ship between symptoms or personality characteristics and hypoglycemia.

What may be in question here is not so much whether hypoglycemia is specifically related to certain psychiatric syndromes but what type of patient is more likely to be referred for study of hypoglycemia. Both hysterical and obsessive patients are often concerned with somatic complaints. In the search for the etiology of their symptoms many laboratory procedures, including a GTT, may be performed. In an effort to establish a diagnosis, all of the patient's complaints may be mistakenly attributed to hypoglycemia, although, in essence, what brought the patient to the physician were symptoms of depression or anxiety. The finding of a reactive hypoglycemic glucose tolerance curve may be more of an incidental finding than the basis for etiology of the patient's symptoms (17).

This formulation does not negate the concept of hypoglycemia as a real entity that can express itself in multiple ways and cause genuine somatic discomfort. Rather, we would emphasize that the numerous nonspecific somatic complaints of hysterical and obsessive patients may be overdiagnosed as hypoglycemia, while more psychologically normal individuals may tolerate the symptoms of hypoglycemia with less anxiety and therefore be less likely to seek medical attention.

This hypothesis is consistent with reports that it is not uncommon for a nonsymptomatic volunteer subject to have a GTT with some markedly low values (18, 19). In the report of Park and associates (19), 23% of an apparently normal population had blood sugar levels below 50 mg/100 ml during a standard five-hour GTT. Another article (20) also stressed the epidemic nature of "nonhypoglycemia" and the number of people who now regard themselves as hypoglycemic without demonstrable GTT abnormality. Some of the patients in our sample of 30 appeared to fall into this category.

Another consideration is whether the anxiety and depression experienced by a patient with a psychiatric disorder affects glucose tolerance. However, our data demonstrate no relationship between depression and anxiety (as measured by the MMPI) and degree of hypoglycemia. Herzberg and associates (21) were also unable to demonstrate a relationship between depression and glucose tolerance.

Fabrykant (22) noted that the hyperglycemic effect of low-carbohydrate diets is limited to the first hours of the GTT and that the magnitude of the hypoglycemic response after carbohydrate restriction may exceed the response in controlled tests after standard high-carbohydrate diets. Therefore, people who believe themselves to be hypoglycemic may treat themselves with low-carbohydrate diets and then have their self-diagnosis "confirmed" by a five-hour GTT. Fabrykant recommended that one not be too quick to ascribe symptoms to hypoglycemia because of the danger of overlooking a more serious illness. The findings of our study suggest that one serious illness that can be easily overlooked is depression.

This pilot study, which used volunteer subjects who believed themselves to have reactive hypoglycemia, uncovered significant psychopathology but no interesubject relationship between the severity of psychiatric symptoms and the degree of hypoglycemia. Because of the popular interest in hypoglycemia and the potential of misdiagnosis of psychiatric illness, further research is indicated. Use of large numbers of randomly selected subjects not already identified as patients would be desirable but methodologically difficult because of such factors as the need for informed consent.

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SPECIAL SECTION: Disaster at Buffalo Creek

Family and Character Change at Buffalo Creek

BY JAMES L. TITCHENER, M.D., AND FREDERIC T. KAPP, M.D.

Psychiatric evaluation teams used observations of family interaction and psychoanalytically oriented individual interviews to study the psychological aftereffects of the 1972 Buffalo Creek disaster, a tidal wave of sludge and black water released by the collapse of a slag waste dam. Traumatic neurotic reactions were found in 80% of the survivors. Underlying the clinical picture were unresolved grief, survivor shame, and feelings of impotent rage and hopelessness. These clinical findings had persisted for the two years since the flood, and a definite symptom complex labeled the "Buffalo Creek syndrome" was pervasive. The methods used by the survivors to cope with the overwhelming impact of the disaster—first-order defenses, undoing, psychological conservatism, and dehumanization—actually preserved their symptoms and caused disabling character changes.

On February 26, 1972, an enormous slag dam gave way and unleashed thousands of tons of water and black mud on the Buffalo Creek valley in southern West Virginia. This Appalachian tidal wave destroyed everything in its path, killing 125 people and leaving 4,000 homeless and carrying away human bodies, houses, trailers, cars, and other debris. It expended its force in no more than 15 minutes at any one point in the 18-mile-long valley.

Just below the dam and the tipple of the Buffalo Mining Company stood the town of Saunders; there was no trace of this town minutes after the black water rushed through the dam. The sides of the valley are steep at this point, and the wall of water and mud careened from side to side, miraculously sparing some homes but destroying many others as it slammed down the valley.

The wall of water sped through 14 mining hamlets with names like Crites, Becco, Lundale, and Pardee, hitting their schools, churches, taverns, stores, and homes, leaving no trace of some and damaging nearly all. The sides of the valley become less steep and it spreads out, so the black sludge and water became more of a "flash flood" at Amherstdale and just an overflow at Man, where it reached the Guyandotte River.

None of the settlements in Buffalo Creek, which had a total population of 4,000–5,000 inhabitants, were incorporated. There was no governmental organization beyond the commercial structures provided by post offices, schools, and churches. There are five deep mines in operation and evidence of stripmining is everywhere. In spite of the stripping, the ugly tipples, the dozen or so huge black heaps of waste, the railroad and highway construction, it is still a beautiful valley, and young adults there will tell you it was once much more beautiful, with pleasant homes and gardens where there are now primarily mobile homes. It was and is a middle-class area. Nearly all families are supported by employment in the coal mines or in the supporting industries and services. There is an accepted (but not documented) belief that this valley had not had the degree of emigration of young people that typified others like it since the Depression.

There had been rumors for years that the dam would give way, but hundreds of people reported they did not believe it had really happened until a few moments after the fearsome sight and sound of the advancing water. All the survivors know that the time of the dam break (8:00 a.m. on a Saturday morning) was fortunate. Few people were down in the road, and the children were not in or waiting for the school buses. Nevertheless, 125 were killed, and most lost their homes and possessions.

Subsequently, a group of 654 survivors of this disaster from 160 families began a legal action against the

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company that owned the dam. This group contacted the law firm of Arnold & Porter in Washington, D.C., and a legal team headed by Mr. Gerald Stern traveled to the area to interview survivors. His observations of the psychological effects of the disaster and a summary of the litigation are presented in "From Chaos to Responsibility" in this section. The law firm first contacted Robert J. Lifton, M.D., who assessed "The Human Meaning of Total Disaster" (1), and Kai Erikson, Ph.D., whose observations of the situation in the community are presented in "Loss of Communality at Buffalo Creek." The suit was settled in July 1974 for $13.5 million of which $6 million was for psychological damages.

The legal team then retained one of us (J.L.T.) to organize a group of experts to interview the survivors and assess for the court the psychological impairment they had suffered as a result of the flood. This paper presents our findings on the severity and duration of these psychological effects, a symptom complex we have labeled the "Buffalo Creek syndrome." The size and composition of the evaluation teams varied with the nature of the families assigned to them. A full-sized team consisted of a general psychiatrist, a child psychiatrist, and two psychologists or case workers. These teams did their work in the valley itself, visiting the respondents' mobile homes and those houses that were still standing.

We conducted a pilot study consisting of interviews of 50 survivors in June of 1973. The court then directed that all of the survivor-plaintiffs be interviewed, as all were bringing suit separately. These evaluations were carried out on several long weekends in the spring of 1974.

