9	5
<b>Forced to betray/endanger non-family</b>	6	5	8	4
<b>Someone forced to betray/endanger you</b>	11	11	13	6
<b>Forced to humiliate another person</b>	7	11	19	5
<b>Forced to search for GAM member in forest</b>	37	65	72	26
<b>Lack of shelter because of conflict</b>	31	44	57	26
<b>Lack of food, water because of conflict</b>	79	86	92	77
<b>Sick, lack of access to health care</b>	71	84	91	61

\* All eleven respondents in Aceh Selatan who reported "other sexual assault" live in the Kluet River Valley.

\*\* All ten respondents in Aceh Selatan who reported being forced to injure a member of their family live in the Kluet River Valley.

peace agreement. Table 2.2 compares the levels of traumatic events reported by respondents during the conflict in first the Southwest Coast region, then Aceh Selatan at the district level, and then focused on the five villages in the Kluet River valley of Aceh Selatan.

In a region already remarkable for the chaotic and cruel violence inflicted upon civilians up and down the Southwest coast of Aceh during the latter years of the conflict, where more than half of respondents (57%) from four districts (Aceh Barat, Nagan Raya, Aceh Barat Daya and Aceh Selatan) report being forced to flee danger, a focus upon the events reported from villages in the Kluet River valley stands out for nearly every item on the list. Comparing the numbers down from region, to district, to the Kluet River valley, it comes as little surprise that 93% of the Kluet respondents were forced to flee under such intolerable conditions.

The astonishingly high levels of violence (beatings, torture, attacked with a weapon, destruction of property, combat and combat injuries) give pause, the percentages for experiences of traumatic events in the Kluet River valley are typically twice as high or greater than the average percentage reported by the total sample (PNA1 & PNA2).

In one of the villages, during three days of nearly continuous torture and interrogation of every adult man in the village, an elderly farmer was hacked with a machete down the side of his torso because he could not keep up with the forced labour and "exercises" imposed by security forces. Today the wound is thickly scarred, often turns red accompanied with throbbing pain and pus, and has permanently restricted movement of his right shoulder so that he can not raise his arm. Unable to even work in his own garden to harvest areca nuts, he is so demoralized that his only activity is "waiting to die."

During those three days of torture, when security forces first occupied the village, this man along with three other

men whose sons were suspected combatants, were forced to spend each night submerged in sewage and irrigation canals. One father of two teenage combatants was beaten so badly on the head and then held forcefully underwater in the sewage canal until he lost consciousness; he suffered severe anoxic brain injury as a result and since then his body has gradually lost nearly all motor function.

Although he is alert, answering questions lucidly and retaining a sense of touch, his emaciated body now lies almost completely spastic. He is unable to sit up, his muscles are contracted, his joints in permanent flexion, he's incontinent, and his ability to speak is increasingly compromised. His family keeps him clean and cares for him attentively, but he will never recover from this terrible injury. The family needs additional education about providing physical therapy, hygienic care for his body, and giving him medication to ease the discomfort and spasticity that he will suffer for the rest of his life.

What makes the Kluet River valley's conflict experience stand out even more than the violence are the levels of insult and humiliation suffered by this population. The numbers for traumatic events that deliberately inflict psychological injury and shame upon respondents are mostly between three and four times higher than the average numbers reported by the total sample. 85% of Kluet respondents witnessed physical punishment, 40% were humiliated in public, 19% were forced to humiliate others, 22% were forced into isolation, and 29% were forced apart from their families. 12% of Kluet respondents were the only respondents in all of Aceh Selatan who were forced to injure a member of their own family. This is four times higher than the total sample average.

The Gendered Trauma section below describes the difficulty of quantifying sexual violence, given such low reporting, but it is worth noting that the percentage of Kluet respondents admitting rape is three times higher than the total sample average. The percentage of Kluet

respondents admitting they were forced to rape a member of their own family is twice as high as the total sample average, and the percentage of Kluet respondents reporting "other sexual assault" (12%) is four times higher than the total sample average.

Upon hearing the stories told by key informants and questionnaire respondents in the Kluet River valley, senior researchers from Harvard, IOM staff, and the Acehnese interviewing staff were all rendered speechless and exhausted by what they learned. The residents of one village in the sample wished they had evacuated like the neighbouring communities had done before the violence and torture reached its peak. A young man described being forced to stand in a circle with his friends, and one by one the men were ordered to punch the man to his right with genuine strength and force, around and around the circle. Half-hearted punches were met with much worse blows by the soldiers who ordered the men to hurt each other. When asked how he lives with the memory of injuring the friends and neighbours he has known all his life, he answered, "the situation was so absurd, we could only laugh about it.

Yes, we really did punch each other as hard as we could, we had no choice! But we laughed our way through it, that is all we could do. How can we hold a grudge against each other under such ridiculous conditions? We don't feel hurt or vengeful about what we did to each other; we can only laugh if we remember it. The capacity to find humour in the absurd conditions of senseless violence and terror may have been an important mode of psychosocial resilience for the men and women who lived through such intensive and concentrated periods of conflict, as well as an indication of their psychological strength in being able to position

themselves outside of the traumatic situation.

Other examples of humiliating trauma perpetrated in the Kluet River valley need not be reproduced in this report in order to understand the point of this particular example from Aceh Selatan. While the PNA data finds conflict events widely distributed across all of Aceh, leaving nearly no one unaffected, it is possible to identify, with minimal advance quantitative and ethnographic assessment, the so-called hot spots or micro-localities where intense, complex, and sustained bursts of conflict violence may suggest the priorities for the tailored design and delivery of psychosocial and other post-conflict reintegration services.

Today nearly all of the residents of the Kluet River valley have returned home from their IDP camps in Tapaktuan, where entire villages lived for more than a year until the peace agreement was signed. Fields and forest gardens were destroyed or have gone fallow, along with many homes, and the market price of patchouli oil has plummeted to less than a third of its value in the late 1990s, before the conflict began. Returned IDPs in the Kluet villages are living in makeshift homes and growing quick but low profit cash crops such as chili peppers and cassava. There are also unverified reports of continued extortion and intimidation of civilians by armed groups in the area. There is a dire need for transitional livelihood support in order for Kluet villagers to rehabilitate their fields. Community organizing and training to improve the quality, value, and marketing of patchouli as their local cash crop is also recommended. Psychosocial screening and support for conflict victims suffering from depression or trauma should be coupled with post-conflict economic support for these communities in order for all assistance to be successful and sustainable.

### • Low Prevalence Regions

The PNA2 survey did indeed find significantly lower levels of traumatic events in other regions, particularly in the Southeast Highlands and in Aceh Besar. But the preceding discussion about the remarkably local specificities of conflict experience, such as in the Kluet Valley, should serve as a cautionary note before discounting entire regions. The real finding of this study is just how many persons even in these so-called low prevalence communities were deeply affected by the conflict and violence as well.

In the Southeast Highlands 69 % and in Aceh Besar 68% of respondents reported experiencing combat. Even in the Southeast Highlands, usually cited as the least conflict-affected region of the province, 12% of respondents there reported having a family member or friend killed. In Aceh Besar, 32% of men (see Table 2.3) reported being beaten on the body. Thus, while violence was certainly localized in particular regions and villages, it was also widespread, affecting a remarkably high number of persons throughout hundreds, if not thousands, of rural communities throughout Aceh.

### GENDERED TRAUMA

Table 2.3 below reports past traumatic events experienced by men in the different geographic regions. Table 2.4 reports the same information for women. Both men and women experienced extraordinary levels of violence, but the level and type of traumatic events experienced as part of the conflict varied by gender. Men reported significantly greater physical violence than women. Across the full sample, 44% of men report having been beaten (12% of women), 24% report being attacked with a gun or knife

(10% of women), 19% of men report being tortured (5% of women), 16% of men reported being taken captive (4% of women), and 49% of men (and 38% of women) reported witnessing physical violence against others. Nonetheless, women suffered enormously. For example, in the Southwest Coast communities, 79% of women experienced combat and 56% had to flee danger, 52% were forced to witness physical punishment, 36% had a family member or friend killed, 43% had property confiscated or destroyed and 32% were forced to search for GAM members in the forest.

### • Sexual Violence

As noted in the PNA1 report, rape and other sexual violence is rarely reported in the PNA questionnaire data, although human rights advocates have identified sexual violence as an important feature of conflict violence in Aceh. Interviewers did not challenge respondents' choice of not reporting these stigmatizing events. It is worth noting that on the traumatic events checklist, respondents could answer non-specific items about being humiliated or shamed in public, or being forced to humiliate or shame others. For example, twelve percent of East Coast respondents, 17% of North Coast respondents and 18% of Southwest Coast respondents report having experienced public humiliation during the conflict. Gender differences are significant in distinguishing who reported most humiliation.

In both PNA1 and PNA2, men were more likely than women to report being humiliated in public or forced to humiliate another. Four percent of women in both samples reported other sexual assault and one percent reported rape. In simple numbers this means that 50

out of the 965 women in the total sample reported sexual violence of some kind as part of their traumatic experience during the conflict.

Key informant interviews and informal group discussions in these regions, during both PNA1 and PNA2 fieldwork, recount acts of sexual abuse and bodily humiliation in ways that suggest that there was more of this kind of violence committed than the reported numbers tell us. Men and women were often forced by combatant groups to line up and strip naked. Children were forced to touch the genitals of their parents of the opposite sex. Many women in some parts of Aceh Selatan district reported having their heads shaved bald every two weeks because their husbands or sons were suspected combatants.

Those who describe finding the corpses of conflict victims, usually dumped in public places such as road sides and river banks, often depict the genital mutilation inflicted upon the bodies as but one of many signs of torture. Many respondents spoke about how young women from their communities were sent to live with relatives in safer, urban areas rather than risk having them subjected to sexual abuse by combat groups stationed in their village. These same respondents recall well-known "posts" or empty buildings in or near their village where young women suffered various forms of sexual violence.

Finally, women's narratives reveal that the common experience of having one's house ransacked or destroyed was experienced as an especially powerful attack on women, bearing in mind that in rural Aceh women typically own their own homes and a husband moves into his wife's home upon marriage. In fact, a man's wife in

Aceh is often referred to as *po rumah*, the owner of the house.

### • Head Trauma

A unique form of physical trauma widely experienced during the conflict, particularly among men, that can have terrible consequences for an individual's organic mental health is head injury. In the worst cases, severe head injuries can result in total loss of motor control such as the example described in the Kluet River valley case study above. In other cases, people lose their ability to remember, experience numbness and other sensory disabilities such as vision loss, or have rapid and unexplainable mood swings.

Rates of head trauma and potential brain injury, suffered through beatings, strangulation, near drownings, and other forms of torture or violence, were extraordinarily high in the PNA sample and deserve clinical interventions and additional research. Men, particularly young men in the highest conflict areas, were at the highest risk. 43% of all men in the East Coast region and 41% in the Southwest Coast report having suffered head trauma—rates equivalent to those found in PNA1 for the North Coast. Tables 2.5 and 2.6 present the data on physical head injuries sustained due to conflict violence by men and women respectively.

### FORCED EVACUATION AND OTHER DISPLACEMENT EXPERIENCE

Table 2.7 reproduces two items from the Traumatic Events checklist that concern evacuation due to conflict violence. After seeing these figures in PNA1, and given IOM's core mandate to deal with migration, additional questions about displacement experience were included in the PNA2 questionnaire, including the

information at the bottom of Table 2.7 about forced and voluntary evacuation.

In nearly all of the high conflict areas sampled, between one-third and two-thirds of all respondents were displaced, usually by force, during the conflict. Respondents who answered yes to the question about voluntary or forced evacuation were then given an opportunity to tell interviewers about their displacement experience, including their main reason for leaving their home of origin during the conflict. The following unranked list summarizes the main themes that emerge from the answers to this question:

- Combat operations in the community (*kontak senjata*)
- Too much extortion and robbery
- Ordered to leave by either GAM, TNI, or "unidentifiable groups"
- Respondents' homes were destroyed
- Threatened by, or fearful of, either TNI or GAM
- Too much violence and torture against civilians
- Not permitted to buy essential goods by armed groups occupying the village
- Respondents, or respondents' relative(s), involved in GAM
- Accused of providing logistical support to armed groups
- Respondents heard that TNI or GAM were searching for them
- Everyone else in the village was evacuating

Almost every respondent who told us about their displacement experience during the conflict should be considered as returned IDPs, or for those living very close to their home of origin prior to displacement, as current IDPs. There are still thousands of Javanese transmigrant IDP families still living in Sumatra Utara (North Sumatra) province just south of Aceh, and several thousand Acehnese

refugees still in Malaysia. Indeed, most Javanese transmigrants have chosen to sell their land rather than to risk returning and facing more violence. The PNA data therefore does not capture the experience of the current IDPs still living outside Aceh. Bearing this in mind, the following Table 2.8 provides data on where the returned IDPs in the PNA2 sample went during their displacement.

Following the numbers diagonally from top left to bottom right, it is overwhelmingly clear that the returned IDPs in the PNA2 sample did not go very far during their displacement. Most of the qualitative data describes displacement experiences as close as the neighbouring village, the sub-district office/ school/ mosque, the district capital, the neighbouring district, or the nearest municipality. Counting the diagonal numbers, 545 out of the 595 (95%) respondents who told us where they went during their evacuation stayed in the same geographic region. Not shown in Table 2.8, a closer analysis shows that 505 of these respondents (85%) stayed within their home district. Localised displacement is the overwhelming finding among returned IDPs in the PNA2 sample.

Duration of displacement is varied. Respondents report being away from their villages for as brief as a week, and for as long as two years. (Current IDPs not in the sample have been away for five years or much longer) But the common refrain, no matter how short or long the duration of displacement, is that returning IDPs came home to nothing. It only took a day or two to pillage and burn entire villages—homes, fields, livestock, gardens, schools, mosques. "Starting from zero" is the common experience of returning IDPs, and vulnerable economic conditions have significant bearing on their psychosocial condition.

TABLE 2.3 PAST TRAUMA EVENTS EXPERIENCED BY MEN, BY REGION

Traumatic Events	*PNA1	District Location					% Total Sample (N=1,006)
	†PNA2						
	% North Coast (N=315)	% Aceh Besar (N=66)	% East Coast (N=125)	% Central Highlands (N=180)	% Southeast Highlands (N=94)	% Southwest Coast (N=226)	
Experienced combat (bombing, fire fights)	83	62	83	61	78	80	77
Forced to flee burning buildings	43	12	44	33	9	46	37
Forced to flee danger	52	33	61	36	18	58	47
Forced to hide	20	6	10	8	3	21	14
Beating to the body	56	32	66	25	5	48	44
Attacked by knife or gun	36	9	28	9	5	30	24
Tortured	25	9	24	8	3	25	19
Serious physical injury from combat	19	11	25	8	4	23	17
Witnessed physical punishment	61	35	62	25	15	63	49
Humiliated or shamed in public	22	8	15	4	4	26	16
Rape	1	0	2	2	0	0	1
Forced to rape a family member	<1	0	2	1	0	<1	1
Other sexual assault	3	5	2	1	1	3	2
Spouse killed	2	2	0	1	1	2	1
Spouse disappeared, kidnapped	2	2	1	2	0	1	2
Child killed	5	2	1	5	1	4	4
Child disappeared, kidnapped	2	2	1	4	0	1	2
Family member or friend killed	49	26	59	37	18	45	43
Family member or friend disappeared	36	26	51	39	15	35	36
Kidnapped	8	6	11	3	1	7	6
Captured, held by TNI/ POLRI or GAM	19	11	23	7	5	21	16
Sent to prison	4	2	7	3	2	10	5
Forced separation from family	11	9	8	5	3	18	10
Forced isolation	10	2	3	5	1	14	8
Confiscation, destruction of property	49	21	52	35	22	51	43
Extortion, robbery	36	17	36	14	6	31	27
Forced labour	44	31	30	30	5	45	36
Forced to give food, shelter to TNI or GAM	29	14	16	8	5	31	21
Forced to fight against TNI or GAM	28	17	25	8	5	35	23
Punished for not fighting against TNI or GAM	17	9	19	3	4	25	15
Forced to search for corpses	15	8	7	13	5	14	12
Not allowed to provide Muslim burial	7	2	16	4	0	2	5
Forced to injure family member	10	0	2	2	0	5	6
Forced to injure non-family member	11	0	6	1	0	7	6
Forced to destroy someone's property	6	0	7	4	1	7	5
Forced to betray/ endanger family member	10	8	8	3	0	9	7
Forced to betray/ endanger non-family	10	8	5	1	0	8	6
Someone forced to betray/ endanger you	11	8	11	6	0	16	10
Forced to humiliate another person	11	0	4	3	0	10	7
Forced to search for GAM member in forest	46	19	40	15	1	44	33
Lack of shelter because of conflict	22	11	27	33	13	32	25
Lack of food, water because of conflict	86	55	77	84	70	80	80
Sick, lack of access to health care	64	38	65	69	42	73	63

## MALES \*†

Past Trauma Events Experienced by Male Informant	PNA1 VS. PNA2 District Locations Comparison	PNA2 District Locations Comparison
Experienced combat (bombing, fire fights)	p<0.0001	p<0.0001
Forced to flee burning buildings	p<0.0001	p<0.0001
Forced to flee danger	p<0.0001	p<0.0001
Forced to hide	p<0.0001	p<0.0001
Beating to the body	p<0.0001	p<0.0001
Attacked by knife or gun	p<0.0001	p<0.0001
Tortured	p<0.0001	p<0.0001
Serious physical injury from combat	p<0.0001	p<0.0001
Witnessed physical punishment	p<0.0001	p<0.0001
Humiliated or shamed in public	p<0.0001	p<0.0001
Rape	NS	NS
Forced to rape a family member	NS	NS
Other sexual assault	NS	NS
Spouse killed	NS	NS
Spouse disappeared, kidnapped	NS	NS
Child killed	NS	NS
Child disappeared, kidnapped	NS	NS
Family member or friend killed	p<0.0001	p<0.0001
Family member or friend disappeared	p<0.0001	p<0.0001
Kidnapped	p<0.01	p<0.01
Captured, held by TNI/POLRI or GAM	p<0.0001	p<0.0001
Sent to prison	p<0.01	p<0.01
Forced separation from family	p<0.0001	p<0.0001
Forced isolation	p<0.0001	p<0.0001
Confiscation, destruction of property	p<0.0001	p<0.0001
Extortion, robbery	p<0.0001	p<0.0001
Forced labor	p<0.0001	p<0.0001
Forced to give food, shelter to TNI or GAM	p<0.0001	p<0.0001
Forced to fight against TNI or GAM	p<0.0001	p<0.0001
Punished for not fighting against TNI or GAM	p<0.0001	p<0.0001
Forced to search for corpses	p<0.05	NS
Not allowed to provide Muslim burial	p<0.0001	p<0.0001
Forced to injure family member	p<0.0001	p<0.05
Forced to injure non-family member	p<0.0001	p<0.0001
Forced to destroy someone's property	p<0.05	p<0.05
Forced to betray/ endanger family member	p<0.001	p<0.001
Forced to betray/ endanger non-family	p<0.0001	p<0.0001
Someone forced to betray/ endanger you	p<0.0001	p<0.0001
Forced to humiliate another person	p<0.0001	p<0.0001
Forced to search for GAM member in forest	p<0.0001	p<0.0001
Lack of shelter because of conflict	p<0.0001	p<0.0001
Lack of food, water because of conflict	p<0.0001	p<0.0001
Sick, lack of access to health care	p<0.0001	p<0.0001

TABLE 2.4 PAST TRAUMA EVENTS EXPERIENCED BY WOMEN, BY REGION

Traumatic Events	*PNA1	District Location					% Total Sample (N=966)
	% North Coast (N=281)	†PNA2	% East Coast (N=121)	% Central Highlands (N=147)	% Southeast Highlands (N=68)	% Southwest Coast (N=235)	
		% Aceh Besar (N=114)					
Experienced combat (bombing, fire fights)	73	71	77	63	56	79	72
Forced to flee burning buildings	33	14	46	42	3	39	33
Forced to flee danger	42	33	61	45	4	56	44
Forced to hide	12	1	5	8	0	13	9
Beating to the body	20	7	16	3	0	12	12
Attacked by knife or gun	14	4	9	7	0	13	10
Tortured	11	0	5	1	0	6	5
Serious physical injury from combat	6	0	7	4	0	4	4
Witnessed physical punishment	45	34	41	19	2	52	38
Humiliated or shamed in public	11	2	9	3	0	11	8
Rape	2	0	1	0	0	2	1
Forced to rape a family member	0	0	0	0	0	1	<1
Other sexual assault	4	1	6	8	0	3	4
Spouse killed	8	5	7	2	0	3	5
Spouse disappeared, kidnapped	3	2	5	3	0	4	3
Child killed	5	2	2	3	0	5	4
Child disappeared, kidnapped	4	0	3	4	0	2	3
Family member or friend killed	31	33	41	40	3	36	33
Family member or friend disappeared	30	20	38	37	4	22	27
Kidnapped	2	1	4	3	0	<1	2
Captured, held by TNI/POLRI or GAM	5	2	5	3	2	3	4
Sent to prison	2	0	3	2	2	1	2
Forced separation from family	7	7	6	2	0	9	6
Forced isolation	4	0	2	2	0	6	3
Confiscation, destruction of property	40	28	42	31	6	43	36
Extortion, robbery	28	18	26	11	4	24	21
Forced labour	11	12	12	13	0	15	12
Forced to give food, shelter to TNI or GAM	25	11	13	11	4	20	17
Forced to fight against TNI or GAM	16	12	14	6	0	17	13
Punished for not fighting against TNI or GAM	5	3	12	2	0	11	6
Forced to search for corpses	8	3	4	9	0	6	6
Not allowed to provide Muslim burial	4	3	7	1	0	2	3
Forced to injure family member	2	0	0	0	0	2	1
Forced to injure non-family member	2	0	0	1	0	2	1
Forced to destroy someone's property	<1	2	0	5	0	2	2
Forced to betray/endanger family member	3	1	3	1	0	4	2
Forced to betray/endanger non-family	4	3	3	1	0	3	3
Someone forced to betray/endanger you	3	0	4	1	0	6	3
Forced to humiliate another person	5	1	3	2	0	4	3
Forced to search for GAM member in forest	24	11	17	8	0	32	19
Lack of shelter because of conflict	25	26	31	36	0	30	27
Lack of food, water because of conflict	77	56	73	86	59	77	74
Sick, lack of access to health care	55	50	55	70	35	69	59

## FEMALES \*†

Past Trauma Events Experienced by Male Informant	PNA1 VS. PNA2 District Locations Comparison	PNA2 District Locations Comparison
Experienced combat (bombing, fire fights)	p<0.001	p<0.001
Forced to flee burning buildings	p<0.0001	p<0.0001
Forced to flee danger	p<0.0001	p<0.0001
Forced to hide	p<0.0001	p<0.0001
Beating to the body	p<0.0001	p<0.0001
Attacked by knife or gun	p<0.0001	p<0.001
Tortured	p<0.0001	p<0.001
Serious physical injury from combat	p<0.01	p<0.01
Witnessed physical punishment	p<0.0001	p<0.0001
Humiliated or shamed in public	p<0.0001	p<0.0001
Rape	NS	NS
Forced to rape a family member	NS	NS
Other sexual assault	p<0.01	p<0.01
Spouse killed	p<0.01	p<0.05
Spouse disappeared, kidnapped	NS	NS
Child killed	NS	NS
Child disappeared, kidnapped	p<0.05	p<0.05
Family member or friend killed	p<0.0001	p<0.0001
Family member or friend disappeared	p<0.0001	p<0.0001
Kidnapped	NS	p<0.05
Captured, held by TNI/POLRI or GAM	NS	NS
Sent to prison	NS	NS
Forced separation from family	p<0.01	p<0.01
Forced isolation	p<0.01	p<0.01
Confiscation, destruction of property	p<0.0001	p<0.0001
Extortion, robbery	p<0.0001	p<0.0001
Forced labour	p<0.01	p<0.001
Forced to give food, shelter to TNI or GAM	p<0.0001	p<0.01
Forced to fight against TNI or GAM	p<0.0001	p<0.0001
Punished for not fighting against TNI or GAM	p<0.0001	p<0.0001
Forced to search for corpses	p<0.01	p=0.01
Not allowed to provide Muslim burial	p<0.05	p<0.05
Forced to injure family member	NS	NS
Forced to injure non-family member	NS	NS
Forced to destroy someone's property	p<0.01	p<0.05
Forced to betray/endanger family member	NS	NS
Forced to betray/endanger non-family	NS	NS
Someone forced to betray/endanger you	p<0.01	p<0.01
Forced to humiliate another person	NS	NS
Forced to search for GAM member in forest	p<0.0001	p<0.0001
Lack of shelter because of conflict	p<0.0001	p<0.0001
Lack of food, water because of conflict	p<0.0001	p<0.0001
Sick, lack of access to health care	p<0.0001	p<0.0001



## POST-CONFLICT STRESS

Whereas past traumatic events due to conflict varied directly with a region's history of violence in the PNA2 regions, "current stress" - defined as those conditions that prevail since the signing of the peace agreement - follow a very different pattern. Overall, current stressful events were reported at a much lower rate in PNA2 than in PNA1. Although there is some variation among the regions surveyed in PNA2, the pattern of reporting much lower rates of current events is true even in the regions where the conflict was greatest. This is particularly true of reports of seeing perpetrators (47% in PNA1, 7% in PNA2), of experiencing assault (31% vs. 1%), experiencing robbery (21% vs. 1%), and even violence toward women (4% vs. 1%) and violence toward children (7% vs. 1%). Post conflict stress events among the geographic regions and between the PNA1 and PNA2 data are summarized in Table 2.9.

These findings suggest a very significant change between February 2006, when the PNA1 was conducted, and July 2006, when the PNA2 survey was conducted (November 2006 for Aceh Besar). Although the peace agreement, or Memorandum of Understanding (MoU) was signed in August 2005, one possible explanation for the high rates of current stress in February 2006 is that the Indonesian military and police troops were still based in their village posts all over Aceh until as late as December 2005.

In February 2006, security levels were still uncertain and trust in the peace process still very limited, because although the MoU called for the return of 23,000 inorganic troops, i.e. Indonesian forces imported to Aceh from other parts of Indonesia, their departure from was timed along with GAM's lengthy phased process of surrendering its weapons. Thus many villages were still occupied by

**TABLE 2.5 HEAD TRAUMA/ POTENTIAL BRAIN INJURY: MEN**

Head Trauma	†PNA1 Data		District Location				PNA1 + PNA2
	%	%	‡PNA2 Data				%
			North Coast (N=315)	Aceh Besar (N=66)	East Coast (N=125)	Central Highlands (N=180)	
<b>*Any Type of Head Trauma</b>	41	17	43	16	5	41	32
<b>Specific Type</b>							
Beaten on the head	36	14	36	9	3	32	26
Suffocation or strangulation	19	5	14	7	1	18	13
Near drowning	7	5	4	5	3	13	7
Other head trauma	9	2	3	2	0	7	5

\* From the four different types of head injury, if a respondent answers yes to one or more of those four questions, then the answer is yes for the new variable ("Any type of head trauma"), which will then tell us how many respondents experienced physical head trauma of any kind at all.

### Males

† PNA1 VS. PNA2 district locations: Statistically significantly different at  $p < 0.0001$  [All measurements]

Any type of head trauma-	$p < 0.0001$
Beaten on the head-	$p < 0.0001$
Suffocation or strangulation-	$p < 0.0001$
Near drowning-	$p < 0.01$
Other head trauma-	$p < 0.0001$

‡ PNA2 district locations comparison:

Any type of head trauma-	$p < 0.0001$
Beaten on the head-	$p < 0.0001$
Suffocation or strangulation-	$p < 0.0001$
Near drowning-	$p < 0.01$
Other head trauma-	$p < 0.01$

**TABLE 2.6 HEAD TRAUMA/ POTENTIAL BRAIN INJURY: WOMEN**

Head Trauma	†PNA1 Data		District Location				PNA1 + PNA2
	%	%	‡PNA2 Data				%
			North Coast (N=281)	Aceh Besar (N=114)	East Coast (N=121)	Central Highlands (N=147)	
<b>*Any Type of Head Trauma</b>	12	4	10	5	6	7	8
<b>Specific Type</b>							
Beaten on the head	7	1	4	0	0	4	4
Suffocation or strangulation	7	1	8	4	6	1	5
Near drowning	<1	2	0	1	0	3	1
Other head trauma	2	0	1	0	0	0	1

\* From the four different types of head injury, if a respondent answers yes to one or more of those four questions, then the answer is yes for the new variable ("Any type of head trauma"), which will then tell us how many respondents experienced physical head trauma of any kind at all.

### Females

† PNA1 VS. PNA2 district locations: Statistically significantly different at  $p < 0.0001$  [All measurements]

Any type of head trauma-	$p < 0.05$
Beaten on the head-	$p = 0.0001$
Suffocation or strangulation-	$p < 0.001$
Near drowning-	NS
Other head trauma-	$p < 0.05$

‡ PNA2 district locations comparison:

Any type of head trauma-	NS
Beaten on the head-	$p < 0.01$
Suffocation or strangulation-	$p < 0.01$
Near drowning-	NS
Other head trauma-	NS

combat groups until several months after the MoU was signed. The recent memory of village occupation in February 2006 may be what constitutes such high levels of current stress for respondents in PNA1. Whereas by July and November the peace process had advanced significantly, with rural communities experiencing at least six months of legitimate peace, without the intimidating and sometimes harrasing presence of combat groups in their midst. The PNA2 findings suggest that by July, residents experienced far less contact with perpetrators of past violence and far greater security.

The pattern of lower PNA2 scores holds true also for basic living conditions (lack of adequate housing 59% vs. 38%; water/ sanitation 75% vs. 55%; and food security 72% vs. 63%) and livelihood issues (difficulty providing for family 85% vs. 72%; finding work 89% vs. 75%; and starting a livelihood 71% vs. 56%). However, even though they are significantly reduced, the figures from PNA2 are still extremely high. Qualitative interviews suggest that these current stressors reflect the devastation of the

village economies after years of efforts to destroy the material foundations supporting GAM. The conflict clearly wrecked havoc on local economies, destroying trade networks, wrecking their houses, killing their animals and preventing farmers from working their land and young people from entering into the labour economy. Thus, recovery will require both that the terrible traumatic events suffered by these communities and the broken economy and destroyed community resources be dealt with in a timely fashion.

Many months after completion of the

PNA fieldwork and nearly half way into 2007 at the time of writing this report, it is worth noting that in some areas of Aceh the security situation remains unstable, particularly in the districts of Bireuen, Aceh Utara, and Aceh Timur where emerging reports of extortion, robbery, bomb threats, knife attacks, and turf wars are unsettling local communities. The PNA data does not measure events or symptoms prospectively/ longitudinally, so it is unclear whether levels of current stress, along with psychological symptoms, would be fluctuating with the changing security environment.

TABLE 2.7 FORCED EVACUATIONS AND OTHER DISPLACEMENT EXPERIENCE

Displacement Experiences	*PNA1 Data		†PNA2 Data				PNA1 + PNA2 Data	
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Forced to flee burning buildings	38	13	45	37	6	42	33	35
Forced to flee danger	47	33	61	40	12	57	45	46
Evacuation by force (PNA2 only)	-	30	55	36	6	43	38	-
Evacuation by choice (PNA2 only)	-	6	7	5	1	17	9	-

### VILLAGES DESIGNATED AS HIGH CONFLICT BY IOM'S MGKD PROGRAMME

Both the PNA1 and PNA2 based the sampling of high conflict sub-districts and villages in part on previous research by the World Bank and IOM's EC-funded Post-Conflict Community Reintegration Programme, known locally as *Makmue Gampong Kareuna Dame* (MGKD) programme. The MGKD programme implements community-driven quick impact peace dividend projects in villages with intensive history of conflict, and a large number of returning former GAM combatants and amnestied prisoners.

The MGKD programme's selection of high conflict sub-districts and villages was an important component of the PNA sampling methodology if the district covered by the PNA featured MGKD programming. On average, wherever the MGKD programme was present, half of the villages sampled in the PNA were randomly selected from the list of MGKD recipient villages. The remaining villages were randomly selected from the same sub-districts identified by the MGKD programme as high conflict, but that did not end up as recipients of the peace dividend project. 46% of PNA1 respondents and 33% of PNA2 respondents resided in villages with MGKD programmes. The overall

percentage is lower for the PNA2 sample because four districts - Gayo Lues, Bener Meriah, Aceh Tengah, and Aceh Besar - did not have the MGKD programme and thus employed a different sampling methodology.

The difference in sampling procedure leads to the chance of a sampling bias toward less high conflict villages in these four districts. Nevertheless, analysis of traumatic experiences by respondents in MGKD and non-MGKD villages provides an opportunity to evaluate the effectiveness of the World Bank and IOM designation of these communities as high conflict. One might hypothesize that if the high conflict designation turns out to be highly robust in terms of traumatic events experienced by respondents in MGKD villages, then the PNA sampling bias in the districts without an MGKD programme increases as well.

### • Past Traumatic Events in MGKD Villages

Levels of past traumatic events were substantially and significantly higher in the MGKD villages in both PNA1 and PNA2. Rates of some specific past traumatic events were 50% or more higher in MGKD communities in both samples (for events commonly experienced, these achieve high levels of

statistical significance). These findings validate the designation by IOM, based in part on prior World Bank assessment data, of these villages as high conflict communities requiring special assistance.

### • Post-conflict Stress in MGKD Villages

Levels of current post-conflict stress follow a different pattern. PNA1 respondents in MGKD villages reported statistically significant higher rates of current stressful events for 13 of 18 events on the list. PNA2 respondents overall, as noted above, reported current post-conflict stressful events at rates significantly lower than in PNA1, and respondents in MGKD villages reported higher rates for only four of the 18 events on the list.