We began each evaluation with a family interview in which we asked the survivors to talk about their experiences on the "day of the black water" and during the weeks and months that followed. As they talked, we were able to see beyond the immediate clinical phenomena to these people's underlying feelings and their ways of coping with them. The family sessions were followed by psychoanalytically oriented individual interviews with each family member, conducted in backyards, living rooms, or on porches.

EVALUATION FINDINGS

Disabling psychiatric symptoms such as anxiety, depression, changes in character and lifestyle, and maladjustments and developmental problems in children were evident more than 2 years after the disaster in over 90% of the individuals we interviewed. We asked ourselves whether we were examining people who were presenting major symptomatology and character problems that resulted from basically weak ego structures and who were using the disaster in order to win a large settlement from the mining company. Our answer was and is "no." In our evaluations, we witnessed difficult and prolonged struggles with powerful feelings and ideas aroused by the traumatic experience of the disaster and the very uneven attempts of the survivors to reorganize themselves and redevelop shattered coping and adaptive mechanisms. The affects associated with the catastrophe and its aftermath, as well as the psychological and social ways these people chose to deal with them, must be seen against the background of the universal crises of human development. The attendant threats of separation, abandonment, castration, and death—residuals of the developmental crises of separation and individuation—provided the context for the meaning of the catastrophe to the survivors (2, 3).

We found a definite clinical syndrome in the survivors of the Buffalo Creek disaster that arose from both the immediate impact of the catastrophe on each individual and the subsequent disruption of the community and that affected everyone living there. We are all predisposed by previous experiences to be traumatized by pathogenic forces as destructive and awesome as the Buffalo Creek catastrophe. Variations in the clinical picture resulted from individual differences in modes of processing and reorganizing the traumatic experience (4).

A clear pattern emerged from our evaluations and analyses. A traumatic neurotic syndrome was diagnosed in more than 80% of the survivor-plaintiffs, and changes in character structure were equally widespread. These changes, although they were attempts at readjustment, occasionally resulted in maladjustment in the social sense and always went in the direction of psychologically disabling limitations.

Character changes represent the stabilizing neurosis, the psychologically hardening and fixating consequences of the catastrophe. We found conscious and latent meanings and understandings and misunderstandings of the disaster and its aftermath, all of which were associated with the feelings and conflicts aroused by the trauma. The result of this was changes in object relations and attitudes toward the self. We delineated various processes of reorganization—attempts at putting personality functions back together—that were directed toward reintegration and resumption of a non-traumatized life.

We shall indicate below how this personality reorganization, which was so aimed at prevention of recurring experience of the traumatic state, actually *interfered* with flexible and effective recovery and thus preserved symptom patterns and forced changes in the way of life.

SYMPTOMS AND CHARACTER CHANGES

During the first days and on into the weeks and months after the disaster, the survivors reported disorganization and sluggishness in thinking and decision-making. They complained of having difficulty controlling their emotions. These problems ranged from emotional outbursts to the simple inability to feel anything. Some described transient hallucinations and depressions. Almost all reported anxiety, grief, and despair, with severe sleep disturbances and nightmares. Later, the anxiety was manifested in obsessions and phobias about water, wind, rain, and any other reminder that the disaster could recur. Occasionally these obsessive disturbances coalesced and became a group phenomenon. For instance, the wife of a community leader never slept when he was asleep so that one of them would always be on the alert. On rainy nights, this man received phone calls regarding rumors that another dam was about to give way. He would then take his rifle and spend the night sitting on the supposedly weakened dam, guarded by others to protect him from attack.

Grief over the loss of relatives, friends, possessions, and mementos such as family Bibles, as well as the loss of the feeling of communality discussed by Dr. Erikson, was widespread. For many, unresolved grief turned into depressive symptoms, ideation, and behavior, and some developed a depressive lifestyle (5). In some individuals, depression was channeled into a wide range of somatic complaints, with probable increases in the incidence of duodenal ulcer and hypertension.

Many of these people have become listless, apathetic, and less social since the disaster. They cling to their families, lack ambition, and are disinterested in former hobbies and sports. These changes have led to an overall limitation of essential expression, a lack of zest for work and recreation, and despair about ever again resuming the lifestyle they once had.

THOUGHTS, FANTASIES, AND FEELINGS AROUSED BY THE DISASTER

The survivors referred to the disaster as "the end of time" or "the end of everything," and noted that "No one who was not there could ever really know what happened." They were haunted by visual memories and emotions associated with the drownings of relatives and friends and of blackened bodies and parts of bodies that were uncovered for weeks after the flood.

All of the survivors had to confront the loss of a sense of personal invulnerability. The former feeling of comfort and assurance about the continuity of life had depended partly on magical beliefs that horrible things like this disaster do not happen to one; that they could not occur in nice sane communities in this country. Then the impossible happened. The shock was overwhelming and a new outlook took form that reflected a swing from the former sense of invulnerability to pessimism, emptiness, and hopelessness. We heard such comments as "Nothing counts anymore"; "What's the use now?"; and "Since we lost everything, what's to be gained by trying?" The disaster took on the meaning of chaos, helplessness, and death, giving rise to feelings of personal insignificance.

Three other reactions contributed to depressive symptoms and lifestyles. The first was a feeling of impotent rage over the destruction to life, property, and a way of life. This rage is an explosion of feeling against the attack on the self. The victim has little outlet for his anger or hope of satisfaction. This feeling had special intensity because the destruction in Buffalo Creek was man-made; it was caused by the inexplicable inhumanity of a powerful corporation that gave terrible evidence of not caring about its employees or their community. The survivors' guilt was expressed in a wide variety of derivative feelings about the self, in symptoms, in character change, and in behavior through self-denial and lack of hope. These conflicts were not resolved, and their persistence took form in identification with the dead in dreams, actions, and attitude toward life (6).

No one behaves exactly as he thinks he should in a hazardous situation, particularly in a situation he is powerless to influence. Memory becomes clouded and feelings of helplessness influence the way one looks back on the traumatic event. Many people in Buffalo Creek manifested "survivor shame." One of the actual heroes of Buffalo Creek, who had been extraordinarily effective in mobilizing and leading rescue efforts, was able to fend off depression and anxiety in the first four weeks after the flood while he worked relentlessly to help others. When he attempted to return to his former work, he was overwhelmed by anxiety and depression connected with feelings of inadequacy. He developed a phobia connected with his job, began drinking heavily, and became clinically depressed.

We noted in many people a sense of isolation and feelings of alienation combined with an increased need for vigilance and a tightening of the ring around the family. Former feelings of self-assurance, sociability, trust in neighbors, and enjoyment of community activities disappeared. The isolation we observed clinically can be explained by the depressive reactions, the chronic anger, the loss of a way of life, and the dissolution of self-confidence and basic trust.

It has been hypothesized that the emotional disturbances aroused in the victims of disaster quickly disappear after the stress has subsided. Our work at Buffalo Creek suggests that this is rarely the case; the manifestations of a traumatic neurosis do not subside with the receding flood waters. The effects may seem to disappear quickly if one is not alert to the subtle covering-up behavior of the victims of a psychic trauma.