### SUMMARY: CONFLICT TRAUMA AND COLLECTIVE MEMORY IN ACEH

The broad finding of the PNA2 mapping of conflict events across Aceh is that the East Coast and Southwest Coast regions of the province experienced levels of violence as high as, and sometimes higher than, the reference communities of the North Coast sampled during PNA1. The

TABLE 2.8 CONFLICT IDP DESTINATIONS, BY REGIONS (PNA2 DATA ONLY)

Conflict IDP Destinations	†PNA2 Data					
	% Aceh Besar (N=63)	% East Coast (N=143)	% Central Highlands (N=124)	% Southeast Highlands (N=9)	% Southwest Coast (N=256)	% Total PNA2 Sample (N=595)
North Coast *	0	2	3	0	< 1	2
Aceh Besar **	100	< 1	2	0	4	13
East Coast ***	0	87	0	0	< 1	21
Central Highlands	0	0	89	11	0	19
Southeast Highlands	0	0	0	67	0	1
Southwest Coast ****	0	< 1	2	22	95	42
Outside Aceh *****	0	10	4	0	< 1	4

\* Inclusive of respondents who mentioned Lhokseumawe municipality as their destination.

\*\* Inclusive of respondents who mentioned Banda Aceh municipality as their destination.

\*\*\* Inclusive of respondents who mentioned Langsa municipality as their destination.

\*\*\*\* Inclusive of respondents who mentioned Aceh Jaya, Aceh Singkil, and Simeuleu districts as destinations

\*\*\*\*\* Mostly Sumatra Utara (North Sumatra) province, but Riau province, Sumatra Selatan (South Sumatra) province, Jakarta, and Malaysia were each mentioned once only.

**TABLE 2.9 CURRENT STRESSFUL EVENTS EXPERIENCED BY RESPONDENTS**

Current Stressors	*PNA1 Data	†PNA2 Data					% Total PNA2 Sample (N=1376)	PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)		% Total Sample (N=1972)
Lack of proper place to live	59	32	30	44	22	45	38	44
Lack of water, sanitation facilities	75	31	56	65	62	54	55	61
Hungry or lack of food	72	33	42	59	56	63	54	59
Difficulty providing for your family	85	60	65	79	67	77	72	76
Difficulty finding work	89	57	75	79	70	82	75	80
Difficulty starting a livelihood	71	36	55	64	52	61	56	61
Returned to find home destroyed	21	10	18	18	6	20	16	18
Learned of death of family member, friend	45	27	29	37	28	34	32	36
Not know what happened to family/friend	14	2	7	11	3	13	9	10
Seeing perpetrators	47	3	16	10	0	5	7	19
Rejection by family, community	3	0	2	1	0	1	1	2
Fear of living with family, community	18	2	3	11	4	8	7	10
Experienced assault	31	0	3	1	0	1	1	10
Experienced robbery	21	0	3	2	0	1	1	7
Change in religious values	11	21	58	21	19	15	26	21
Change in community values	20	16	51	33	20	11	25	24
Violence toward women	4	0	3	3	0	1	1	2
Violence toward children	7	1	<0	2	0	1	1	3

\* PNA1 VS. PNA2 district locations: Statistically significantly different at  $p < 0.0001$  [All Events].  
Except....

Rejection by family, community-  $p < 0.05$

† PNA2 district locations comparison:

Lack of proper place to live  $p < 0.0001$   
Lack of water, sanitation facilities  $p < 0.0001$   
Hungry or lack of food  $p < 0.0001$   
Difficulty providing for your family  $p < 0.0001$   
Difficulty finding work  $p < 0.0001$   
Difficulty starting a livelihood  $p < 0.0001$   
Returned to find home destroyed  $p < 0.0001$   
Learned of death of family member, friend NS  
Not know what happened to family/friend  $p < 0.0001$   
Seeing perpetrators  $p < 0.0001$

Rejection by family, community NS  
Fear of living with family, community  $p < 0.0001$   
Experienced assault  $p < 0.05$   
Experienced robbery  $p < 0.01$   
Change in religious values  $p < 0.0001$   
Change in community values  $p < 0.0001$   
Violence toward women  $p < 0.01$   
Violence toward children NS

entire integrated data set is useful for documenting these macro-geographic trends, but in many cases can also be used to pinpoint many of the hot spot micro-localities at the district and village levels, even in regions with comparably lower levels in their history of violence. Supplemented with qualitative data, the stories of what entire villages and their individual residents lived through during the conflict complements the quantitative data and fills in the details that the macro indicators do not capture.

The PNA data on conflict trauma events suggests nothing less than an enormous reservoir of collective memories of terrifying and sustained violence perpetrated against ordinary rural civilians in Aceh. Even in so-called low prevalence regions, a consensus of memory acknowledges the devastation inflicted upon the entire province. From individuals, to villages, districts, regions, and the province as a whole, the deep memory and real injuries of Aceh's violent history feed into collective perceptions of the current security situation and anxieties about the future. In general psychosocial terms, the history of violence informs every person's position and everyday practice in Aceh, and should therefore properly inform and be accounted for in the development of post-conflict and all other humanitarian interventions in Aceh.

In specific psychosocial terms, the history of violence in Aceh has irrevocably altered thousands of lives, both in terms of tangible economics and psychological security, individual and collective, as will be amply demonstrated in the sections that follow.

TABLE 2.10 PAST TRAUMA EVENTS BY PNA AND MGKD VARIABLE

Traumatic Events	*†PNA1 Data			*‡PNA2 Data			PNA1+PNA2
	MGKD+ (N=275)	MGKD- (N=321)	Total (N=596)	MGKD+ (N=454)	MGKD- (N=922)	Total (N=1376)	Total (N=1972)
Experienced combat (bombing, fire fights)	84	73	78	82	68	73	74
Forced to flee burning buildings	47	31	38	43	29	33	35
Forced to flee danger	60	36	47	60	38	45	46
Forced to hide	21	12	16	13	7	9	11
Beating to the body	48	31	39	31	19	23	28
Attacked by knife or gun	34	19	26	22	10	14	17
Tortured	24	13	18	17	6	10	12
Serious physical injury from combat	16	10	13	15	7	10	11
Witnessed physical punishment	64	45	54	52	33	39	44
Humiliated or shamed in public	23	12	17	18	6	10	12
Rape	2	1	1	1	1	1	1
Forced to rape a family member	<1	0	<1	1	<1	1	<1
Other sexual assault	5	2	3	5	2	3	3
Spouse killed	6	4	5	3	2	2	3
Spouse disappeared, kidnapped	3	2	3	2	2	2	2
Child killed	8	3	5	3	3	3	4
Child disappeared, kidnapped	4	3	3	1	2	2	2
Family member or friend killed	48	34	41	41	35	37	38
Family member or friend disappeared	41	26	33	32	30	31	31
Kidnapped	8	3	5	4	3	4	4
Captured, held by TNI/ POLRI or GAM	16	9	12	14	6	9	10
Sent to prison	4	2	3	6	3	4	3
Forced separation from family	14	6	9	12	6	8	8
Forced isolation	11	4	8	9	3	5	6
Confiscation, destruction of property	55	36	45	50	31	37	40
Extortion, robbery	41	25	33	27	17	21	24
Forced labour	36	23	29	27	19	22	24
Forced to give food, shelter to TNI or GAM	32	23	27	22	12	15	19
Forced to fight against TNI or GAM	29	17	23	24	12	16	18
Punished for not fighting against TNI or GAM	15	8	12	17	7	10	11
Forced to search for corpses	19	6	12	9	7	8	9
Not allowed to provide Muslim burial	9	2	6	5	3	4	4
Forced to injure family member	9	4	6	4	1	2	3
Forced to injure non-family member	9	5	7	5	1	2	4
Forced to destroy someone's property	4	3	3	5	3	3	3
Forced to betray/ endanger family member	9	5	7	7	2	4	5
Forced to betray/ endanger non-family	9	5	7	6	2	3	4
Someone forced to betray/ endanger you	11	4	7	10	5	6	6
Forced to humiliate another person	11	5	8	7	2	4	5
Forced to search for GAM member in forest	47	26	35	32	18	22	26
Lack of shelter because of conflict	27	21	24	33	25	27	26
Lack of food, water because of conflict	91	74	82	77	74	75	77
Sick, lack of access to health care	72	49	60	66	59	62	61

Past Trauma Events Experienced by Informant	† PNA1/MGKD+ vs. PNA1/MGKD-	‡ PNA2/MGKD+ vs. PNA2/MGKD-
Experienced combat (bombing, fire fights)	p<0.01	p<0.0001
Forced to flee burning buildings	p=0.0001	p<0.0001
Forced to flee danger	p<0.0001	p<0.0001
Forced to hide	p<0.01	p<0.001
Beating to the body	p<0.0001	p<0.0001
Attacked by knife or gun	p<0.0001	p<0.0001
Tortured	p<0.001	p<0.0001
Serious physical injury from combat	NS	p<0.0001
Witnessed physical punishment	p<0.0001	p<0.0001
Humiliated or shamed in public	p<0.001	p<0.0001
Rape	NS	NS
Forced to rape a family member	NS	NS
Other sexual assault	p<0.05	p<0.05
Spouse killed	NS	NS
Spouse disappeared, kidnapped	NS	NS
Child killed	p<0.05	NS
Child disappeared, kidnapped	NS	p<0.05
Family member or friend killed	p<0.001	p<0.05
Family member or friend disappeared	p<0.001	NS
Kidnapped	p<0.01	NS
Captured, held by TNI/ POLRI or GAM	p<0.05	p<0.0001
Sent to prison	NS	p<0.01
Forced separation from family	p<0.001	p<0.0001
Forced isolation	p<0.01	p<0.0001
Confiscation, destruction of property	p<0.0001	p<0.0001
Extortion, robbery	p<0.0001	p<0.0001
Forced labour	p<0.001	p<0.001
Forced to give food, shelter to TNI or GAM	p<0.05	p<0.0001
Forced to fight against TNI or GAM	p<0.01	p<0.0001
Punished for not fighting against TNI or GAM	p<0.01	p<0.0001
Forced to search for corpses	p<0.0001	NS
Not allowed to provide Muslim burial	p=0.0001	NS
Forced to injure family member	p<0.05	p<0.001
Forced to injure non-family member	p<0.05	p=0.0001
Forced to destroy someone's property	NS	NS
Forced to betray/ endanger family member	p<0.05	p<0.0001
Forced to betray/ endanger non-family	p<0.05	p<0.001
Someone forced to betray/ endanger you	p<0.01	p<0.001
Forced to humiliate another person	p<0.05	p<0.0001
Forced to search for GAM member in forest	p<0.0001	p<0.0001
Lack of shelter because of conflict	NS	p<0.01
Lack of food, water because of conflict	p<0.0001	NS
Sick, lack of access to health care	p<0.0001	p<0.05

**TABLE 2.10 PAST TRAUMA EVENTS BY PNA AND MGKD VARIABLE (continue from page 43)**

NOTE: MGKD variable answers "yes" or "no" if IOM has a community peace dividend project (called MGKD) in the village where the respondent lives.

\* PNA1/MGKD+, PNA1/MGKD-, PNA2/MGKD+, PNA2/MGKD- comparison- Statistically significantly different at  $p < 0.0001$  [All measurements]

Except....

Lack of Shelter	$p < 0.01$
Rape	NS
Forced to rape family member	NS
Other sexual abuse	$p < 0.05$
Sent to prison	$p < 0.05$
Kidnapped	$p < 0.01$
No Muslim burial	$p = 0.0001$
Forced to destroy S.O. property	NS
Spouse killed	$p < 0.05$
Child killed	$p = 0.01$
Family member or friend killed	$p < 0.001$
Spouse kidnapped or disappeared	NS
Child kidnapped or disappeared	NS
Family member/ friend kidnapped/ disappeared	$p < 0.01$

**TABLE 2.11 CURRENT STRESSFUL EVENTS EXPERIENCED BY RESPONDENTS, BY PNA AND MGKD DESIGNATION**

Current Stressors	*†PNA1 Data			*†PNA2 Data			PNA1+PNA2 Total (N=1,972)
	MGKD+ (N=275)	MGKD- (N=321)	Total (N=596)	MGKD+ (N=454)	MGKD- (N=922)	Total (N=1,376)	
Lack of proper place to live	66	52	59	41	36	38	44
Lack of water, sanitation facilities	84	68	75	61	52	55	61
Hungry or lack of food	82	64	72	59	51	54	59
Difficulty providing for your family	90	82	85	72	72	72	76
Difficulty finding work	94	86	89	78	74	75	80
Difficulty starting a livelihood	77	66	71	59	55	56	61
Returned to find home destroyed	28	15	21	23	13	16	18
Learned of death of family member, friend	50	41	45	34	32	32	36
Not know what happened to family/ friend	15	13	14	11	7	9	10
Seeing perpetrators	58	38	47	7	7	7	19
Rejection by family, community	3	2	3	2	1	1	2
Fear of living with family, community	21	15	18	7	6	7	10
Experienced assault	38	24	31	1	1	1	10
Experienced robbery	27	16	21	2	1	1	7
Change in religious values	13	10	11	28	24	26	21
Change in community values	24	18	20	24	26	25	24
Violence toward women	6	3	4	2	1	1	2
Violence toward children	9	5	7	1	1	1	3

† Current (Post-Conflict) Stressful Events Experienced by Informant	PNA1/ MGKD+ vs. PNA1/ MGKD-
Lack of proper place to live	$p < 0.001$
Lack of water, sanitation facilities	$p < 0.0001$
Hungry or lack of food	$p < 0.0001$
Difficulty providing for your family	$p < 0.01$
Difficulty finding work	$p < 0.01$
Difficulty starting a livelihood	$p < 0.01$
Returned to find home destroyed	$p < 0.0001$
Learned of death of family member, friend	$p < 0.05$
Not know what happened to family/ friend	NS
Seeing perpetrators	$p < 0.0001$
Rejection by family, community	NS
Fear of living with family, community	$p < 0.05$
Experienced assault	$p < 0.001$
Experienced robbery	$p < 0.001$
Change in religious values	NS
Change in community values	NS
Violence toward women	$p < 0.05$
Violence toward children	NS

† Current (Post-Conflict) Stressful Events Experienced by Informant	PNA2/ MGKD+ vs. PNA2/ MGKD-
Lack of proper place to live	NS
Lack of water, sanitation facilities	$p < 0.01$
Hungry or lack of food	$p < 0.01$
Difficulty providing for your family	NS
Difficulty finding work	NS
Difficulty starting a livelihood	NS
Returned to find home destroyed	$p < 0.0001$
Learned of death of family member, friend	NS
Not know what happened to family/ friend	$p < 0.05$
Seeing perpetrators	NS
Rejection by family, community	NS
Fear of living with family, community	NS
Experienced assault	NS
Experienced robbery	NS
Change in religious values	NS
Change in community values	NS
Violence toward women	NS
Violence toward children	NS

NOTE: MGKD variable answers "yes" or "no" of IOM has a community peace dividend project (called MGKD) in the village where the respondent lives.

\* PNA1/ MGKD+, PNA1/ MGKD-, PNA2/ MGKD+, PNA2/ MGKD- comparison- Statistically significantly different at  $p < 0.0001$  [All measurements]

Except...

Not know what happened to family member/ friend  
 $p < 0.001$

Rejection by family/ community  
 $p < 0.05$

# THE PSYCHOSOCIAL AND PSYCHOLOGICAL REMAINDERS OF VIOLENCE: DEPRESSION, ANXIETY AND TRAUMATIC STRESS DISORDERS

## METHODS

### • Measures of Psychological Distress and Neuropsychiatric Disorders

The survey questionnaire opens with a very general, open-ended set of questions about the effects of the conflict on individuals and their lives; "were you or anyone in your family a victim of the conflict? If so, who? Can you describe what happened?"

This is followed by asking about the list of traumatic events, discussed above. Similarly, the section on psychological distress begins with very open-ended questions; "the conflict has brought unique pressures upon the Acehnese people during the past number of years. Have these pressures had an effect on your feelings, energy, or your health in your daily life? Can you explain what this effect has been?"

This is then followed by a very general self-assessment, with a quantitative response; "in the past year, have you ever had difficulties with your inner feelings or the way you feel (for example, felt depressed or often sad, anxious, fearful, or not being able to control your anger)?" "If yes, how serious was this?" (This was measured by a 1-4 scale, from 'not serious' to 'extremely serious'). "If yes, in your opinion were these caused by stress or trauma connected to the conflict?"

This general question was followed

by asking respondents to report on psychological symptoms or problems they experienced in the past week, using a 25 item version of the Hopkins Symptom Check List (HSCL) for Depression and Anxiety. Fifteen symptoms associated with depression and 10 symptoms associated with anxiety were asked, and respondents were asked to describe whether they had experienced these during the past week 'not at all,' 'a little,' 'sometimes,' and 'often.' This scale is incorporated into the Harvard Trauma Questionnaire and has been used widely in disaster and trauma community assessments of emotional distress (Mollica 2004).

In addition, respondents were asked to tell the interviewer, using the same format, whether they had experienced symptoms or problems which are listed as part of the 42 item Harvard Trauma Questionnaire (HTQ), developed by Mollica and his team for use in conflict areas. The HTQ is a broad measure of symptoms associated with trauma and dissociation, which includes a 16 item core used to assess Post Traumatic Stress Disorder (PTSD).

Care was taken to incorporate common ways of expressing psychological distress in Indonesia, and specifically in Aceh, into these questions. The full questionnaire is written in Bahasa Indonesia, not in Bahasa Aceh and interviewers sometimes explained particular questions in Acehnese or another

local language in Aceh, when needed. Items on the HSCL and HTQ were translated using common Indonesian terms, when available – such as *bingung* (feeling confused), *melamun* (day-dreaming or 'spacing out'), and *pusing* (a combination of feeling dizzy and having a headache).

In addition, items designed to capture popular discourses about disturbing experiences post-tsunami and post-conflict were included in the questionnaire to elicit experiences of nightmares, ghosts, spirits, and hearing voices of people who had died, experiences we knew to be important from previous ethnographic research.

A four item measure was included from the Harvard Trauma Questionnaire to assess presence and severity of events that might have produced head trauma or brain injury, including beatings to the head, suffocation or strangulation, near drowning, and other physical injuries to the head.

### • Analyses of Psychological Symptoms and Psychiatric Diagnoses

Psychological distress can be conceptualized in two ways: as a 'continuous variable,' i.e., as a level of distress or symptoms, such as depression or anxiety, ranging continuously from very low levels to very high levels; and as a 'dichotomous variable,' i.e., as being either high or low, as

being a 'case' or not (for example, a case of depression or anxiety, or a case requiring treatment) or as meeting criteria for a clinical diagnosis (for example, of major depressive disorder, panic disorder, or Post Traumatic Stress Disorder) or not meeting criteria for a diagnosis.

Psychological symptom checklists are designed primarily to be used as continuous variables in clinical work or research – to answer such questions as 'is this patient feeling better than he or she did one month ago?' or 'are psychological symptoms especially high in some risk groups?' or 'are levels of psychological distress highly correlated with levels of stress or numbers of traumatic events experienced?'

On the other hand, questions such as 'what percentage of persons in this village suffer major depressive disorder?' require making dichotomous ratings, determining whether someone is or is not a 'case' of depression or does or does not meet diagnostic criteria for Post Traumatic Stress Disorder (PTSD). Such variables can then be analysed using odds analysis, indicating elevated risk for suffering a particular illness

among persons with particular characteristics in comparison with others.

In mental health surveys, there are two methods used for transforming a continuous variable into a dichotomous variable. First, one can make a determination that any respondent who reports symptoms above a particular level will be judged to be a 'case' – for example, defining someone who has symptoms for a depression above a certain level, and therefore in need of mental health services. The level the analyst sets for the cut-off point, along with the level of symptoms in the community, will determine what percentage of persons are considered to be 'cases'.

Second, one can use a diagnostic algorithm, based on current psychiatric diagnostic practices. If a respondent indicates that he or she has experienced a particular combination of symptoms that serve as criteria for a particular diagnosis (major depressive disorder or post-traumatic stress disorder, for example), that person may be rated as 'meeting criteria' for that disorder.

In what follows, we report our

findings in four ways. First, we follow the standard procedure recommended by Mollica et al to use a mean of 1.75 on depression items on the HSCL 15-item depression scale and 10-item anxiety scale as cut-off points, and 2.50 on the 42 trauma symptoms on the HTQ, to identify a person as suffering depression or a post-traumatic disorder.<sup>8</sup>

Using this method allows us to compare findings for the Aceh sample with similar samples from high conflict areas such as Bosnia or Cambodia. Second, for some analyses, we used more conservative or high threshold cut-offs, 3.0 on depression and anxiety items on the HSCL and 3.0 on the trauma symptoms on the HTQ. Raising the cut-off levels identifies a smaller group of individuals who are currently suffering more severe symptoms, and allows us to ask what groups of persons or what forms of traumatic experience place an individual at particularly high risk for suffering the most severe psychiatric distress. We used this method in PNA1 analyses because symptom levels were so high that it was necessary to identify a smaller group of persons with the highest level of symptoms.

<sup>8</sup> Mollica, Richard F., Laura S. MadDonald, Michael Massagli, and Derrick M. Silove. 2004. Measuring Trauma, Measuring Torture. Instructions and Guidance on the Utilization of the Harvard Program in Refugee Traumas Versions of The Hopkins Symptom Checklist-25 (HSCL-25) & The Harvard Trauma Questionnaire (HTQ). Cambridge, MA: Harvard Program in Refugee Trauma.

Third, we followed the algorithm devised by Mollica et al to determine whether individuals suffer particular constellations of symptoms associated with depressive illness or PTSD, according to the American Psychiatric Association's Diagnostic and Statistical Manual 4<sup>th</sup> edition (DSM-IV). Because this algorithm is based on symptoms from a symptom checklist rather than a psychological interview designed explicitly to determine a clinical diagnosis, and because they ask about the presence of the symptoms during the past week but not the duration of the symptoms, these ratings can be considered approximations only. They do, however, indicate levels of depression and trauma-related illnesses in these communities, suggesting levels of need for services.

A total of 14 depression items from the HSCL were included within the depression algorithm (see Table 3.1). Individuals were considered to be suffering a particular symptom if they rated themselves 3 or 4 on a particular item. In order to be classified as symptomatic for depression, a subject initially needed a positive response on any of the depressed mood or decreased interest/pleasure items. Additionally, a positive score on 4 out of the 6 DSM-IV Criterion A symptoms was required for positive classification.

A positive score on 3 out of the 6 DSM-IV Criterion A symptoms was required when positive responses for both depressed mood and decreased interest/pleasure were present.<sup>9,10,11</sup>

A more conservative or high threshold algorithm was also examined. In this case, questions were 'checklist positive' only if ratings were at the highest level, 4. All other steps in the primary depression algorithm remained the same. Again, this method was used in PNA1 because symptom levels were so high. We provide similar analyses in PNA2 for purposes of comparison.

A total of 16 Harvard Trauma Questionnaire (HTQ) items were included within the PTSD algorithm. Individuals were considered to be suffering a particular symptom if they rated themselves 3 or 4 on a particular item. In order to be classified as symptomatic for PTSD or meeting diagnostic criteria for PTSD, a subject needed a positive response on 1 or more re-experiencing symptoms, 3 or more avoidance and numbing symptoms, and 2 or more arousal symptoms. (See Table 3.2) Subject exposure to a traumatic event (Criterion A) has been assumed for all respondents.

Once again, a more conservative or high threshold algorithm was also examined. In this case, questions

were checklist positive if ratings were 4 only. All other steps in the primary PTSD algorithm remained the same.

## FINDINGS

Tables 3.3 through 3.6 provide findings concerning self-perceived levels of general emotional distress, as well as symptoms and diagnoses of depression anxiety and PTSD, by gender, study (PNA1 vs PNA2), the six geographical categories, and by sample designation as MGKD present or absent. The findings compare the extremely high levels of psychological distress among respondents in the first study PNA1 (interviewed in February 2005), with distress levels exhibited in the newly surveyed population, PNA2, undertaken in different geographical locations and 5 months after the PNA1 study.

### • Self-Assessment of Emotional Distress

Table 3.3 reports findings from the three general questions designed to assess respondents' general sense of emotional distress over the past year. In answering these questions, 78% of respondents in PNA1 from North Coast reported they had experienced general psychological distress in the past year, in contrast with 51% of PNA2 respondents. While 97% of PNA1 respondents felt the distress was caused by the conflict and rated their level of distress as 2.94 on degree of seriousness (1-4 scale), 81% of PNA

2 respondents felt their distress was caused by the consequences of the conflict and rated their distress levels at 2.54 on degree of seriousness (1-4 scale).

The district variations for PNA2 clearly mirror levels of traumatic events experienced. East Coast (68%) and Southwest Coast (60%) regions reported high levels of experiencing psychological distress in the past year at rates only somewhat lower than PNA1 North Coast respondents (78%), while Aceh Besar (22%) and Southeast Highlands (33%) respondents reported much lower rates of such experiences. For those who reported distress, respondents from the East Coast (91%), Central Highlands (87%), and Southwest Coast (81%) were most likely to report distress as resulting from the conflict and rated their distress as most severe (with the East Coast levels comparable to PNA1 North Coast

findings). Differences between the PNA1 and PNA2 and among PNA2 regions are statistically significant at  $p < 0.0001$ .

These findings suggest that when asked to report on distress in the past year, respondents in the highest conflict regions of PNA2 report levels of distress similar to (though somewhat lower than) PNA1 respondents, while PNA2 respondents in the lower conflict regions report significantly lower psychological distress.

### • Psychological and Psychiatric Diagnoses Using Formal Instruments

The primary method of measuring psychological distress experienced by individuals in the sampled high conflict villages was through the use of standardized psychological symptom questionnaires.

These ask individuals to report whether they have experienced

particular symptoms in the past one week and if so at what level, on a 1-4 scale. Using cut-off scores and diagnostic algorithms, these have been converted into categorical variables, reported as percentage of persons who are "symptomatic" or "high symptomatic" and who "meet criteria" for depression or PTSD or "meet high threshold criteria" for that disorder. These questions thus rate respondents' experience at the time of the interview (over the past week), rather than asking them to describe experiences over the past year.

Tables 3.4 and 3.5 examine symptom levels and diagnoses for depression, PTSD, and anxiety by region and gender, for both PNA1 and PNA2.

Respondents from PNA2 suffer mental health problems associated with the violence at a significant level. Using exactly the same methods used in PNA1, 35% of the total PNA2 sample ranked high

TABLE 3.1 HSCL CORE DIAGNOSTIC DEPRESSION SYMPTOMS

<p><b>Depressed Mood</b></p> <ul style="list-style-type: none"> <li>• Crying easily</li> <li>• Feeling hopeless about the future</li> <li>• Feeling blue</li> <li>• Feeling lonely</li> </ul>
<p><b>Diminished interest/pleasure</b></p> <ul style="list-style-type: none"> <li>• Feeling no interest in things</li> <li>• Loss of sexual interest or pleasure</li> </ul>
<p><b>DSM-IV Criterion A Symptoms</b></p> <ul style="list-style-type: none"> <li>• Poor appetite</li> <li>• Difficulty falling asleep or staying asleep</li> <li>• Feeling low in energy and/or Feeling everything is an effort</li> <li>• Blaming yourself for things</li> <li>• Worrying too much about things and/or Feelings of worthlessness</li> <li>• Thoughts of ending your life</li> </ul>

Each symptom was rated as having bothered or distressed the respondent "Not at all", "A little", "Quite a bit", or "Extremely often" (1-4 respectively) during the past week.

<sup>9</sup> Mollica et al. "Disability Associated with Psychiatric Comorbidity and Health Status in Bosnian Refugees Living in Croatia" in *Journal of the American Medical Association (JAMA)*. Volume 282(5), 04 August 1999, pp 433-439.

<sup>10</sup> Mollica et al. "Dose-effect Relationships of Trauma to Symptoms of Depression and Post-Traumatic Stress Disorder Among Cambodian Survivors of Mass Violence" in *The British Journal of Psychiatry*. Volume 173(12), December 1998, pp 482-488.

<sup>11</sup> Sabin et al. "Factors Associated with Poor Mental Health Among Guatemalan Refugees Living in Mexico 20 Years After Civil Conflict" in *Journal of the American Medical Association (JAMA)*. Volume 290(5), 06 August 2003, pp 635-642.

**TABLE 3.2 HARVARD TRAUMA QUESTIONNAIRE (HTQ) CORE DIAGNOSTIC SYMPTOMS**

<p><b>Re-experiencing Symptoms (DSM-IV criterion B)</b></p> <ul style="list-style-type: none"> <li>• Recurrent thoughts or memories of the most hurtful or terrifying events</li> <li>• Feeling as though the event is happening again</li> <li>• Recurrent nightmares</li> <li>• Sudden emotional or physical reaction when reminded of the most hurtful or traumatic events</li> </ul> <p><b>Avoidance and Numbing Symptoms (DSM-IV criterion C)</b></p> <ul style="list-style-type: none"> <li>• Feeling detached or withdrawn from people</li> <li>• Unable to feel emotions</li> <li>• Avoiding doing things or going places that remind you of the traumatic or hurtful events</li> <li>• Inability to remember parts of the most traumatic or hurtful events</li> <li>• Less interest in daily activities</li> <li>• Feeling as if you don't have a future</li> <li>• Avoiding thoughts or feelings associated with the traumatic or hurtful events</li> </ul> <p><b>Arousal Symptoms (DSM-IV criterion D)</b></p> <ul style="list-style-type: none"> <li>• Feeling jumpy, easily startled</li> <li>• Difficulty concentrating</li> <li>• Trouble sleeping</li> <li>• Feeling on guard</li> <li>• Feeling irritable or having outbursts of anger</li> </ul>
--

Each symptom was rated as having bothered or distressed the respondent "Not at all", "A little", "Quite a bit", or "Extremely often" (1-4 respectively) during the past week.

on depression symptoms, 39% on anxiety symptoms, and 10% on PTSD symptoms. (Using diagnostic criteria, corresponding rates are 23% of respondents meeting criteria for major depressive disorder and

12% meeting criteria for PTSD.)

Rates are substantially higher for respondents from the Southwest Coast, East Coast, and Central Highlands – areas that suffered

the highest levels of violence. For example, 41% of respondents from the Southwest coast suffered depressive symptoms above internationally recognised cutoff levels, 43% anxiety symptoms and

14% PTSD symptoms at such levels. This follows the pattern of PNA1, in which levels of symptoms were found to be significantly higher in districts with higher levels of traumatic events. The Central Highlands is somewhat exceptional. Although traumatic events are somewhat lower in the Central Highlands than in the East Coast and Southwest Coast districts, psychological symptoms are as high as or higher than symptom levels in those regions.

This may be linked to ethnic differences in symptom reporting (80% of Central Highlands respondents are Gayo, as opposed to being ethnically Acehnese), or to differences in general living conditions in this region. The PNA2 thus finds significant levels of trauma-related mental health problems, deserving specialized interventions, with the highest priorities including the North Coast (from PNA1), the adjoining East Coast districts, the South Coast (particularly Aceh Selatan), and the Central Highlands, in this order.

At the same time, a highly significant finding of PNA2 is that respondents in all districts

surveyed in July (and November) 2006 reported substantially lower rates of major depression, anxiety disorders, and PTSD than those in PNA1. PNA1 reported rates of psychological symptoms among the North Coast respondents surveyed in February 2006 at some of the highest levels reported for post-conflict settings worldwide. The percentage of PNA2 respondents who suffered high levels of symptoms for depression, anxiety, and PTSD (35%, 39%, 10% respectively), while high, are much lower than comparable rates reported from PNA1 (65%, 69%, and 34%). Because rates using these cutoffs were so high in PNA1, we developed analyses using higher cutoffs to identify those at risk for the most severe forms of depression, anxiety, and PTSD.

While rates for high threshold mental health problems were also found to be extremely high in PNA1, they are substantially and significantly lower for PNA2 respondents. For example, while 18% of the total population of PNA1 on the North Coast met the extremely high threshold criteria for depression, only 4% of the total PNA2 sample met these more

stringent criteria. And even in the Southwest Coast, the East Coast, and the Central Highlands, a more modest 6%, 5% and 9% of the sample met these more stringent criteria for depression.

Rates of high threshold PTSD are even lower in PNA2 districts, including those regions with the highest trauma scores, in comparison with PNA1.

Villages designated as high conflict by the IOM and World Bank and selected for the IOM Post-Conflict Community Reintegration Programme (i.e. the MGKD villages – described above in the section on sampling), showed substantially and significantly higher rates of all psychological symptoms in the PNA1 study. (See Table 3.6; these data were not reported in the PNA1 Report.) Strikingly, Table 3.6 indicates that this is not true for the PNA2 respondents.

Although for many of the symptom measures in PNA2, MGKD respondents report slightly higher levels of symptoms than NON-MGKD respondents, not one of these differences is statistically significant.