Lifton and Olson (1) explain the persistence of traumatic effects on the basis of an analysis of the nature of the disaster itself and the special psychological effects of such an experience. Our study complements their work by showing how the effects of a traumatic event are preserved by the modes of adaptation to overwhelming fears and hopelessness. The very attempts to protect self, family, and community from a recurrence of helplessness and loss are responsible for the individual and societal neurosis and restrictive character change. Our combined approach has been to show what occurred, the nature of its impact on the psyche,

and why its effects became chronic.

One can analyze the sequential formation of the "Buffalo Creek syndrome" as follows. The disaster activated intense affects, including fear, rage, and helplessness. These waves of external and internal overstimulation overran the stimulus barrier and the ego's capacity to integrate the traumatic experience and control and discharge the affects. There was temporary ego collapse and the ego was damaged. We estimate that reorganization of the ego in whole or in part required 6 to 24 months. The course of the reorganization and the way individuals processed these affects, memories, and the associated conflicts made the ultimate difference in outcome. The survivors' course of ego reorganization and their manner of processing the disaster experience were reflected in their symptoms and character change (2, 4, 7, 8). The variables in the reconstitution of the personalities of the survivors we studied can be divided into four categories.

PERSONALITY RECONSTRUCTION

First-Order Defenses

There was a continuous and steady deployment of a coordinated system of character-shaping first-order defenses (9), i.e., projection, externalization, and denial. Projection defended against feelings of guilt and shame aroused by the disaster. The constructors of the dam, state and federal agency representatives, and intrusions from the society outside of the valley became objects of increasing anger and fear. Externalization blocked awareness of this anger and fear as well as feelings of helplessness. Individuals became sensitive to and acutely observant of the anxiety and unrest in their families, coworkers, and the social group. Denial defended against recognition that the self had been changed in any way; it disavowed the feeling of helplessness and the awareness of psychological scarring (10). Denial enabled people to believe that while much had happened to them and to those around them, they had not been affected in an *essential* way, and that they were the same people they had been before the flood. This defensive complex protected against emotions that would have otherwise reactivated memories and feelings of fright and helplessness. It was oriented to the present and functioned continuously, preventing the gradual recollection and discharge of the feeling of helplessness and blocking recognition of the irrationality of shame and guilt. Although one can never be the same after an experience with disaster, this defensive system provides a desperate sort of status quo that substitutes for personal regrowth.

Efforts to "Undo" the Disaster Experience

Undoing consisted of efforts to change the past by reliving the disaster in dreams and other ways, giving it a different outcome. Survivors' memories of the early postdisaster period contained fantasies of magical reliving of childhood stresses. Attempts at undoing also appeared in strange, symbolic reenactments of trauma, sometimes leading to violence to the self or others. Freudian repetition compulsion was often displaced by the mechanism of undoing, which is a defense against facing the anxiety associated with trauma.

The dreams of the survivors during the period of initial shock and (in many cases) for months thereafter were fantasied attempts to relive the disaster, but with a less painful outcome. At first, such dreams were unsuccessful and people awoke from them in terror. As time passed, the dreams were modified. Although the affects remained frightening, the subject matter shifted from the flood to previous, often long-past, images of chaos and threats of annihilation. The dreams no longer involved direct reliving of the disaster but instead depicted stressful episodes that represented repetitions of normal developmental crises such as separation, abandonment, castration, and guilt (1, 8).

The regressive process in these traumatic neuroses differs from that in other psychoneuroses. The goal is not gratification or mastery of infantile conflicts, but rather an attempt to work through recent traumatic anxiety. The anxieties of infantile and childhood phases of personality development become the focus of undoing because these problems had been successfully contained or overcome; dreams of long-past stresses that had been mastered provided reassurance to the survivors that they could overcome the recent trauma. Just as "examination dreams" attempt to deal with anticipatory anxiety by fantasying a past stress that had been overcome, dreams that are characteristic of traumatic neuroses attempt to neutralize the overwhelming anxiety of the traumatic event by recalling successful past adaptations to difficult situations. Each of these phases of dealing with normal stress, reproduced in the survivors' dreams, is common to all persons as part of human epigenesis. Each past crisis included not only a deprivation of instinctual demand but also a threat to the continuity of life. The latter aspect is what makes them particularly suitable for undoing the threat of annihilation experienced in a trauma like the Buffalo Creek disaster.

Because undoing relies on omnipotence and magic, it prevents recognition of the influence of guilty, shameful attitudes toward the self. The undoing process—aimed at fending off fearful anticipation of a recurrence of the traumatic experience—is a continuing obstacle to the relatively nonanxious acceptance of human vulnerability that is necessary for readaptation.

The Psychological Emphasis on Survival

Psychological conservatism consisted of avoidance of situations that might raise the level of excitation either internally or externally. It is the defensive and ego psychological counterpart of the psychic numbing described by Lifton and Olson (1). We perceive psychic conservation as mental activity designed to control behavior by banking energies, surrendering ambition, reducing enthusiasm, dampening socializing and love-

...ing, and discouraging novel experience (11). Psy...logical conservatism accepts survival as the only ...of existence. It is a trade-off: the individual ac... hopelessness in the present to prevent help...ness in the future, as if to say, "Better to live with... hope than not to live at all." Psychological con...atism functions as if the disaster will recur ...orrow, thus totally distorting an individual's view ...the future. If you live as though the dreaded uncer...ty is certain to occur, you become a psychic con...ative.

...humanization

Dehumanization affects one's view of life and hu... relationships and has a direct toxic effect on per...ality function. Every disaster places man at the ...cy of forces beyond his control. The feeling of ...ng a pawn of fate is dehumanizing—people feel ...ithout appeal, beyond empathy, and cannot be per...ded or assuaged. When the catastrophe is man...de, dehumanization is magnified. In Buffalo Creek, ...re was the terrible realization that other human ...ings had planned, built, and maintained an unsound ...m and then acted irresponsibly and uncaringly after ...e resulting disaster. The defense of dehumanization ...an example of identification with the aggressor. It de...royed pride and joy in being human.

Dehumanization may be mitigated by corrective ex...riences with empathic people in the helping profes...ons and private and public institutions. Collaboration ...ith other sufferers in a law suit against the dehumaniz...g aggressor may also be useful in that it can ensure ...at it will be more difficult for such organizations to ...isk human life in the future.

CONCLUSIONS

It is our belief that the reactions we have described are not those of individuals with weak egos who were exaggerating their complaints in order to win a law suit. These people, by and large, did not exaggerate their complaints: the majority minimized or denied them. If their reactions were merely exacerbations of old neurotic symptoms and problems, we would have encountered a wider range of psychoneurotic reactions. Although there were differences in modes of response, the uniformity of the psychological reactions comprising the Buffalo Creek syndrome was striking. Our analyses of dreams and early memories, reported elsewhere (12, 13), support the consistency and severity of this syndrome.

We found a definable clinical entity characterized by a well-delineated group of clinical symptoms and changes in character and lifestyle that were related to clear-cut psychopathogenic factors precipitated by the disaster. All of us have in our unconscious memory systems encounters with the various forms of dread that a disaster reawakens. There need not be any preexisting neurosis for the Buffalo Creek syndrome to become disabling and chronic. All of us are susceptible to traumatic neurosis and the "death imprint."