**TABLE 3.3 GENERAL PSYCHOLOGICAL DISTRESS BY REGIONS**

General Emotional Distress Experienced by Informants	*PNA1 Data	†PNA2 Data						PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Experienced general psychological distress during the past year?	78	22	68	48	33	60	51	59
IF YES...Caused by the conflict?	97	56	91	87	45	81	81	87
IF YES...Seriousness (1-4 scale – mean (SD))	2.94 (0.85)	2.10 (0.88)	2.89 (1.11)	2.56 (0.78)	2.15 (0.69)	2.44 (0.91)	2.54 (0.95)	2.70 (0.93)

\* PNA1 VS. PNA2 district locations: Statistically significantly different at p< 0.0001

† PNA2 district locations comparison: Experience general psychological distress p< 0.0001 Caused by the conflict? p< 0.0001 Seriousness (1-4 scale – mean (SD)) p< 0.0001



TABLE 3.4 DEPRESSION, PTSD, AND ANXIETY SYMPTOMS AND DIAGNOSES BY REGIONS

Formal Measures of Psychological Symptoms and Diagnoses	*PNA1 Data		†PNA2 Data				PNA1 + PNA2 Data	
	% North Coast Total PNA1 Sample (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Meet Criteria for Major Depressive Disorder	55	13	24	23	16	29	23	33
Meet High Threshold Criteria for Major Depressive Disorder	18	3	5	9	10	6	7	10
Mean Depression Score "Symptomatic" ( $\geq 1.75$ )	65	20	33	43	25	41	35	44
Mean Depression Score "High Symptomatic" ( $\geq 3$ )	17	2	5	4	7	4	4	8
Meet Criteria for PTSD	36	4	9	15	6	17	12	19
Meet High Threshold Criteria for PTSD	10	1	2	5	4	2	3	5
Mean PTSD Score "Symptomatic" ( $\geq 2.5$ )	34	2	8	12	6	14	10	17
Mean PTSD Score "High Symptomatic" ( $\geq 3$ )	16	1	4	4	5	5	4	8
Mean Anxiety Score "Symptomatic" ( $\geq 1.75$ )	69	31	42	43	25	43	39	48
Mean Anxiety Score "High Symptomatic" ( $\geq 3$ )	33	3	14	9	5	10	9	16

\* PNA1 VS. PNA2 district locations: Statistically significantly different at  $p < 0.0001$  [All measurements]

† PNA2 district locations comparison:  
 $p < 0.0001$  [Depression-initial algorithm]  
 $p < 0.05$  [Depression-revised algorithm]  
 $p < 0.0001$  [Depression score-  $\geq 1.75$ ]  
 NS [Depression score-  $\geq 3.00$ ]

$p < 0.0001$  [PTSD-initial algorithm]  
 $p < 0.05$  [PTSD-revised algorithm]  
 $p < 0.0001$  [PTSD score-  $\geq 2.50$ ]  
 NS [PTSD score-  $\geq 3.00$ ]

$p < 0.0001$  [Anxiety score-  $\geq 1.75$ ]  
 $p < 0.001$  [Anxiety score-  $\geq 3.00$ ]

TABLE 3.5 DEPRESSION, PTSD, AND ANXIETY SYMPTOMS AND DIAGNOSES BY GENDER

Formal Measures of Psychological Symptoms and Diagnoses	*PNA1 Data			†PNA2 Data			PNA1 + PNA2
	% Male (N=315)	% Female (N=281)	% Total PNA1 Sample (N=596)	% Male (N=691)	% Female (N=685)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Meet Criteria for Major Depressive Disorder	54	57	55	20	26	23	33
Meet High Threshold Criteria for Major Depressive Disorder	18	19	18	6	7	7	10
Mean Depression Score "Symptomatic" ( $\geq 1.75$ )	64	67	65	31	40	35	44
Mean Depression Score "High Symptomatic" ( $\geq 3$ )	16	18	17	3	5	4	8
Meet Criteria for PTSD	37	35	36	11	13	12	19
Meet High Threshold Criteria for PTSD	11	10	10	3	3	3	5
Mean PTSD Score "Symptomatic" ( $\geq 2.5$ )	33	35	34	8	12	10	17
Mean PTSD Score "High Symptomatic" ( $\geq 3$ )	17	16	16	3	4	4	8
Mean Anxiety Score "Symptomatic" ( $\geq 1.75$ )	64	75	69	33	46	39	48
Mean Anxiety Score "High Symptomatic" ( $\geq 3$ )	30	36	33	8	10	9	16

\* PNA1 VS. PNA2 gender comparisons (PNA1 Males vs. PNA2 Males and PNA1 Females vs. PNA2 Females): Statistically significantly different at  $p < 0.0001$  [All measurements]

† PNA1 within gender comparison:  
 NS [Depression-initial algorithm]  
 NS [Depression-revised algorithm]  
 NS [Depression score-  $\geq 1.75$ ]  
 NS [Depression score-  $\geq 3.00$ ]  
 NS [PTSD-initial algorithm]  
 NS [PTSD-revised algorithm]  
 NS [PTSD score-  $\geq 2.50$ ]  
 NS [PTSD score-  $\geq 3.00$ ]  
 $p < 0.01$  [Anxiety score-  $\geq 1.75$ ]  
 NS [Anxiety score-  $\geq 3.00$ ]

PNA2 within gender comparison:  
 $p < 0.05$  [Depression-initial algorithm]  
 NS [Depression-revised algorithm]  
 $p < 0.001$  [Depression score-  $\geq 1.75$ ]  
 $p < 0.05$  [Depression score-  $\geq 3.00$ ]  
 NS [PTSD-initial algorithm]  
 NS [PTSD-revised algorithm]  
 $p < 0.05$  [PTSD score-  $\geq 2.50$ ]  
 NS [PTSD score-  $\geq 3.00$ ]  
 $p < 0.0001$  [Anxiety score-  $\geq 1.75$ ]  
 NS [Anxiety score-  $\geq 3.00$ ]

Thus, while levels of traumatic experience were significantly higher for respondents in those PNA2 villages selected for the MGKD programme, these respondents did not show higher levels of psychological symptoms. This raises further questions about the reason for the reduction of psychological symptoms in the PNA2 study in comparison with the PNA1 study.

#### • The Distribution of Risk: The Effects of Traumatic Experiences on Psychological Distress

A major question for the overall psychosocial assessment is the question of what places persons at risk for mental health problems. We have been particularly interested in the extent to which the level of

traumatic incidents individuals experience places them at risk for mental health problems, and what gender and age groups are at particular risk for traumatic experience and mental health problems. In the PNA1 report, these relationships are analysed utilizing adjusted odds ratios for depression and PTSD. This is a statistical model that allows one to determine how much the risk for an illness like depression is increased for those who have suffered particular patterns of traumatic violence or other risk factors.

PNA1 showed that the strongest predictor of mental health symptoms was the number of traumatic experiences a person had suffered. PNA1 showed only

modest patterns of special risk by age and gender. Here we use the same statistical model for calculating risk associated with increased levels of past traumatic events and current stressors, as well as for particular gender and age groups.

Table 3.7 shows the effects of past traumatic events on increasing risk for symptoms and diagnoses of depression, PTSD, and anxiety for the PNA2 sample. For all measures, an increase in numbers of past traumatic events is shown to place persons at directly increasing levels risk for mental health problems.

Persons who experienced the highest level of traumatic events have 3 to 12 times the risk of a mental

health problem when compared with persons who did not suffer a traumatic event, and their risk of suffering the more severe forms of PTSD (highest symptom cutoff or highest threshold for diagnosis) are increased 7 to 12 times. This table may be compared directly with Table 9.1 of the PNA1 report.<sup>12</sup>

For PNA1 respondents, because symptoms were reported at much higher levels, odds ratios are also much higher. However, the pattern persists of a powerful relationship between traumatic events associated with conflict and continued levels of mental health problems.

Table 3.8 shows the pattern for influence of 'current stressors' on mental health symptoms and

diagnoses. Increased levels of current stressors is associated with increased risk for mental health problems in PNA2, although less directly and strongly than found for the PNA1 respondents. (Compare Table 3.8 here with Table 9.2 in the PNA1 report).

The total number of 'current stressors' associated with real insecurity and violent events – particularly the number of persons who report seeing perpetrators or experiencing attack or robbery – is much lower in PNA2 than PNA1, making it somewhat difficult to interpret these findings for PNA2. Nonetheless, reported experiences of post-conflict stressors and insecurities of daily living increase risk for mental health measures

by 3 to 13 times.

#### • The Distribution of Risk: Groups at High Risk

Tables 3.9 examines adjusted odds ratios for depression, PTSD, and anxiety by study (PNA1 and PNA2) and by gender. As indicated in the previous analyses, PNA1 respondents were four times more likely than PNA2 respondents to meet criteria for depression, PTSD, and 4.7 times more likely to score high on anxiety symptom measures. The PNA1 versus PNA2 differences are statistically significant (<p.0.0001) for all psychiatric symptom measures. Table 3.5 (above) indicates that a slightly higher percentage of women than men suffer depression, PTSD, and anxiety. This is verified

TABLE 3.6 DEPRESSION, PTSD, AND ANXIETY SYMPTOMS AND DIAGNOSES BY MGKD DESIGNATION

Formal Measures of Psychological Symptoms and Diagnoses	*PNA1 Data			†PNA2 Data			PNA1 + PNA2
	MGKD+ (n=275)	MGKD- (n=321)	Total (n=596)	MGKD+ (n=454)	MGKD- (n=922)	Total (n=1376)	Total (n=1972)
Meet Criteria for Major Depressive Disorder	64	48	55	25	22	23	33
Meet High Threshold Criteria for Major Depressive Disorder	23	14	18	8	6	7	10
Mean Depression Score "Symptomatic" (≥1.75)	74	58	65	36	35	35	44
Mean Depression Score "High Symptomatic" (≥3)	22	13	17	5	4	4	8
Meet Criteria for PTSD	43	31	36	13	11	12	19
Meet High Threshold Criteria for PTSD	14	8	10	3	3	3	5
Mean PTSD Score "Symptomatic" (≥2.5)	41	27	34	11	9	10	17
Mean PTSD Score "High Symptomatic" (≥3)	20	13	16	5	3	4	8
Mean Anxiety Score "Symptomatic" (≥1.75)	75	65	69	42	38	39	48
Mean Anxiety Score "High Symptomatic" (≥3)	40	27	33	10	9	9	16

NOTE: MGKD- answers "yes" or "no" if IOM/PIKR has a community peace dividend project (called MGKD) in the village where the respondent lives.

\* PNA1/MGKD+, PNA1/MGKD-, PNA2/MGKD+, PNA2/MGKD- comparison- Statistically significantly different at p< 0.0001 [All measurements]

† PNA1/MGKD+, PNA1/MGKD- comparison:  
 p<0.0001 [Depression-initial algorithm]  
 p<0.01 [Depression-revised algorithm]  
 p<0.0001 [Depression score- ≥ 1.75]  
 p<0.01 [Depression score- ≥ 3.00]  
 p<0.01 [PTSD-initial algorithm]  
 p<0.05 [PTSD-revised algorithm]  
 p<0.001 [PTSD score- ≥ 2.50]  
 p<0.05 [PTSD score- ≥ 3.00]  
 p<0.01 [Anxiety score- ≥ 1.75]  
 p<0.001 [Anxiety score- ≥ 3.00]

‡ PNA2/MGKD+, PNA2/MGKD- comparison:  
 NS [Depression-initial algorithm]  
 NS [Depression-revised algorithm]  
 NS [Depression score- ≥ 1.75]  
 NS [Depression score- ≥ 3.00]  
 NS [PTSD-initial algorithm]  
 NS [PTSD-revised algorithm]  
 NS [PTSD score- ≥ 2.50]  
 NS [PTSD score- ≥ 3.00]  
 NS [Anxiety score- ≥ 1.75]  
 NS [Anxiety score- ≥ 3.00]

<sup>12</sup> Good, B., M.-J. D. Good, J. Grayman, and M. Lakoma. 2006. *Psychosocial Needs Assessment of Communities Affected by the Conflict in the Districts of Pidie, Bireuen, and Aceh Utara*. International Organization for Migration.

by odds analyses, where men are at lower risk for all categories of symptoms.

However, these differences are not statistically significant, except for depression and anxiety symptoms at the "Symptomatic" level (women scoring higher than men  $p<.001$  and  $p<.0001$ ), and depression, that is they meet criteria for Major Depressive Disorder (MDD), PTSD "Symptomatic", and Anxiety "High Symptomatic," which are of borderline significance ( $p<.05$ ). It should be noted that the differences between women and men are less

than in many normal populations, where women often show much higher levels of depression than men, suggesting that men may be somewhat more affected by conflict related symptoms than women.

Table 3.10 examines the relationship between age and mental health problems for both PNA1 and PNA2, adjusted for gender and MGKD programme. What is interesting to note in these two tables is the apparent shift in risk for age groups from PNA1 to PNA2. In PNA1, young adults (age 17-29) were at

greater risk for nearly all categories of mental health problems than all other age groups, though most often at statistically non-significant levels.

For PNA2, the pattern is quite different. Young adults have the lowest risk for mental health problems, whereas other groups, particularly the oldest group (54 years and older), are at the highest risk, particularly for depression and anxiety. For example, older PNA2 respondents are over 2.5 times more likely to meet criteria for depression than

17-29 year olds. This suggests an interesting pattern of resilience among the young adults in this population, as well as a special risk among elders.

#### • The Distribution of Risk: Head Trauma

One form of trauma is particularly noteworthy among PNA2 respondents, as it was for respondents in PNA1. Rates of head trauma and potential brain injury, suffered through beatings, strangulation, near drownings, and other forms of torture or violence, used by the Indonesian forces

to gather information or punish villages for perceived support for GAM, were extraordinarily high.

As our clinical work in Bireuen has shown, head trauma may have long term effects, both physically and psychologically, and deserve clinical interventions and further research.

Overall, 17% of the entire PNA2 sample suffered from conflict related head trauma; these are extremely high rates, considering that this includes high and relatively low conflict areas, and may be

compared with the rate of 27% for the PNA1 sample. In the PNA2 districts rating particularly high for head trauma, rates were comparable with those found in the PNA1 study on the North Coast. In PNA2, 27% of East Coast respondents and 24% of Southwest Coast respondents experienced conflict related head trauma, including beating on the head, suffocation, and near drowning. As mentioned above, while both men and women suffered head trauma, men, particularly those in the highest conflict regions, were at the highest risk.

**TABLE 3.7 ADJUSTED ODDS RATIOS\*: MENTAL HEALTH PROBLEMS BY PAST TRAUMATIC EVENTS FOR PNA2 RESPONDENTS**

Formal Measures of Psychological Symptoms and Diagnoses for PNA2 (N=1376)	Number of Past Traumatic Events			
	0-3	4-7	8-10	≥11
Meet Criteria for Major Depressive Disorder	1.00	1.43 (0.99-2.09)	§2.25 (1.46-3.48)	3.56 (2.43-5.22)
Meet High Threshold Criteria for Major Depressive Disorder	1.00	1.43 (0.72-2.84)	1.87 (0.80-4.38)	5.98 (3.04-11.75)
Mean Depression Score "Symptomatic" (≥1.75)	1.00	†1.39 (1.01-1.90)	2.11 (1.44-3.08)	3.53 (2.52-4.96)
Mean Depression Score "High Symptomatic" (≥3)	1.00	0.62 (0.24-1.58)	0.90 (0.28-2.94)	4.73 (2.16-10.35)
Meet Criteria for PTSD	1.00	0.88 (0.53-1.48)	1.02 (0.54-1.92)	3.73 (2.32-5.99)
Meet High Threshold Criteria for PTSD	1.00	0.83 (0.23-3.04)	3.07 (0.84-11.25)	12.12 (4.15-35.37)
Mean PTSD Score "Symptomatic" (≥2.5)	1.00	1.13 (0.63-2.04)	1.57 (0.80-3.10)	4.34 (2.51-7.49)
Mean PTSD Score "High Symptomatic" (≥3)	1.00	0.68 (0.22-2.09)	2.01 (0.65-6.25)	7.16 (2.91-17.60)
Mean Anxiety Score "Symptomatic" (≥1.75)	1.00	†1.42 (1.05-1.91)	2.48 (1.72-3.58)	3.30 (2.37-4.59)
Mean Anxiety Score "High Symptomatic" (≥3)	1.00	1.52 (0.84-2.73)	1.65 (0.83-3.30)	3.62 (2.05-6.41)

Odds Ratios: CI 95%

Note: "0-3" Events= reference group.

\* Adjusted for district locations.