To be successful in treating these traumatic neuroses, we must substitute active recall and working through of the painful memories of helplessness and separation for counterphobic behavior, passive reproduction of the experience in dreams, and magical ways of living out and reenacting the trauma. The change from passive to active experience, from reproduction to re-creation is the essential thing. By linking long-past and previously worked-through childhood anxieties with the overwhelming anxieties aroused by the recent disaster, we may be able to strengthen the ego of the individual with a traumatic neurosis. Through his relationship with helping and capable persons and institutions, the disaster survivor is given an opportunity for regrowth, much like the ego development that came about as the individual met and dealt with the normal crises of growing up.

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From Chaos to Responsibility

BY GERALD M. STERN, L.L.B.

The litigation initiated by the 625 survivors of the Buffalo Creek flood who refused to settle with the coal company claims office was a landmark case. For the first time, individuals who were not present at the scene of a disaster were allowed to recover for mental injuries. Psychic impairment, the term coined for these injuries, was found in virtually all of the survivor-plaintiffs. In an out of court settlement, the survivors were awarded $13.5 million, $6 million of which was distributed on the basis of a point system as compensation for the psychological damages.

THE DESTRUCTION of the Buffalo Creek community gave rise almost immediately to the creation of a new kind of group—a community of 625 survivors from 160 families who joined together to sue the coal company that owned the dam. These individuals, unlike the majority of the survivors, refused to settle their cases at the coal company claims office. Instead, they sought legal help outside the state of West Virginia.

This group contacted Arnold & Porter, a law firm in Washington, D.C., and we agreed to represent them.[1] We immediately went to Buffalo Creek and spent many days interviewing survivors at Charlie Cowan's gas station, one of the few buildings remaining in the Buffalo Creek valley. Mr. Cowan was the leader of the citizens' committee that called to ask for our legal help. The survivors' legal right to sue for traditional damages was clear: they could sue for lost property, for their homes and all their possessions, for physical injuries, or for the death of family members. However, it soon became apparent that they also had significant mental injuries, and it was not so clear whether the law would permit recovery for these damages.

The magnitude and significance of these mental and emotional damages hit me personally when I interviewed a coal miner who had lost his 22-month-old son and his pregnant wife in the disaster. The flood waters caught this family asleep in their home. As the wife disappeared in the black water, she cried out to her husband to save their son. He held the child tightly and tried to struggle to safety, but houses and debris battered him and the child as they were washed miles down the valley. Somewhere in this maelstrom, he lost his grip on his son, who disappeared forever into the black waters. Eventually, this man was able to struggle to safety, although his body was badly lacerated by the jagged wood in the water. At the time I interviewed him, my own son was exactly 22 months old. I was terribly upset by his story and decided to try to expand the lawsuit to recover for his mental agony and for the mental suffering of others like him.

We contacted Robert J. Lifton, M.D., who had studied the survivors of Hiroshima. He agreed to interview a number of our clients and to help us explain to the court in lay terms the common psychiatric injuries of these survivors. He also suggested that we ask Dr. Kai Erikson, whose findings are reported in this section, to study the sociological aspects of this disaster. With these two men as our principal experts, we articulated for the court and for the coal company defendant what we called the "psychic impairment" damages suffered by every one of our survivor-clients.

We coined the term "psychic impairment" to include both the psychiatric damages identified by Dr. Lifton and the loss of communality found by Dr. Erikson. We wanted to avoid alleging that the survivors suffered mental illness and felt that the phrase "psychic impairment" had a less negative connotation.

Eventually we also employed a team of psychiatrists from the University of Cincinnati, some of whose findings are also presented in this section, to interview each of our clients. The coal company also retained a psychiatrist—actually, a physician whose primary field was neurosurgery—and a young psychologist in training, who also examined each of the 625 men, women, and children involved in the lawsuit.

Our psychiatric studies indicated that almost all of the survivors were suffering from psychiatric damage of varying degrees as a result of this disaster. In contrast, the physician retained by the coal company determined that the survivors generally suffered only transient situational disturbances that he felt should have abated soon after the disaster. The fact that the survivors still had disturbances when he examined them some 18 months after the disaster led him to presume almost invariably that these people were suffering primarily from preexisting mental conditions.

Under traditional legal principles, if the survivors had been physically injured by the flood waters and, as a result, had suffered psychiatric damages, they could recover full monetary damages unless their current mental conditions were merely the result of an aggravation of preexisting mental conditions. Our physicians indicated that the survivors' psychiatric damages were caused *solely* by the disaster. The coal company physicians disagreed. This is a dispute juries must often resolve in cases involving psychiatric damages.

The more interesting and more difficult legal question presented by this case was whether the survivors could recover monetary damages at all, even if the jury found that all of the survivors' present psychiatric injuries were caused by the disaster. Traditionally the law does not permit recovery for psychiatric injury on the sole ground that the injury can be proven to have been caused by another person or persons. For example, a mother who sees a truck run over and kill her child may suffer severe psychiatric trauma, but the law traditionally has denied the mother recovery for her pain suffering, terming her a mere bystander. Needless to say, an individual who sees a friend killed has even less chance in the courts of recovering for mental suffering.

In this case, most of the survivors were not seriously injured physically. Many of them had run up the side of the valley just ahead of the flood waters, and some of them were not even in the valley at the time of the disaster. For example, one survivor was visiting in New Mexico, another was in Florida, some were in jail, and others were in hospitals in nearby towns outside the valley. Nevertheless, we insisted that all of the survivors were entitled to recover for their mental suffering, even if they suffered no physical injury, saw or heard no relative or friend in peril, or were absent from the valley on the day of the disaster. We argued that each resident of the valley, even those who were not there during the flood, was a direct victim of the coal company's reckless conduct and not merely a bystander.

The court agreed with this contention and held that all survivors—even those who were outside the valley at the time of the disaster—could collect for mental injury if we could convince the jury that the coal company's conduct was reckless (i.e., more than merely negligent), and that this reckless conduct caused the survivors' mental suffering (2).

Once the coal company realized that the court would not dismiss the psychic impairment claims of any of the 625 survivor-plaintiffs in this lawsuit, we reached a settlement for a total of $13.5 million, to be divided among the survivors by their own attorneys. We first calculated the payments for real and personal property losses, for wrongful deaths, lost wages, other miscellaneous claims, expenses, and legal fees. This left approximately $6 million to be distributed for psychic impairment. We distributed this money to the 625 plaintiffs using a point system based on their immediate involvement with the disaster, their medical disability, their loss of community ties, and the disruption of their way of life. Each survivor received between $7,500 and $10,000 after all expenses and legal fees were deducted. Approximately $2 million of the $6 million was placed directly in a trust fund for the 224 children under the age of 18 who were plaintiffs in the case.

The court's approval of this substantial monetary settlement for survivors' psychic impairment established a significant legal precedent for recovery in cases of mental suffering. The court was not bound by concepts of space and time. Instead, the court recognized that it is the permanence of loss, rather than the witnessing of the disaster, that causes mental suffering. In other words, the court (and eventually the coal company) was persuaded that the relief provided by the law should be determined not by narrow traditional legal principles but by fairly modern psychiatric and sociological principles.

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[1] A much more detailed report of my observations and involvement in this case will be presented in a forthcoming work (1).

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Loss of Communality at Buffalo Creek

BY KAI T. ERIKSON, PH.D.