District Locations include

-Aceh Besar (N=180)  
 -East Coast districts (N=246)  
 -Central Highlands (N=327)  
 -Southwest Highlands (N=162)  
 -Southwest Coast (N=461)

†  $p<0.05$   
 ‡  $p<0.01$   
 §  $p<0.001$   
 ||  $p<0.$

**TABLE 3.8 ADJUSTED ODDS RATIOS\*: MENTAL HEALTH PROBLEMS BY NUMBERS CURRENT STRESSFUL EVENTS, FOR PNA2 RESPONDENTS**

Formal Measures of Psychological Symptoms and Diagnoses for PNA2 (N=1376)	Number of Current Traumatic events			
	0-3	4-7	8-10	≥11
Meet Criteria for Major Depressive Disorder	1.00	3.28 (2.26-4.76)	4.34 (2.72-6.91)	3.45 (2.21-5.40)
Meet High Threshold Criteria for Major Depressive Disorder	1.00	8.69 (3.10-24.36)	13.49 (4.48-40.67)	10.08 (3.36-30.26)
Mean Depression Score "Symptomatic" (≥1.75)	1.00	3.69 (2.69-5.06)	5.54 (3.66-8.37)	3.37 (2.28-4.99)
Mean Depression Score "High Symptomatic" (≥3)	1.00	‡3.68 (1.40-9.73)	§7.01 (2.39-20.50)	‡5.91 (2.05-17.02)
Meet Criteria for PTSD	1.00	‡2.17 (1.31-3.58)	4.29 (2.40-7.69)	3.34 (1.90-5.87)
Meet High Threshold Criteria for PTSD	1.00	†5.36 (1.23-23.41)	†10.97 (2.32-51.96)	†12.11 (2.66-55.15)
Mean PTSD Score "Symptomatic" (≥2.5)	1.00	§2.72 (1.52-4.89)	4.97 (2.55-9.68)	3.75 (1.96-7.21)
Mean PTSD Score "High Symptomatic" (≥3)	1.00	2.15 (0.85-5.43)	‡4.23 (1.49-11.97)	§5.34 (2.04-14.02)
Mean Anxiety Score "Symptomatic" (≥1.75)	1.00	2.48 (1.87-3.29)	3.05 (2.07-4.49)	2.23 (1.55-3.21)
Mean Anxiety Score "High Symptomatic" (≥3)	1.00	§2.99 (1.64-5.45)	4.64 (2.33-9.25)	3.84 (1.93-7.64)

Odds Ratios: CI 95%

Note: "0-3" Events= reference group.

\* Adjusted for district locations

District Locations include

-Aceh Besar (N=180)  
 -East Coast districts (N=246)  
 -Central Highlands (N=327)  
 -Southwest Highlands (N=162)  
 -Southwest Coast (N=461)

†  $p<0.05$   
 ‡  $p<0.01$   
 §  $p<0.001$   
 ||  $p<0.0001$

TABLE 3.9 ADJUSTED ODDS RATIOS: MENTAL HEALTH PROBLEMS BY STUDY AND BY GENDER

Formal Measures of Psychological Symptoms and Diagnoses for PNA2 (N=1376)	*Dataset: PNA1 Vs. PNA2 or (95% CI)	†Gender Male Vs. Female or (95% CI)
Meet Criteria for Major Depressive Disorder	4.01 (3.26-4.93)	0.77 (0.63-0.94)
Meet High Threshold Criteria for Major Depressive Disorder	2.98 (2.20-4.02)	0.93 (0.69-1.25)
Mean Depression Score "Symptomatic" (≥1.75)	3.43 (2.79-4.20)	0.71 (0.59-0.86)
Mean Depression Score "High Symptomatic" (≥3)	4.51 (3.19-6.38)	0.72 (0.51-1.00)
Meet Criteria for PTSD	4.04 (3.19-5.11)	0.94 (0.75-1.19)
Meet High Threshold Criteria for PTSD	3.73 (2.47-5.64)	0.92 (0.61-1.38)
Mean PTSD Score "Symptomatic" (≥2.5)	4.50 (3.51-5.77)	0.78 (0.61-1.00)
Mean PTSD Score "High Symptomatic" (≥3)	4.76 (3.34-6.78)	0.88 (0.63-1.24)
Mean Anxiety Score "Symptomatic" (≥1.75)	3.47 (2.81-4.27)	0.59 (0.49-0.71)
Mean Anxiety Score "High Symptomatic" (≥3)	4.71 (3.66-6.07)	0.78 (0.60-1.00)

\* Dataset:  
0=PNA2 (reference)  
p<0.0001 for all psych measures

† Gender: 0=female (reference), NS for all psych measures, with the following exceptions:  
Depression "Symptomatic" (p<0.001),  
Anxiety "Symptomatic" (p<0.0001),

and

Borderline significance:  
Depression (meet criteria for MDD),  
PTSD "Symptomatic", and  
Anxiety "High Symptomatic" (p≤0.05)

Remarkably, 43% of all men in the East Coast region and 41% in the Southwest Coast, report having suffered head trauma. These rates are equivalent to those found in PNA1 for the North Coast. (See Tables 2.5 and 2.6 above.) It might be noted that women experienced higher rates of suffocation and strangulation than other forms of head trauma, including being beaten to the head. In our PNA1 report, we further broke these findings down by district and by age group.

This produced the remarkable finding that 68% of young men (aged 17-29) in Bireuen and 67% of

young men in Aceh Utara reported experiencing conflict related head trauma.<sup>13</sup>

Tables 3.11 and 3.12 show comparable figures for Aceh Timur and Aceh Selatan, the highest conflict districts within the East Coast and Southwest Coast regions. Again, the findings are strikingly high for young men; 50% for Aceh Timur, 38% for Aceh Selatan.

However, the distribution in these areas is somewhat different than in the PNA1 districts. In Aceh Timur, 50% of men aged 30-40, which is equivalent to the rate among young men, suffered head

trauma. In Aceh Selatan, 57% of men aged 30-40 and 52% of men aged 41-53, higher than the rates for younger men, suffered head trauma.

#### • Social Functioning

The PNA2 protocol added a simple social functioning scale to the questionnaire, to attempt to measure the actual effects of psychological symptoms on social functioning. The questionnaire asked persons to rate difficulties they feel in carrying out routine daily activities – washing and dressing themselves, raising their children, earning money, doing manual labour or cooking and cleaning

<sup>13</sup> Ibid. See tables 9.5 and 9.6

TABLE 3.10A ADJUSTED ODDS RATIOS: MENTAL HEALTH PROBLEMS BY AGE (PNA1)

Formal Measures of Psychological Symptoms and Diagnoses: PNA1 (N=589, 7 missing)	Age			
	17-29 (N=145) 25%	30-40 (N=185) 31%	41-53 (N=139) 24%	54-82 (N=120) 20%
	or (95% CI)			
Meet Criteria for Major Depressive Disorder	1.00	0.97 (0.62-1.51)	1.60 (0.99-2.61)	1.02 (0.61-1.68)
Meet High Threshold Criteria for Major Depressive Disorder	1.00	†0.46 (0.25-0.82)	0.75 (0.42-1.35)	1.03 (0.57-1.88)
Mean Depression Score "Symptomatic" (≥1.75)	1.00	0.94 (0.59-1.50)	1.45 (0.87-2.43)	0.83 (0.49-1.39)
Mean Depression Score "High Symptomatic" (≥3)	1.00	0.60 (0.33-1.09)	0.72 (0.38-1.36)	1.41 (0.76-2.61)
Meet Criteria for PTSD	1.00	0.82 (0.52-1.28)	0.83 (0.51-1.34)	0.71 (0.42-1.19)
Meet High Threshold Criteria for PTSD	1.00	*0.46 (0.22-0.96)	0.58 (0.27-1.24)	0.96 (0.46-2.00)
Mean PTSD Score "Symptomatic" (≥2.5)	1.00	0.66 (0.42-1.05)	0.72 (0.44-1.18)	0.59 (0.35-1.02)
Mean PTSD Score "High Symptomatic" (≥3)	1.00	†0.44 (0.24-0.81)	0.55 (0.29-1.03)	0.88 (0.47-1.63)
Mean Anxiety Score "Symptomatic" (≥1.75)	1.00	0.95 (0.59-1.55)	1.07 (0.63-1.80)	0.87 (0.51-1.48)
Mean Anxiety Score "High Symptomatic" (≥3)	1.00	0.89 (0.55-1.43)	1.35 (0.82-2.22)	1.09 (0.63-1.86)

Note:  
Odd ratios are adjusted for gender and MGKD.  
\* p<0.05  
† p<0.01

TABLE 3.10B ADJUSTED ODDS RATIOS: MENTAL HEALTH PROBLEMS BY AGE (PNA2)

Formal Measures of Psychological Symptoms and Diagnoses: PNA1 (N=1374, 2 missing)	Age			
	17-29 (N=489) 35%	30-40 (N=448) 33%	41-53 (N=250) 18%	54-82 (N=187) 14%
	or (95% CI)			
Meet Criteria for Major Depressive Disorder	1.00	*1.47 (1.07-2.03)	†1.69 (1.17-2.45)	‡2.59 (1.75-3.82)
Meet High Threshold Criteria for Major Depressive Disorder	1.00	1.09 (0.64-1.86)	1.02 (0.53-1.94)	1.75 (0.94-3.25)
Mean Depression Score "Symptomatic" (≥1.75)	1.00	†1.56 (1.19-2.06)	*1.50 (1.08-2.08)	‡1.87 (1.31-2.68)
Mean Depression Score "High Symptomatic" (≥3)	1.00	1.63 (0.87-3.06)	0.96 (0.41-2.26)	1.05 (0.41-2.74)
Meet Criteria for PTSD	1.00	1.32 (0.89-1.97)	1.32 (0.83-2.11)	1.07 (0.62-1.86)
Meet High Threshold Criteria for PTSD	1.00	1.72 (0.85-3.50)	0.45 (0.13-1.61)	0.83 (0.26-2.58)
Mean PTSD Score "Symptomatic" (≥2.5)	1.00	1.35 (0.86-2.13)	1.49 (0.89-2.51)	1.75 (1.00-3.07)
Mean PTSD Score "High Symptomatic" (≥3)	1.00	1.52 (0.79-2.93)	1.00 (0.42-2.37)	1.05 (0.40-2.76)
Mean Anxiety Score "Symptomatic" (≥1.75)	1.00	†1.55 (1.18-2.03)	‡1.76 (1.28-2.42)	‡2.71 (1.90-3.86)
Mean Anxiety Score "High Symptomatic" (≥3)	1.00	†1.94 (1.17-3.21)	†2.22 (1.26-3.89)	‡3.37 (1.90-5.96)

Note:  
Odd ratios are adjusted for gender and MGKD.

MGKD- answers "yes" or "no" if IOM has a community peace dividend project (called MGKD) in the village where the respondent lives.

\* p<0.05  
† p<0.01  
‡ p<0.001  
‡ p<0.0001

the house, engaging in farming or fishing, communicating with others, participating in community events, doing their prayers.

Overall rates of expression of difficulty in carrying out such basic life routines were extremely low. While using a disability instrument with items that focus primarily on severe disability (e.g., "difficulty with washing and dressing oneself") always works far better for the most severely disabled persons than for those with more mild disability, this causes serious statistical difficulties for analysis. (These variables lack normality in distribution [median=0]; therefore mean tests are unreliable [requiring non parametric tests]). Furthermore, expressed difficulties were highest for earning money, manual labour (men), and farming or fishing; issues which reflect economic conditions as well as disability.

However, even with this limited instrument, analysis demonstrated significant relationships between sum scores for social functioning and depression, anxiety, and PTSD. (See Table 3.13 for analysis of the depression data). Most striking were relationships between psychological symptoms and expressed difficulty in basic livelihood activities, such as earning money, manual labour, farming and fishing.

Although causal directionality cannot be established, non-significant trends indicate that those respondents with depression find greater difficulty with livelihood issues. For example, men with the highest scores on depression rated their ability to earn money, do manual labour, or engage in farming or fishing

as "difficult" (2), on average, compared with all other persons who on average rated these same livelihood issues as "somewhat difficult" (1). Mental health problems have real consequences for social functioning, and mental health and livelihood interventions need to go hand in hand.

### • Reduced Levels of Psychological Symptoms Acehnese Resilience, Continued Need for Services, and Questions for Further Research

The finding that psychological symptoms were substantially lower for PNA2 respondents, even those in areas that suffered quite high conflict, in comparison with PNA1 respondents was unexpected and raises a series of questions. First, the PNA2 research was done across Aceh in areas with quite varied experiences of violence. Do the lower levels of symptoms for PNA2 respondents simply reflect lower rates of trauma among those respondents? Second, we know that the violence came to some regions (such as Aceh Selatan and more generally the Southwest Coast) much later than to other areas (particularly the east coast regions).

Do the differences in levels of psychological symptoms reflect exposure to violence for a shorter period of time for those in the PNA2 districts? Third, the PNA2 research was conducted five months after the PNA1 research. Is there a reason why this difference in the time of the research may have influenced the reporting of symptoms among the respondents to PNA2? Does it reflect resilience in this population and recovery for many persons? Do the differences in levels of security, as the peace process moved

forward between February and July, contribute to this finding? Because the research was conducted in different districts at somewhat different times, it is impossible to determine whether time or place is most critical. However, our data suggest answers to these questions.

First, one might hypothesize that the differences in psychological symptoms among the PNA1 and PNA2 populations simply reflect different rates of violence in the broad region covered by PNA2 in contrast with the PNA1, with some PNA2 regions experiencing considerably less violence.

This hypothesis is based on the general assumption that higher levels of acute traumatic events will produce higher levels of enduring psychological symptoms. This hypothesis was demonstrated by our research. Calculating adjusted odds ratios, both PNA1 and PNA2 found that persons with higher levels of past traumatic experiences were at risk for significantly higher levels of depression, anxiety, and PTSD, although these ratios were much higher for PNA1. When looked at by region, the PNA2 districts that suffered highest rates of traumatic events also suffered higher levels of symptoms and diagnoses, when compared with regions that experienced the lowest levels of violence. This led us to predict that the districts in the PNA2 study with levels of violence equivalent to those in the PNA1 study would show equivalent levels of symptoms as well.

But our findings did not support this expectation. The PNA2 East Coast and Southwest Coast respondents experienced violent and traumatic events at levels equivalent to (or for some events, higher than) those

TABLE 3.11 HEAD TRAUMA BY GENDER AND AGE FOR ACEH TIMUR

Head Trauma/ Potential Brain Injury	Aceh Timur			
	Male (N = 101 - 106)			
	Age 17 - 29 % (N = 41 - 42)	Age 30 - 40 % (N = 19 - 20)	Age 41 - 53 % (N = 24 - 26)	Age 54 + % (N = 17 - 18)
<b>*Any Type of Head Trauma</b>	50	50	42	44
<b>Specific Type</b>				
<b>Beaten on the head</b>	45	50	35	28
<b>Suffocation or strangulation</b>	10	21	13	28
<b>Near drowning</b>	10	0	0	0
<b>Other head trauma</b>	2	5	0	11

\*From the four different types of head injury, if a respondent answers yes to one or more of those four questions, then the answer is yes for the new variable ("Any type of head trauma"), which will then tell us how many respondents experienced physical head trauma of any kind at all.

TABLE 3.12 HEAD TRAUMA BY GENDER AND AGE FOR ACEH SELATAN

Head Trauma/ Potential Brain Injury	Aceh Selatan			
	Male (N=100-112)			
	Age 17 - 29 % (N = 29)	Age 30 - 40 % (N = 30)	Age 41 - 53 % (N = 21)	Age 54 + % (N = 14)
<b>*Any Type of Head Trauma</b>	38	57	52	21
<b>Specific Type</b>				
<b>Beaten on the head</b>	34	53	48	14
<b>Suffocation or strangulation</b>	24	27	10	21
<b>Near drowning</b>	31	27	0	14
<b>Other head trauma</b>	7	23	14	7

\*From the four different types of head injury, if a respondent answers yes to one or more of those four questions, then the answer is yes for the new variable ("Any type of head trauma"), which will then tell us how many respondents experienced physical head trauma of any kind at all.

of PNA1 North Coast respondents. However, their rates of depression, anxiety, and PTSD symptoms are much lower. Residents of PNA2 regions with both the highest and lowest rates of violence reported significantly lower rates of current

psychological distress than did residents of PNA1 communities. Furthermore, MGKD respondents (those from villages identified as having had particularly high levels of violence) in the PNA1 survey reported significantly higher levels

of symptoms than non-MGKD respondents, while this relationship does not hold for the PNA2 survey. Thus, this initial hypothesis is not supported.

The second question to ask, is

**TABLE 3.13 SOCIAL FUNCTIONING BY DEPRESSION**

†Men: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data								% Total Sample (N~691)
	Meet Criteria for Major Depressive Disorder		Meet High Threshold Criteria for Major Depressive Disorder		Mean Depression Score "Symptomatic" (≥1.75)		Mean Depression Score "High Symptomatic" (≥3)		
	Yes n=139	No n=525	Yes n=44	No n=620	Yes n=206	No n=458	Yes n=20	No n=644	
<b>Sum Score</b> [Range: 0-27]	6.06 (4.40)	3.03 (3.00)	8.18 (4.58)	3.35 (3.25)	5.75 (4.01)	2.73 (2.88)	9.45 (6.35)	3.49 (3.29)	3.67 (3.56)
<b>Mean Score</b> [Range: 0-3]	0.69 (0.49)	0.35 (0.34)	0.92 (0.51)	0.38 (0.37)	0.65 (0.45)	0.31 (0.33)	1.06 (0.70)	0.40 (0.37)	0.42 (0.40)

‡Women: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data								% Total Sample (N~685)
	Meet Criteria for Major Depressive Disorder		Meet High Threshold Criteria for Major Depressive Disorder		Mean Depression Score "Symptomatic" (≥1.75)		Mean Depression Score "High Symptomatic" (≥3)		
	Yes n=169	No n=492	Yes n=45	No n=616	Yes n=264	No n=397	Yes n=35	No n=626	
<b>Sum Score</b> [Range: 0-18]	4.40 (3.80)	2.56 (2.94)	5.69 (3.95)	2.84 (3.14)	4.44 (3.67)	2.10 (2.60)	5.71 (4.10)	2.88 (3.16)	3.03 (3.28)
<b>Mean Score</b> [Range: 0-2.29]	0.52 (0.45)	0.30 (0.34)	0.67 (0.45)	0.33 (0.37)	0.52(0.43)	0.24 (0.30)	0.67 (0.47)	0.33 (0.37)	0.35 (0.38)

\*Mean (Standard Deviation). Functioning Scale (0-3): 0-No Difficulty, 1-Some Difficulty, 2-Difficult, 3- Often cannot complete task.