The survivors of the Buffalo Creek disaster suffered both individual and collective trauma, the latter being reflected in their loss of communality. Human relationships in this community had been derived from traditional bonds of kinship and neighborliness. When forced to give up these long-standing ties with familiar places and people, the survivors experienced demoralization, disorientation, and loss of connection. Stripped of the support they had received from their community, they became apathetic and seemed to have forgotten how to care for one another. This was apparently a community that was stronger than the sum of its parts, and these parts—the survivors of the Buffalo Creek flood—are now having great difficulty finding the personal resources to replace the energy and direction they had once found in their community.

THE TRAUMA experienced by the survivors of the Buffalo Creek disaster can be conceptualized as having two related but distinguishable facets—the individual trauma and the collective trauma.

By individual trauma, I mean a blow to the psyche that breaks through one's defenses so suddenly and with such force that one cannot respond effectively. As the other papers in this section make abundantly clear, the Buffalo Creek survivors experienced just such a blow. They suffered deep shock as a result of their exposure to so much death and destruction, and they withdrew into themselves, feeling numbed, afraid, vulnerable, and very alone.

By collective trauma, I mean a blow to the tissues of social life that damages the bonds linking people together and impairs the prevailing sense of communality. The collective trauma works its way slowly and even insidiously into the awareness of those who suffer from it; thus it does not have the quality of suddenness usually associated with the word "trauma." It is, however, a form of shock—a gradual realization that the community no longer exists as a source of nurturance and that a part of the self has disappeared. "I" continue to exist, although damaged and maybe even permanently changed. "You" continue to exist, although distant and hard to relate to. But "we" no longer exist as a connected pair or as linked cells in a larger communal body.

The two traumas are closely related, of course, but they are distinct in the sense that either of them can take place in the absence of the other. For instance, a person who suffers deep psychic wounds as the result of an automobile accident, but who never loses contact with his community, can be said to suffer from individual trauma. A person whose feelings of well-being begin to wither because the surrounding community is stripped away and no longer offers a base of support (as is known to have happened in certain slum clearance projects) can be said to suffer from collective trauma. In most large-scale human disasters, of course, the two traumas occur jointly and are experienced as two halves of a continuous whole. For the purposes of this paper, however, it is worthwhile to insist on the distinction at least briefly, partly because it alerts us to look for the degree to which the psychic impairment observed in settings like Buffalo Creek can be attributed to loss of communality, and partly because it underscores the point that it is difficult for people to recover from the effects of individual trauma when the community on which they have depended remains fragmented.

I am proposing, then, that many of the traumatic symptoms experienced by the people of Buffalo Creek are as much a reaction to the shock of being separated from a meaningful community base as to the actual disaster itself.

It should be noted that "community" means much more in Buffalo Creek than it does in most other parts of the United States. Much has been said in the literature on Appalachia about the importance of kinship and neighborliness in mountain society. Although it is true that coal camps like the ones along Buffalo Creek differ in many ways from the typical Appalachian community, the people of Buffalo Creek were nonetheless joined together in the close and intimate bonds that sociologists call *gemeinschaft*. The rhythms of everyday life were largely set by the community in general and governed by long-standing traditions, and the social linkages by which people were connected were very strong. In Buffalo Creek, tightly knit communal groups were considered the natural order of things, the envelope in which people live.

Long stories must be made short in a presentation like this, so I will simply summarize my theme by stating that the human communities along Buffalo Creek were essentially destroyed by the disaster and its aftermath. The flood itself forced the residents of the hollow into a number of nearby refugee camps from which they were, for a variety of reasons, unable to escape. The result was that the majority of the Buffalo Creek survivors remained in the general vicinity of their old homes, working in familiar mines, traveling along familiar roads, trading in familiar stores, attending familiar schools, and sometimes worshipping in familiar churches. However, the people were scattered more or less at random throughout the vicinity—virtually stranded in the spots to which they had been washed by the flood—and this meant that old bonds of kinship and neighborhood, which had always depended on physical proximity, were effectively severed. People no longer related to one another in old and accustomed ways. The threads of the social fabric had snapped.

A year after the disaster (which is roughly when most of the authors represented in this section first encountered these people) visitors to Buffalo Creek were struck by a number of behavioral manifestations that seemed to be exhibited by almost everyone in the valley and, for that matter, continue to this day. Several of these manifestations are discussed elsewhere in this section. I would like to mention three by way of illustrating a larger point.

DEMORALIZATION

First, the survivors clearly suffer from a state of severe demoralization, both in the sense that they have lost much personal morale and in the sense that they have lost (or so they fear) most of their moral anchors.

The lack of morale is reflected in a profound apathy, a feeling that the world has more or less come to an end and that there are no longer any sound reasons for doing anything. People are drained of energy and conviction, not just because they are still stunned by the savagery of the flood but because activity of any kind seems to have lost much of its direction and purpose in the absence of a confirming community surround. They feel that the ground has been pulled out from under them, that the context in which they had worked, played, and cared for others has more or less disappeared. One survivor said,

> I don't know. I just got to the point where I just more or less don't care. I don't have no ambition to do the things I used to do. I used to try to keep things up. But anymore I just don't. It seems I just do enough to get by, to make it last one more day. It seems like I just lost everything at once, like the bottom just dropped out of everything.

I suppose the clinical term for this state of mind would be depression, but one can hardly escape the impression that it is, at least in part, a reaction to the ambiguities of postdisaster life in the valley. The survivors are literally out of place and uprooted. They had never realized the extent to which they relied on the rest of the community to reflect a sense of security and well-being, or how much they depended on others to supply them with a point of reference.

The people of Buffalo Creek are also haunted by a suspicion that moral standards are beginning to collapse all over the valley, and in some ways it would appear that they are right. As is so often the case, the forms of misbehavior people find cropping up in their midst are exactly those about which they are most sensitive. The use of alcohol, always a sensitive problem in Appalachian society, has apparently increased, and there are rumors everywhere that drugs have found their way into the valley. The theft rate has also gone up, and theft has always been viewed in the mountains as a sure index of social disorganization. The cruelest cut of all, however, is that younger people seem to be slipping away from parental control and are becoming involved in nameless delinquencies. This is an extremely disturbing development in a culture so devoted to the family and so concerned about generational continuity.

This apparent collapse of conventional morality has a number of curious aspects. For one thing, observers generally feel that there is much less deviation from community norms than the local people seem to fear. Moreover, there is an interesting incongruity in these reports of immorality—one gets the impression that virtually everyone is coming into contact now with persons of lower moral stature than they did formerly. This, of and by itself, does not make very much logistical sense. One survivor said flatly,

> The people of Buffalo Creek tended to group themselves together; therefore the breaking up of the old communities threw all kinds of different people together. At the risk of sounding superior, I feel we are living amidst people with lower moral values than us.

Perhaps this is true—but where did all these sordid people come from? Whatever else people may say about their new neighbors in the refugee camps, they are also from Buffalo Creek, and it is hard to avoid the suspicion that their perceived immorality has as much to do with their newness as with their actual behavior. It may be that relative strangers are almost by definition less "moral" than familiar neighbors. To live within a tightly knit community is to make allowances for behavior that might otherwise look deviant. New neighbors do not qualify for this clemency—not yet, at least—and to that extent, their very unfamiliarity may seem to hint at vice all by itself.

The collapse of morality in Buffalo Creek thus seems to have two edges. We have sufficient evidence to believe that certain forms of deviation are actually on the increase, although this is a difficult thing to measure accurately. However, we also have reason to believe that the breakdown of accustomed neighborhood patterns and the scattering of people into unfamiliar new groupings has increased the level of suspicion people feel toward one another.

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DISORIENTATION

The people of Buffalo Creek are also clearly suffering from a prolonged sense of disorientation. It has often been noted that the survivors of a disaster are likely to be dazed and stunned, unable to locate themselves meaningfully in time and space. Time seems to stop for them; places and objects suddenly seem transitory. They have trouble finding stable points of reference in the surrounding terrain, both physical and human, to help fix their position and orient their behavior. All of this can be understood as a natural consequence of shock, but the people of Buffalo Creek seem to have continued to experience this sense of dislocation for months and even years after the crisis. "We find ourselves standing, not knowing exactly which way to go or where to turn," said one individual. Another survivor noted, "We feel like we're living in a strange and different place, even though it is just a few miles up Buffalo Creek from where we were."

Professional observers who have gone into the valley on medical or research errands have noted repeatedly how frequently the survivors seem to forget simple bits of everyday information—the names of close friends, their own telephone numbers, etc. People are often unable to locate themselves spatially, even when they are staring at fixed landmarks they have known all their lives. It is not at all uncommon for them to answer factual questions about time—their own age or their children's grade in school—as if history had indeed stopped on the date of the disaster. In general, people all over the valley live with a lasting sense of being out of place, disconnected, and torn loose from their moorings, and this feeling has far outlasted the initial trauma of the catastrophe itself.

People normally learn who they are and where they are by taking soundings from their fellows. As if employing a subtle form of radar, we probe other people in our immediate environment with looks, gestures, and words, hoping to learn something about ourselves from the signals we get in return. But when there are no reliable objects off of whom to bounce those exploratory probes, people have a hard time calculating where they stand in relation to the rest of the world. In a very real sense, they come to feel that they are not whole persons, not entirely human, because they do not know how to position themselves in a larger communal setting.

> Well, I just don't feel like the same person. I feel like I live in a different world. I don't have no home no more. I don't feel normal anymore. I mean, sometimes I just wonder if I'm a human being. I just feel like I don't have no friends in the world, nobody cares for me, nobody knows I even exist.

LOSS OF CONNECTION

A third manifestation of the disaster's psychosocial effects is a condition that might be described as loss of connection—a sense of separation from other people. For better or worse, the people of the hollow were deeply enmeshed in the tissues of their community; they drew their very being from them. When those tissues were stripped away by the disaster, people found themselves exposed and alone, suddenly dependent on their personal resources. The cruel fact is that many of the survivors proved to have few resources—not because they lacked the heart or the competence, but because they had spent so many years placing their abilities in the service of the larger community that they did not really know how to mobilize them for their own purposes.

Many people feel that they have lost meaningful connection with themselves. Much of their apparent former strength was actually the reflected strength of the community, and they are learning—to their very great discomfort—that they cannot maintain an enduring sense of self when separated from that larger tissue. They find that they are not very good at making individual decisions, getting along with others, or establishing themselves as separate persons in the absence of a supportive surround. "Lonesome" is a word many of them use, and they do not use it to mean the lack of human company. One woman who has moved to the center of a large neighboring town said of her new home: "It is like being all alone in the middle of a desert." A man who continued to live in his damaged home on Buffalo Creek said,

> Well, there is a difference in my condition. Like somebody being in a strange world with nobody around. You don't know nobody. You walk the floor or look for somebody you know to talk to, and you don't have nobody.

In addition, the inability of people to come to terms with their own individual isolation is counterpointed by an inability to relate to others on a one-to-one basis. Human relations along Buffalo Creek took their shape from the expectations that pressed in on them from all sides like a mold: they were regulated by the customs of the neighborhood, the ways of the community, and the traditions of the family. When that mold was stripped away, long-standing relationships seemed to disintegrate. This is true of everyday acquaintances, but it is doubly—and painfully—true of marriages. Wives and husbands discovered that they did not know how to nourish one another, make decisions, or even to engage in satisfactory conversations when the community was no longer there to provide a context and set a rhythm. There has been a sharp increase in the divorce rate, but that statistical index does not begin to express the difficulties the survivors have relating to their spouses. It is almost as if communal forces of one sort or another had knit family groups together by holding them in a kind of gravitational field, but when the forces of that field began to dissipate, family members became scattered like aimless individual particles. Each individual nurses his or her own hurts and tends to his or her own business. They do not know how to care for one another or to coordinate emotionally, because the context that lent substance and meaning to their relationships has disappeared. Two survivors put it this way:

> Each person in the family is a loner now, a person alone. Each of us is fighting his own battles. We just don't seem to care for each other anymore.

> The family is not what they was. They're not the same people. I don't know how you'd put this, but before there was love in the home. But now it seems like each one is a different person, an individual by himself or herself, and there's just nothing there.

Finally, the difficulty people experience in sustaining warm relationships extends beyond marriages and families, out into the rest of the valley. In places like Buffalo Creek, relationships are part of the natural order—being inherited by birth or acquired by physical proximity—and the very idea of "making" friends or "forming" relationships is hard for these people to understand and harder still for them to achieve.

One result of all the problems I have described is that the community (what remains of it) seems to have lost its most significant quality—the power it gave people to care for one another in moments of need, to console one another in moments of distress, and to protect one another in moments of danger. In retrospect, it is apparent that the community was indeed stronger than the sum of its parts in this regard. When the people of Buffalo Creek were clustered together in the embrace of a community, they were capable of remarkable acts of generosity; when they tried to relate to one another as separate individuals, they found that they could no longer mobilize the energy to care. One woman summed it up in a phrase: "It seems like the caring part of our lives is gone."

CONCLUSIONS

To end with an oversimplified metaphor, I would suggest that the people of Buffalo Creek were accustomed to placing their individual energies and resources at the disposal of the larger collectivity—the communal store, as it were—and then drawing on those reserves when the demands of everyday life made this necessary. When the community more or less disappeared, as it did after the disaster, people found that they could not take advantage of the energies they once invested in that communal store. They found themselves almost empty of feeling, devoid of affection, and lacking all confidence and assurance. It is as if the cells had supplied raw energy to the whole body but did not have the means to convert that energy into usable personal resources once the body was no longer there to process it.

Children of Disaster: Clinical Observations at Buffalo Creek

BY C. JANET NEWMAN, M.D.

Most of the 224 children who were survivor-plaintiffs of the Buffalo Creek disaster were emotionally impaired by their experiences. The major factors contributing to this impairment were the child's developmental level at the time of the flood, his perceptions of the reactions of his family, and his direct exposures to the disaster. The author focuses on children under 12, describing their responses to fantasy-eliciting techniques and their observed behavior after the flood compared with developmental norms for their age and reports of their previous behavior. These children share a modified sense of reality, increased vulnerability to future stresses, altered senses of the power of the self, and early awareness of fragmentation and death. These factors could lead to "after-trauma" in later life if they cannot make the necessary adaptations and/or do not receive special help to deal with the traumas.

AS PART of the psychiatric evaluation of the survivors of the Buffalo Creek flood, 224 children were interviewed and evaluated; most were found to be significantly or severely emotionally impaired by their experiences during and after the flood. In this paper I will focus on children under the age of 12, using as a sample 11 of the children I assessed personally.