**\*PNA2 REPORT: SOCIAL FUNCTIONING BY PTSD**

†Men: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data								% Total Sample (N~691)
	PTSD Symptoms "Meet Criteria" Initial Algorithm		PTSD Symptoms "Meet Criteria" Revised Algorithm		Mean PTSD score (>2.5) "Symptomatic"		Mean PTSD score (>3) "High Symptomatic"		
	Yes n=76	No n=588	Yes n=18	No n=646	Yes n=55	No n=609	Yes n=22	No n=642	
<b>Sum Score</b> [Range: 0-27]	6.25 (4.90)	3.33 (3.21)	9.67 (5.47)	3.50 (3.35)	6.51 (4.80)	3.41 (3.31)	8.91 (5.65)	3.49 (3.33)	3.67 (3.56)
<b>Mean Score</b> [Range: 0-3]	0.71 (0.55)	0.38 (0.36)	1.08 (0.61)	0.40 (0.38)	0.75 (0.53)	0.39 (0.38)	1.00 (0.63)	0.40 (0.38)	0.42 (0.40)

‡Women: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data								% Total Sample (N~685)
	PTSD Symptoms "Meet Criteria" Initial Algorithm		PTSD Symptoms "Meet Criteria" Revised Algorithm		Mean PTSD score (>2.5) "Symptomatic"		Mean PTSD score (>3) "High Symptomatic"		
	Yes n=85	No n=576	Yes n=22	No n=639	Yes n=77	No n=584	Yes n=30	No n=631	
<b>Sum Score</b> [Range: 0-18]	4.88 (3.77)	2.76 (3.11)	5.91 (3.15)	2.93 (3.24)	5.29 (3.90)	2.74 (3.07)	5.77 (2.98)	2.90 (3.23)	3.03 (3.28)
<b>Mean Score</b> [Range: 0-2.29]	0.57 (0.43)	0.32 (0.36)	0.70 (0.38)	0.34 (0.38)	0.62 (0.46)	0.32 (0.35)	0.69 (0.35)	0.34 (0.38)	0.35 (0.38)

\*Mean (Standard Deviation). Functioning Scale (0-3): 0-No Difficulty, 1-Some Difficulty, 2-Difficult, 3- Often cannot complete task.

**\*PNA2 REPORT: SOCIAL FUNCTIONING BY ANXIETY**

†Men: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data				% Total Sample (N~691)
	Mean anxiety score (>1.75)		Mean anxiety score (>3)		
	Yes n=224	No n=440	Yes n=57	No n=607	
<b>Sum Score</b> [Range: 0-27]	5.24 (4.12)	2.86 (2.93)	6.11 (4.82)	3.44 (3.33)	3.67 (3.56)
<b>Mean Score</b> [Range: 0-3]	0.60 (0.46)	0.33 (0.33)	0.69 (0.54)	0.39 (0.38)	0.42 (0.40)

‡Women: How difficult does it feel for you when you conduct the following daily activities:	PNA2 Data				% Total Sample (N~685)
	Mean anxiety score (>1.75)		Mean anxiety score (>3)		
	Yes n=308	No n=353	Yes n=67	No n=594	
<b>Sum Score</b> [Range: 0-18]	4.21 (3.67)	2.00 (2.47)	4.97 (3.96)	2.81 (3.12)	3.03 (3.28)
<b>Mean Score</b> [Range: 0-3]	0.49 (0.43)	0.23 (0.28)	0.58 (0.46)	0.33 (0.36)	0.35 (0.38)

\*Mean (Standard Deviation). Functioning Scale (0-3): 0-No Difficulty, 1-Some Difficulty, 2-Difficult, 3- Often cannot complete task.

## † T-TEST ANALYSES SOCIAL FUNCTIONING SUM AND MEAN SCORES BY PSYCH. MEASURES: MALES

General Emotional Distress Experienced by Informants (PNA2)	Sum Score (0-27)	Mean Score (0-3)
Depression symptoms "meet criteria" Initial Algorithm	p<0.0001	p<0.0001
Depression symptoms "meet criteria" Revised Algorithm	p<0.0001	p<0.0001
Mean depression score (>1.75) "symptomatic"	p<0.0001	p<0.0001
Mean depression score (>3) "symptomatic"	p<0.001	p<0.001
PTSD symptoms "meet criteria" Initial Algorithm	p<0.0001	p<0.0001
PTSD symptoms "meet criteria" Revised Algorithm	p<0.001	p<0.001
Mean PTSD score (>2.5) "symptomatic"	p<0.0001	p<0.0001
Mean PTSD score (>3) "symptomatic"	p<0.001	p<0.001
Mean anxiety score (>1.75)	p<0.0001	p<0.0001
Mean anxiety score (>3)	p<0.0001	p<0.0001

whether the length of time that a particular area was exposed to violence accounts for levels of symptoms. Stated as a hypothesis, this would suggest that a duration effect - that persons who suffer repeated trauma over longer periods of time are more likely to suffer continued psychological symptoms than persons suffering acute trauma for a short time - could account for this finding. Historically, the North Coast communities of PNA1 and the East Coast communities of PNA2 experienced severe conflict between TNI and GAM forces dating back to the initial DOM period of the early 1990's and before. By contrast, the conflict came to the Southwest Coast and the Central Highlands much later, usually after 2000.

This hypothesis would predict similar levels of symptoms for North Coast and East Coast, lower levels for Southwest Coast and Central Highlands. Again, this hypothesis is not supported.

Levels of psychological symptoms reported in the East Coast region are not only much lower than in the North Coast, but they are lower than in the PNA2 Southwest Coast and Central Highlands.

While this second hypothesis is not supported, it should be noted that we do not have data about the length of exposure to violence by individual respondents, only about the history of violence in regions, and none of the high conflict villages experienced truly short exposure to violence (such as a single event). Nearly all experienced at least 3-5 years of violence prior to the peace agreement. It remains quite possible that many persons may have experienced conflict related traumatic events repeatedly over long periods of time, and that this has led to the persistence of high levels of symptoms and increased risk for diagnosable mental illness. It is possible that the duration effect is important at the individual and clinical level.

However, at the aggregate level, the duration of conflict in a region does not explain reduced levels of symptoms in the PNA2 regions.

The third question to ask, is whether being at a greater remove in time from the violence, that is by five months, combined with increased security by July 2006 compared to February, are enough to lead to a lowering of symptom rates. This suggests two hypotheses, a resilience hypothesis and a security hypothesis, which together argue that the primary difference between PNA1 and PNA2 levels of psychological symptoms is due to the passage of time and increased levels of security.

It suggests that while a very significant number of persons continue to suffer symptoms of depression and PTSD at a level meeting criteria for psychiatric diagnoses, and some persons continue to suffer especially severe conditions, the extraordinarily

## † T-TEST ANALYSES SOCIAL FUNCTIONING SUM AND MEAN SCORES BY PSYCH. MEASURES: FEMALES

General Emotional Distress Experienced by Informants (PNA2)	Sum Score (0-18)	Mean Score (0-2.29)
Depression symptoms "meet criteria" Initial Algorithm	p<0.0001	p<0.0001
Depression symptoms "meet criteria" Revised Algorithm	p<0.0001	p<0.0001
Mean depression score (>1.75) "symptomatic"	p<0.0001	p<0.0001
Mean depression score (>3) "symptomatic"	p<0.001	p<0.001
PTSD symptoms "meet criteria" Initial Algorithm	p<0.0001	p<0.0001
PTSD symptoms "meet criteria" Revised Algorithm	p<0.0001	p<0.0001
Mean PTSD score (>2.5) "symptomatic"	p<0.0001	p<0.0001
Mean PTSD score (>3) "symptomatic"	p<0.001	p<0.001
Mean anxiety score (>1.75)	p<0.0001	p<0.0001
Mean anxiety score (>3)	p<0.0001	p<0.0001

high level of symptoms of anxiety and depression found among PNA1 respondents declined over this period of time.

Although the PNA data are not longitudinal and we cannot directly test these hypotheses, the data are consistent with both the resilience and security explanations. PNA2 was conducted at a time when reported rates of current violence (experiencing assault and robbery, seeing former perpetrators) were much, much lower for all PNA2 regions than they had been for the PNA1 districts at the time of that study. (See Table 2.9.) It was conducted when the inorganic Indonesian military troops had been gone long enough to give Acehese communities a sense that the peace process might actually succeed.

By the time of the PNA2 interviews, our data show that psychological symptoms were lower in all regions

interviewed, both those which experienced trauma at the same level as PNA1 districts and those that experienced much lower levels of trauma.

While odds analysis shows that individual levels of experience of traumatic events increased the risk for psychological symptoms in both PNA1 and PNA2, these odds ratios are much lower in PNA2.

All of these support the hypothesis that as security increased from February to July of 2006, a broad process of community recovery was underway. It supports our broader observations that the people of Aceh are remarkably resilient. It also suggests that the symptom checklists used in this study not only measure psychopathology, but that they are also sensitive barometers of collective anxiety.

The PNA data overall suggest that psychological symptoms reflect

both severe traumatic violence experienced in the past and current levels of security and collective anxiety. Our research suggests on the one hand that carrying the peace process forward, maintaining and enhancing security, is utterly critical to the mental health of persons in high conflict regions of Aceh. It also provides evidence that while this is an extremely resilient population, trauma-related symptoms and treatable psychiatric conditions remain very common in these communities.

Continued interventions are needed to address the acute and persistent psychiatric conditions associated with the conflict, even as the peace process moves forward. And as programmes are developed to respond to the effects of violence, research is needed to understand natural processes of resilience and recovery in Aceh and to assure that interventions will support these processes.

## COMMUNITY MENTAL AND PSYCHOSOCIAL HEALTH

### AVAILABLE RESOURCES IN COMMUNITIES

A series of questions were asked about what, or who, people turn to in times of stress. Interviewers asked all respondents; "in the past six months, have you done any of the following things to overcome bad experiences related to the conflict?" The list of possible responses is shown in the left column of Table 4.1. Respondents were free to choose as many of these items as they wanted; each row in the table represents the percent of people

who said "yes" to that category, but not at the expense of others. The percentages in each column therefore do not sum to 100%.

The remarkable difference between PNA1 and PNA2 in the responses to each item on this checklist of activities is due to a change in the format of the questionnaire. In PNA1, the response rate is low because each choice was not read out loud to the respondent. Knowing that much more than

three percent of residents living in rural areas of Aceh make use of traditional healers, the researchers speculated that respondents were reluctant to offer that up on their own to interviewers, many of whom were medical nurses from the psychiatric hospital in Banda Aceh and the rest of whom were educated city residents as well.

In PNA2, interviewers went through each item on the checklist, asking out loud whether or not in the past

six months the respondent made use of a healer, a religious leader, and so on. Instead of thinking of their ways of coping with stress on their own and then matching to a list of answers, respondents had a chance to affirm or deny their use of each item shown on the table above, and this probably accounts for the jump in affirmative answers for each item on the list.

Nevertheless the pattern established by the answers of the PNA1 sample

remains more or less the same. Nearly all respondents in the PNA2 sample (91%) make use of prayer in times of stress, followed by talking with friends and family (68%) as a distant second. Consulting a religious specialist (54%) and trying to forget what happened (56%) are roughly tied for third place ranking. Medical care (33%), sport and exercise (24%) and traditional healing care (17%) are all noteworthy sources of support to overcome bad memories of conflict experiences. Rates for

many of these activities were highest in the East Coast region, where violence was particularly intense. These are, however, only small indicators of the local resources and psychological processes used in recovery and efforts to deal with the memories of violence. Larger scale political processes are almost certainly equally important in the long term efforts for community and personal recovery.

Not shown in Table 4.1 are the gender differences. In the PNA2 sample, women and men sought to overcome conflict related experiences in similar ways, with only sports and exercise engaged in more frequently by men (34%) than by women (16%).

TABLE 4.1 HELP SEEKING BEHAVIOUR DURING THE PAST SIX MONTHS

In the past 6 months, have you done any of the following things to overcome bad experiences related to the conflict?	*PNA1 Data	†PNA2 Data						PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
Talk about it with friend or family	35	65	87	71	62	63	68	58
Visit a traditional healer or take traditional medicine	3	6	10	24	26	17	17	13
Look for medical help ( <i>Pushkesmas</i> , hospital, village midwife)	15	23	48	37	29	31	33	28
Consult a mental health specialist (psychologist/psychiatrist/ community mental health nurse)	1	2	1	4	1	4	3	2
Consult a religious specialist (imam ustad, ulama)	17	34	67	46	53	65	54	42
Prayer	71	90	98	92	74	93	91	85
Sport / exercise	2	9	26	32	31	23	24	18
Try to forget about the experience	16	24	85	70	39	54	56	44
Move somewhere else	3	2	21	19	6	9	12	9
Do nothing	6	0	11	6	4	7	6	6
Other	2	0	2	7	0	<1	2	2
Don't know / refuse / no opinion	0	0	1	<1	0	1	1	<1

### • Perceptions of Conflict-Related Mental Disability in the Community

Respondents were asked a broad series of questions about mental health problems in their own communities. This section of the questionnaire began by asking whether respondents felt that there are mental health problems in their community related to the conflict and/ or the tsunami, and if those problems are affecting the respondents or the respondents' families. The results are presented in Table 4.2.

There is a significant difference in respondent perceptions of the presence of conflict or tsunami-related mental health problems in their community, between PNA1



**TABLE 4.2 RESPONDENT PERCEPTIONS OF MENTAL ILLNESS IN THE COMMUNITY AND AT HOME**

	*PNA1 Data	†PNA2 Data						PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
<b>Do you think there are any mental health problems in your community related to the tsunami and/ or the conflict? (%Yes)</b>	66	16	50	42	17	46	39	47
<i>Those responding "yes":</i>	(n=393)	(n=29)	(n=122)	(n=137)	(n=27)	(n=214)	(n=529)	(n=922)
<b>Do you feel that these problems have affected you and your family? (%Yes)</b>	55	31	64	31	30	43	43	48

\* PNA1 VS. PNA2 district locations:

- Do you think there are any mental health problems in your community related to the tsunami and/or the conflict? [p<0.0001]
- Do you feel that these problems have affected you and your family? [p<0.0001]

† PNA2 district locations comparison:

- Do you think there are any mental health problems in your community related to the tsunami and/or the conflict? [p<0.0001]
- Do you feel that these problems have affected you and your family? [p<0.0001]

and PNA2, down from 66% in PNA1 to 39% in PNA2. However given the significant difference between regions in PNA2, it might not be appropriate to compare PNA2 as a whole to PNA1, given that they cover different regions as well. Rather, it makes more sense, for

example, to compare North Coast (66%) with East Coast (50%), in which the numbers are closer to each other and a greater percentage of East Coast respondents who said yes to the first question felt that these problems affect themselves or their families (64% of PNA2 East

Coast vs. 55% of PNA1 North Coast respondents).

Overall, nearly half of all PNA respondents felt that there are conflict and tsunami-related mental illnesses in their community, half of whom feel that these problems

affect themselves or people in their family.

Respondents were then asked to tell us which groups in their community suffered the most from "stress or trauma related to the conflict." Respondents were free

to choose as many groups as they wanted, without rank, from the following groups: women, men, children, youth, former political prisoners, former GAM-TNA combatants, the elderly, and conflict widows and widowers. Based on feedback from PNA1, in

the PNA2 questionnaire two more choices were added: community leaders, and Indonesian security forces. The results are presented in Table 4.3.