As has been described elsewhere in this section, the evaluation procedure began with an interview of the total family and proceeded to individual interviews. In interviews of mothers, outlines of each child's developmental history and functioning before and after the disaster were obtained. This information was passed on to the child psychiatrists in order to help us place each child in his parents' developmental perspective. Children were usually seen in their own rooms. They were encouraged to recall their own experiences of the flood; such expressions had often been submerged or inhibited amidst the outpourings of more vocal family members. The issues we discussed included past and present family life, personal feelings, school experiences, and the childrens' perceptions of future hopes, the nature of the disaster, and the meaning of the lawsuit.

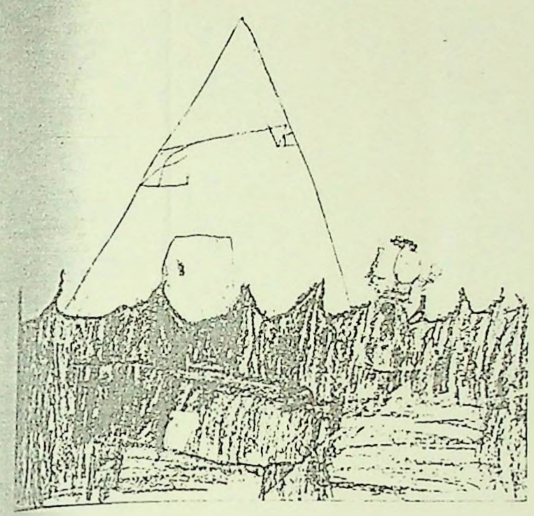
We used such fantasy-eliciting techniques as "three wishes," "draw a person," and story telling. Preadolescent children were asked to draw a picture of the flood as they remembered it. Special educators from the Children's Psychiatric Center obtained school data to confirm or correct parental impressions of major losses of academic achievement that persisted long after the disaster.

The effects of the disaster on children can be attributed to three major factors: 1) their developmental level at the time of the disaster, 2) their perceptions of their family's reactions to the disaster, and 3) their direct exposures to the disaster. This paper illustrates each factor and examines their numerous interactions.

DEVELOPMENTAL LEVEL

The developmental factor will be illustrated by contrasting the clinical evidence gathered from 3 latency age children and 2 preschoolers. A depressed, hopeless, and guilt-ridden 11-year-old boy who had discovered human remains in his immediate environment after the flood drew a starkly realistic picture of a completely submerged trailer that contained two people screaming for help. A house above the trailer was half filled with water, and a panic-stricken figure tried to keep afloat amidst the waves and debris of the flood waters. Drawings by 2 younger children showed a possible symbolic meaning of mountains to Appalachian children, i.e., the provision of humanlike functions of cradling and life sustenance (this contrasts with Lifton and Olson's remarks about the "overall environment, including nature itself, as threatening and lethal" [1]). An 8-year-old boy with a chronic anxiety reaction drew the "house-mountain" depicted in figure 1 as life-saving compensation for his temporarily lost and helpless parents. The drawing represents a traumatic regression to a wishful merging of parental security into a house-mountain in a partially beneficent environment. A 7-year-old child also indicated security in nature in a picture of himself climbing a steep hill behind his mother and aunt. He drew a tree below him, saying, "This is a tree I can hang onto if I slide down." Nature offers support when human beings suddenly seem helpless. In Appalachia, the mountains represent not only slag heaps and flood threats but tangible, reassuring security.

FIGURE 1
8-Year-Old's Drawing of a "House-Mountain"



Note that the trailer is destroyed, while the safe "mountain" acquires door and windows.

The experiences of 2 younger boys will be described to isolate developmental factors at the preschool level. Henry, who was 3 years old at the time of the disaster and 5 at the time of our interview, was the only son and favorite child of his mother's second marriage. He was the first to awaken on the morning of the flood. Looking out his window, he viewed the uncanny and perplexing sight of a house moving down the creek. Unsure whether this was real or a dream, he awakened his parents, conveying more cognitive bewilderment than fright or anxiety. He remembered saying, "Come and look!" The parents rose instantly and managed to evacuate the family to safety on high ground just in time.

Two years after the flood, his mother told us that Henry frequently slept in the same bed with her and loved to be rocked, although he had rarely needed this type of attention before the disaster. She reported that he often talked about the houses and cars that had floated by in the flood and how they "went boom!" I felt that because Henry was the first to awaken and, in a sense, rescued his family, they regarded him with special gratitude and admiration. During the family interview Henry was hyperactive—he was friendly but restless. In his individual interview, he recalled seeing the house going by his window and asking his parents to come and look. He denied being scared, but said, "I didn't like it." Henry also remembered seeing a screaming baby on top of an upside-down store that was floating downstream. He said, "I didn't like that either. I hated it."

Henry's flood picture started with a creek as an almost perfect circle. Then a curving line showed "how the creek goes here." A rounded object near the path of the flood conveyed its force; as he explained, "The flood threw this rock." Then Henry spontaneously drew a 3-sided rectangular but bottomless form nearby with "windows" for eyes, explaining that this was a person killed in the flood. Most children Henry's age, drawing their first human figures, use crude circles for heads or head-and-body combinations; in a precircle phase they use primitive scribble-strokes to indicate human figures. Henry had already manifested a capacity for drawing circles but had applied this skill only to his representation of the flood, using a bottomless rectangle with windows for eyes as a human figure. Such faces or human figures were interpreted as condensations of humans with buildings, stimulated by this 3-year-old's view of a peculiarly and perhaps awesomely floating house and other buildings, including the one the screaming baby was on. His flood experience started as he awakened from sleep, and sorting dream from waking perception and reality is typically difficult for young children. Developmentally, Henry was at a stage of tenuous differentiation of dream from reality and animate from inanimate objects, and motility is the first characteristic differentiating living from inanimate objects.

To summarize, Henry's drawing showed the human figure as dehumanized and fused with a seemingly animated building. The bottomlessness of the human face-figure suggests his lack of security, which was shown clinically by hyperactivity and an excessive need to be closer to his mother than he had been before. The circular flood moving huge rocks suggests the projection of superhuman powers to nature. His barely developed abilities to separate animate from inanimate and actuality from fantasy or dreams help to explain his current bewilderment, excessive anxiety, and hyperactivity. His favored position in the family and his role as "rescuer" have accentuated his sense of narcissistic omnipotence, which allays his underlying feelings of helplessness and anxiety. It is likely that his problems of immaturity, anxiety, and developmental deviations in cognition will become more evident when he starts school.

Peter was interviewed 2 years after the disaster, which occurred when he was 26 months old. His parents reported that he had been a happy baby, developing at normal rate. His father, a chronically disabled miner, described how the family scrambled up the side of the mountain behind their home and watched as their house was swept away and a nearby bridge crumbled from the force of the flood. A frantic passerby yelled to Peter's father to aid in the rescue of two children clinging to a floating mattress. As he ran to help, his wife screamed for him to come back. Realizing the danger, he ran back to his own children and led them to higher ground, carrying Peter on his chronically weak back.