As with the results shown in Table 4.1, the response rate per

**TABLE 4.3 RESPONDENT SELECTION OF GROUPS IN THEIR COMMUNITY SUFFERING MOST FROM CONFLICT-****RELATED STRESS OR TRAUMA**

Which of the following groups in your community suffer the most because of stress or trauma related to the conflict? (%Yes)	*PNA1 Data	†PNA2 Data						PNA1 + PNA2 Data
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
<b>Women</b>	65	77	95	87	70	94	87	80
<b>Men</b>	81	89	97	92	74	96	92	88
<b>Children</b>	32	60	78	74	50	76	71	59
<b>Youth</b>	71	88	96	91	69	96	90	84
<b>Former political prisoners</b>	19	63	81	48	63	74	68	51
<b>Former GAM-TNA combatants</b>	26	69	86	53	68	80	73	57
<b>Elderly</b>	38	73	89	77	65	90	82	68
<b>Conflict widows/ widowers</b>	32	68	90	81	69	86	82	66
<b>Community Leaders</b>	-	72	93	72	52	88	79	79
<b>Security Forces (RI)</b>	-	47	65	41	48	22	40	40

\* PNA1 VS. PNA2 district locations:

Women	p<0.0001
Men	p<0.0001
Children	p<0.0001
Youth	p<0.0001
Former political prisoners	p<0.0001
Former GAM-TNA combatants	p<0.0001
Elderly	p<0.0001
Conflict widows/ widowers	p<0.0001
Community Leaders	p<0.0001
Security Forces (RI)	p<0.0001

† PNA2 district locations comparison:

Women	p<0.0001
Men	p<0.0001
Children	p<0.0001
Youth	p<0.0001
Former political prisoners	p<0.0001
Former GAM-TNA combatants	p<0.0001
Elderly	p<0.0001
Conflict widows/ widowers	p<0.0001
Community Leaders	p<0.0001
Security Forces (RI)	p<0.0001

Note: PNA1 "Community Suffering" questions = binary (Yes=1/No=0)

PNA2 "Community Suffering" questions = "Did not suffer at all"=0, "Suffered a little"=1, "Suffered"=2, "Suffered a lot"=3

Binary (Yes=1, if response=1, 2 or 3, No=0, if response=0)

TABLE 4.4 OPINIONS ABOUT NGO MENTAL HEALTH SERVICES AND IMPLEMENTING PARTNERS

	*PNA1 Data		†PNA2 Data					PNA1 + PNA2 Data	
	% North Coast (N=596)	% Aceh Besar (N=180)	% East Coast (N=246)	% Central Highlands (N=327)	% Southeast Highlands (N=162)	% Southwest Coast (N=461)	% PNA2 Sample (N=1,376)	% Total Sample (N=1,972)	
If an outside NGO offered you or your family member mental health assistance, administered through GAM, would you accept it?	Yes-60 No-11 DK/refuse-29	Yes-67 No-10 DK/refuse-23	Yes-40 No-22 DK/refuse-38	Yes-40 No-35 DK/refuse-25	Yes-67 No-27 DK/refuse-6	Yes-49 No-23 DK/refuse-28	Yes-50 No-24 DK/refuse-26	Yes-53 No-20 DK/refuse-27	
If an outside NGO offered you or your family member mental health assistance, that was administered by the Indonesian government, would you accept it?	Yes-51 No-23 DK/refuse-26	Yes-69 No-10 DK/refuse-21	Yes-37 No-26 DK/refuse-37	Yes-52 No-24 DK/refuse-24	Yes-69 No-23 DK/refuse-8	Yes-50 No-25 DK/refuse-25	Yes-53 No-22 DK/refuse-25	Yes-53 No-22 DK/refuse-25	

\* PNA1 VS. PNA2 district locations:  
Statistically significantly different at p<0.0001 [All Activities]

Except.....

"Consult a mental health specialist" (p<0.05)  
"Don't know / refuse / no opinion" (NS)

† PNA2 district locations comparison:  
Statistically significantly different at p< 0.0001 [All Activities]

Except.....

"Consult a mental health specialist" (p<0.05)  
"Don't know / refuse / no opinion" (NS)

TABLE 4.5 OPINIONS ABOUT NGO MENTAL HEALTH SERVICES AND IMPLEMENTING PARTNERS, BY GENDER

	*PNA1 Data			†PNA2 Data			PNA1 + PNA2
	% Male (N=315)	% Female (N=281)	% Total PNA1 Sample (N=596)	% Male (N=691)	% Female (N=685)	% Total PNA2 Sample (N=1,376)	% Total Sample (N=1,972)
If an outside NGO offered you or your family member mental health assistance, administered through GAM, would you accept it?	Yes-68 No-6 DK/refuse-26	Yes-51 No-16 DK/refuse-33	Yes-60 No-11 DK/refuse-29	Yes-60 No-19 DK/refuse-21	Yes-40 No-30 DK/refuse-30	Yes-50 No-24 DK/refuse-26	Yes-53 No-20 DK/refuse-27
If an outside NGO offered you or your family member mental health assistance, that was administered by the Indonesian government, would you accept it?	Yes-51 No-24 DK/refuse-25	Yes-52 No-21 DK/refuse-27	Yes-51 No-23 DK/refuse-26	Yes-59 No-20 DK/refuse-21	Yes-47 No-25 DK/refuse-28	Yes-53 No-22 DK/refuse-25	Yes-53 No-22 DK/refuse-25

\* PNA1 VS. PNA2 district locations:  
Statistically significantly different at p< 0.0001 [All Activities]

Except.....

"Consult a mental health specialist" (p<0.05)  
"Don't know/ refuse /no opinion" (NS)

† PNA2 district locations comparison:  
Statistically significantly different at p< 0.0001 [All Activities]

Except.....

"Consult a mental health specialist" (p<0.05)  
"Don't know/ refuse /no opinion" (NS)

## \* PNA1 VS. PNA2 GENDER COMPARISONS

Additional assistance by gender	PNA1 Males vs. PNA2 Males	PNA1 Females vs. PNA2 Females
NGO offered assistance, administered by GAM	p<0.0001	P<0.0001
NGO offered assistance, administered by Indonesian gov.	NS	NS

## † PNA1 AND PNA2 WITHIN GENDER COMPARISONS (MALES VS. FEMALES)

Additional assistance by gender	PNA1 within gender comparison:	PNA2 within gender comparison:
NGO offered assistance, administered by GAM	p<0.0001	P<0.0001
NGO offered assistance, administered by Indonesian gov.	NS	P<0.0001

item increases significantly in PNA2 because of a format change in the questionnaire. In PNA2, interviewers listed each item and asked respondents whether they felt men, women, youth, and the other community groups listed were heavily affected by conflict related trauma. In PNA1, interviewers solicited answers without reading the choices.

In spite of the change in format of the question, and in spite of the leap in response rate, the general pattern established by the results of PNA1 still holds in PNA2. Respondents continue to cite men (92%) and youth (90%) as suffering the most due to conflict related trauma and stress. However, respondents often said that everyone in the community suffered greatly, and so every choice (except for government security forces) ranks higher than 65%, and most are above 70%.

Compared with the gender and age distributions of traumatic events, respondents correctly identify men and youth as most vulnerable, but it is also clear that respondents felt that no one was exempt from suffering stress or trauma due to conflict experience. Regional differences accurately reflect different intensities of conflict violence across Aceh, but the general ranking pattern holds across all regions of the province.

## PERCEPTIONS OF NGOS AND PUBLIC HEALTH SERVICES

In much of the qualitative data, respondents tend to ask for outreach and express interest in having non-governmental organizational (NGO) support for developing community-based mental health services.

The questionnaire included two questions about interest in NGO services, designed also to measure preference in local implementing partners, i.e. the Indonesian government or GAM, which now operates in Aceh as a civil society organization and political party.

These questions were asked before the elections in December 2006, when many GAM-backed candidates were voted into office, including the Governor and many district-level Regents. It would not make as much sense to ask this question today, given that GAM has stepped into government power at the provincial and district levels. In any case, the question is hypothetical in an effort to also measure levels of trust in the government or GAM. The results are summarized by region in Table 4.4 and by gender in Table 4.5

In the PNA1 we reported that only 35% of respondents in Bireuen and 36% in Aceh Utara said they would be willing to accept mental health assistance if it were offered by the Indonesian government.

We interpreted this to mean that there was significant mistrust of the government and government services by communities in these two districts, and that this was an important potential barrier to providing mental health services through the public mental health system.

Findings in PNA2 are similar. In the highest conflict region, the East Coast districts, only 37% said they would accept such services. This provides some quantitative support for the impression gained from qualitative interviews that significant mistrust remained at the time of these interviews for services offered by the public or government sector.

Comparing responses from the PNA1 and PNA2 studies, fewer women (51% and 40%, respectively) say they would accept mental health assistance offered by an NGO administered through GAM than do men (68% and 60%). Fewer women (47%) in the PNA2 sample also state they would accept mental health assistance if administered by the Indonesian government than men (59%), whereas half of men and women for PNA1 indicated they would accept an offer. A quarter of the sample, more women than men, refused to answer both of these questions, and 20% responded no to GAM administered services and 22% to government administered services.

## CONFLICT-RELATED CLINICAL ILLNESSES IN THESE COMMUNITIES: FINDINGS FROM A MENTAL HEALTH OUTREACH PROJECT

The final finding described in this study is drawn not from the PNA2 survey but from the Norwegian Embassy funded pilot mental health outreach programme currently being undertaken in Bireuen. IOM's three medical teams, each with a GP physician and a nurse, both with special mental health training, have screened patients and are now providing treatment to over 580 persons with diagnosable mental health problems in 25 villages, in high conflict sub-districts.

Clinicians are finding that the problems identified in the PNA surveys are extremely prominent among persons diagnosed as suffering mental health problems. PTSD symptoms are ubiquitous, with nearly a quarter of all patients meeting criteria for PTSD and 42% of all persons treated for diagnosable mental health problems saying that their illnesses are related to conflict-related trauma experience. Head trauma appears as an important

clinical phenomenon, with patients reporting continuing symptoms dating back to being beaten or tortured. Clinical depression is common.

In these high conflict settings, depression is often associated with traumatic memories of the conflict, with social isolation and community divisiveness, a the legacy of the violence, and with the losses of property and economic devastation.

Whatever evidence there is in the PNA2 report of reduced levels of symptoms in comparison with the PNA1 study, mental health problems directly associated with the conflict are very real in these communities, and a continued urgency should be felt to provide care for these populations. The IOM pilot mental health project has demonstrated successfully one approach which is effective in providing care in these communities.

## RECOMMENDATIONS

**1. All programmes undertaken in rural Aceh should take account of the ubiquity and complexity of violence and its psychological and social remainders in the affected communities.**

The legacy of accumulated traumatic events all across Aceh as shown by the PNA data poses unique challenges even for programmes such as housing and school reconstruction that are not specifically designed for psychosocial assistance. Consultative processes and key informant interviews, early and often, and at the most local level, should inform the development of any intervention. From these, an understanding of the historical experience and current social dynamics in sites of post conflict assistance will help refine priorities for the programme and ensure smooth implementation.

**2. The international community should recognize the continued urgency to provide mental health services to the communities most affected by the conflict.**

This report documents remarkable levels of traumatic violence enacted against ordinary civilian populations in rural Aceh, particularly in the highest conflict districts, sub-districts, and villages. The report, as well as findings from the pilot mental health intervention undertaken by IOM, show that this violence is closely associated with high levels of depression, anxiety, Post Traumatic Stress Disorder (PTSD), and neuropsychiatric conditions in these communities. These problems have not gone away.

Nearly two years after the signing of the peace deal, which ended the military violence in Aceh, acute mental health problems remain a critical legacy of the violence. There is urgent need to provide medically-based mental health responses, as well as psychosocial and livelihood programmes, for victims in these communities.

**3. Provision of mental health services will require sustained investment in the long-term development of the health and mental health system of Aceh.**

Aceh has over 4 million people, but just three psychiatrists. Building a mental health system that will reach the widely dispersed communities of Aceh should be recognized as an immediate and urgent need and as a domain requiring sustained, long term investment. The mental health needs in these communities can only be met through the development of a competent and effective health system that gives special priority to mental health care. International, national, and provincial agencies should collaborate in strengthening the capacity of the public health system in general, and specifically in developing innovative solutions to the difficult task of providing community-based mental health services.

**4. Specialized outreach services should be supported to meet the most urgent mental health needs in high conflict areas of Aceh.**

While the long term needs for mental health care in Aceh can only be addressed through investment in improving the public mental health system, persons suffering the mental health consequences of violence, torture, and displacement should not be made to wait. Specialized programmes that provide mental health and psychosocial services to the victims of the conflict should be given immediate support.

The Norwegian Embassy funded Mental Health Outreach programme developed jointly by IOM and Harvard Medical School has been shown to be one effective mechanism for addressing acute and urgent needs in relatively isolated communities. Serious investment should be made in programmes that bring services directly to these communities.

**5. Focused efforts to treat persons suffering the effects of complex trauma should be undertaken in the context of the development of specialized mental health and psychosocial programmes.**

In communities in which 15-18% of the total population and 25% of all men report being tortured, in which 50-70% of young men report being beaten on the head, suffocated, or submitted to near drowning, in which 50-65% of all men and 15-20% of women report being beaten, complex trauma is a common and important remainder of the violence.

Managing mental health and psychosocial problems associated with PTSD and complex trauma in relatively isolated settings with limited access to mental health care is extremely challenging. It should be explicitly recognized that there is no single therapeutic modality which is certain to be effective and sustainable. Instead, a commitment should be made to developing innovative therapeutic programmes in selected settings, to documenting each programme, and to careful evaluation of the efficacy of therapeutic approaches.

**6. Special attention needs to be given to the problem of head trauma, brain injury, and long-lasting disability resulting from torture and violence associated with the conflict.**

Both this report and the PNA1 documented remarkably high levels of head trauma – beatings to the head, strangulation and suffocation, and near drowning – that were a routine part of torture, particularly of men, in high conflict communities. Head trauma can cause brain injury and anoxia (lack of oxygen to the brain) that can cause long lasting emotional, cognitive, and behavioural effects. These may include reduced ability to concentrate and participate in livelihood training, impaired judgment leading to what may appear to be routine acting out or even criminal behaviour, as well as personal suffering.

Research should be undertaken to determine whether specialized programmes are needed to respond to these problems. The medical, legal, and educational systems should be made aware of the importance of these issues for persons who have suffered traumatic violence in the conflict.

**7. Special attention needs to be given to the mental health problems of older persons in the high conflict areas.**

While young people were submitted to particular violence during the conflict and rightly deserve specialized attention, this report suggests that older men and women may continue to experience the highest rates of mental health problems in these communities. Little attention has been directed to the effects of the conflict on the elderly. This finding suggests the need for further research and the development of programmes to address the mental health and psychosocial needs of older men and women in these communities.

**8. Those districts and villages that suffered particularly egregious violence should be provided special attention in the development of mental health and psychosocial services.**

Exposure to traumatic events during the conflict is the single largest predictor of current mental health disability in both PNA1 and PNA2. A mapping of conflict events across Aceh shows where the priorities are for mental health and psychosocial services. These include the North and East Coast districts of Bireuen, Aceh Utara, and Aceh Timur, as well as the Southwest coast district of Aceh Selatan. Additionally, the mapping of conflict events can be taken down to the sub-district and village level, revealing the micro-localities where service providers are most likely to find the highest conflict-related mental health burden.

**9. National and international agencies should recognize the continued need for livelihood interventions in high conflict areas, which should be linked specifically with mental health and psychosocial programmes.**

Damaged or lost livelihoods are more than just an unfortunate by-product of the conflict. In most cases, there was a deliberate and systematic attempt to destroy local economies that were seen by military forces as a strategic material base for continued rebellion. This created devastating losses for the civilians in these communities and their recovery is invariably identified by respondents as a first priority. But the worst affected communities in need of livelihood recovery are also the communities with the highest mental health burden, which may hinder the success of programmes designed for material recovery.

Transitional assistance to rehabilitate destroyed fields and forest gardens, capital inputs to restart local business, livelihood training and the development of small trade cooperatives, can all be seen as psychosocial interventions on their own, but those with the most disability will need explicit mental health assistance to accompany their livelihood support.

**10. The development of programmes for rural Aceh should include a systematic awareness of the long term effects of displacement in the high conflict communities.**

Nearly half the sample reported displacement due to conflict. In many villages, this figure is between 90% and 100%. The people living in these high conflict areas must be recognized as IDPs with all the vulnerabilities and needs that accompany their

recent displacement experience. Displacement recovery programmes, in particular the reconstruction of damaged and destroyed houses, schools, roads and other infrastructure, and the recovery of lost livelihoods, are a prerequisite for any kind of broad psychosocial recovery in these communities.

**11. There is an enormous and lasting reservoir of memories of torture, violence, and displacement enacted against communities and individuals in Aceh. Profound loss and a potent sense of injustice are remainders of the violence. Careful consideration should be given to specific efforts to work through these memories as a part of the on going peace process in the context of rebuilding Aceh.**

These efforts will in turn have consequences for the larger goal of trauma healing for individuals and communities. This report documents remarkable levels of violence enacted against civilian communities in Aceh. As a psychosocial needs assessment, the report focuses on specific clinical and mental health problems associated with this violence.

However, the ubiquity of violence documented in this report has broader social and political implications which are critical to the larger goal of trauma healing for the people of Aceh. Special consideration should be given to finding mechanisms for commemoration, for working through painful and contested memories, for dealing with loss, and for reconciliation. These efforts have the potential to contribute to trauma healing and ultimately to addressing the painful remnants of violence in the communities who contributed to this report.



INTERNATIONAL ORGANIZATION FOR MIGRATION (IOM)

Surya Building 13th Floor  
Jl. MH. Thamrin Kav. 9  
Jakarta 10350, Indonesia

Ph. +6221 3983 8529  
Fx. +6221 3983 8528

infoindonesia@iom.int  
www.iom.or.id