Since the disaster, Peter cannot take a bath without screaming, and he still wets the bed frequently and screams in his sleep. He gets mad easily and always

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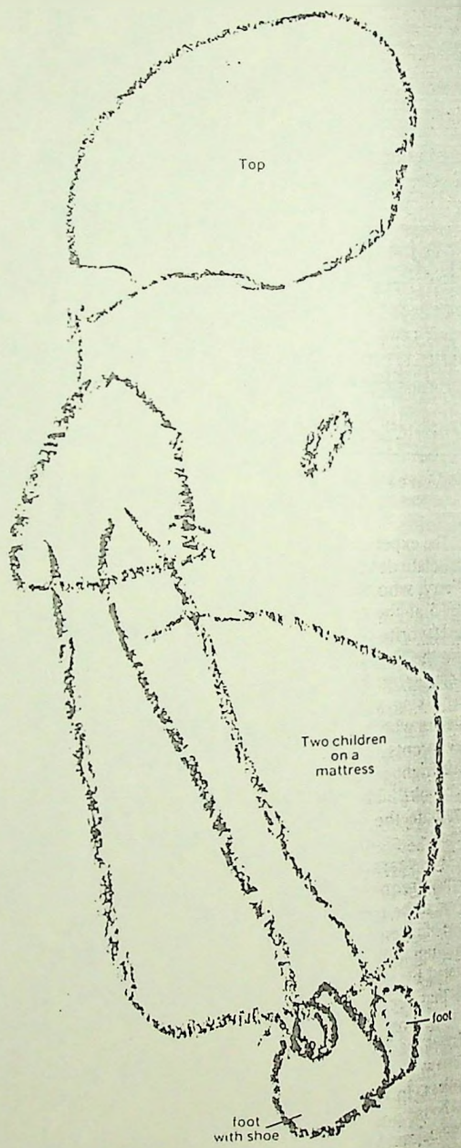
wants his own way. Peter's memories of the flood involved concerns over the safety of his friends and an older brother's loss of his best friend. He referred to the "two kids on a mattress" and worried aloud whether "their daddy, he might just not want them." This must have represented his own fears at the hands of his own father, who did not save all children, limiting his efforts to the rescue of his own family. When asked about troubles or worries he said, perhaps stoically, "I don't be sad, that's all." When asked what would make him happy he said, "I don't know, maybe if my daddy was handy."

Peter's response to the three-wishes question was touching and highly original and was probably related to a 4-year-old's determination to hold on to reality, with a resulting fear of pretending, even for a moment: "I don't wish," he said proudly. His drawings, made at age 4, about his flood experience when he was 2 years old, should remind the reader of Henry, who, although he was perfectly capable of drawing good circles, drew a person as a house with a rectangular bottomless face. Peter, although younger, is involved with deeper, more sophisticated, more human views of the disaster.

Peter's first flood picture included irregularly round or oval outlines of what he then chose to call windows—an "ugly" window, a "shoe" window, and a "big" window. (Windows with views of the creek became highly important for many families.) As an afterthought, Peter drew a longer shape and told me to write "two kids on a mattress in the creek" within it. I then said, "Let's do that one again on a bigger page." Peter drew a mattress and started to draw the 2 children in the form of lines. However, in the process, he appeared to convert the children into 2 legs (one barefoot and one with a shoe)[1] and then drew a body and a head labeled "top," creating a total human figure. He was influenced by the fact that his siblings were drawing people. Figure 2 is Peter's second drawing: the writing is that of the interviewer during the process of drawing and records Peter's words. This is a powerful condensation of a traumatic scene, combining his father's failure to save all of the endangered children, particularly those on the mattress. These 2 children became the 2 legs of the larger total human figure in the picture. As with Henry, we see a variety of serious developmental interferences and emotional distortions in the development of perception and cognition as manifested in body image concepts.

FIGURE 2
A 4-Year-Old's Picture of Two Lost Children Condensed into a Primitive Human Figure



REACTIONS BASED ON DIRECT FLOOD EXPERIENCES

Marie was the cute, articulate daughter of a strong father and a dominating hypertensive mother; she was 8 years old at the time of the disaster. During the flood Marie's mother bundled her in blankets and carried her to shelter, never allowing the child to see the acute stages of the flood.

During Marie's interview, her "draw-a-person" picture was of smiling, childlike parents in flowered clothing. Her flood picture, drawn from hearsay, seems traumatic at first glance. However, the bubbly clouds she drew were duplicates of the floral prints of the father's shirt and the mother's skirt in the draw-a-person picture. The houses stood high above the languid flood, and the many bodies appeared mostly in cheerful upright positions. Only 2 small figures yelled, "Help!" Marie exemplifies a child reacting to maternal anxieties, reminding us of the children described by Anna Freud and Dorothy Burlingham in *War and Children* (2), who reacted far more strongly to maternal emotions than to bombs.

The major clue to the anxieties underlying the facade of pollyannaish denial was Marie's response to the Despert Bird Fable, which elicits a child's story of what a baby bird who can fly a little will do if a strong wind blows the family nest from the tree, scattering the mother and father and baby bird. Marie asked, "Were they all close together or were they far apart?" I then said, "What do you think?" Marie replied,

> Mother makes another nest, with twigs, on a stronger branch. The little bird grows up to have a family. Or, maybe the mommy bird might get sick or die, or a cat might eat her. Or maybe the little bird might get sick or poisoned. It might mistake weed-killer for seed. That *could* happen. Oh well, the little bird probably got old and then died.

This story reveals a rapid descent from superficial health into violent and even paranoid ideation, involving the death of both mother and baby by violence and poison. This rapid weakening of defenses reveals Marie's vulnerability to and identification with a chronically anxious mother, whose exacerbated anxieties she had been intimately exposed to in the apparent service of being protected herself.

Richard, who was 7½ years old at the time of the disaster, was the middle child of 3, born to mature parents. On the day of the disaster, as soon as the water level fell, Richard and his father searched for relatives. They were concerned about the safety of Richard's older sister, who had stayed overnight with a girl friend. The sight of the mutilated body of a boy Richard's age was shocking to both the child and his father. Richard was described as a changed boy since the flood, having become tense, nervous, talking little to his parents, and suffering from terrifying nightmares of someone coming back from the black water to take him to the spirit world. When interviewed, he said that he usually slept with a blackjack under his pillow.

Richard's flood picture conveyed a firm sense of reality, a strong sense of form combined with creative impressibility. He drew a truck carrying 5 bodies wrapped in sheets, set against a background of a burning slag pile and a house with a large chunk missing. The sky was overcast and it was raining. His draw-a-person picture, a clever, strutting, colorful comic book character drawn in profile, shows color, movement, and detail and indicates creativity and ego strength. Despite enduring strengths in peer relationships, good school performance, and basically warm family ties, Richard has a chronic traumatic anxiety reaction manifested by trembling hands, tension, inner tremulousness, difficulty sleeping, and nightmares. In contrast to Marie, who looks deceptively healthy and self-assured but whose reawakened inner problems stem from close ambivalent ties to a chronically anxious mother, Richard's symptoms represent more purely a chronic overt traumatic reaction to the disaster, in the context of considerable ego strength.

David, 7 years old during the flood and 9 when interviewed, was apparently well-adjusted before the disaster. Afterward his grades fell, he tended to keep to himself, and got into fights. His most severe symptoms, however, were crying in his sleep, sleep-talking (saying he wants to "get home again"), and somnambulism—he seems to be walking *out* of the house. Although others direct him back to bed, he does not wake up during these episodes but appears frightened. Since the disaster he has been wetting his bed several times a night, something he did not do previously.

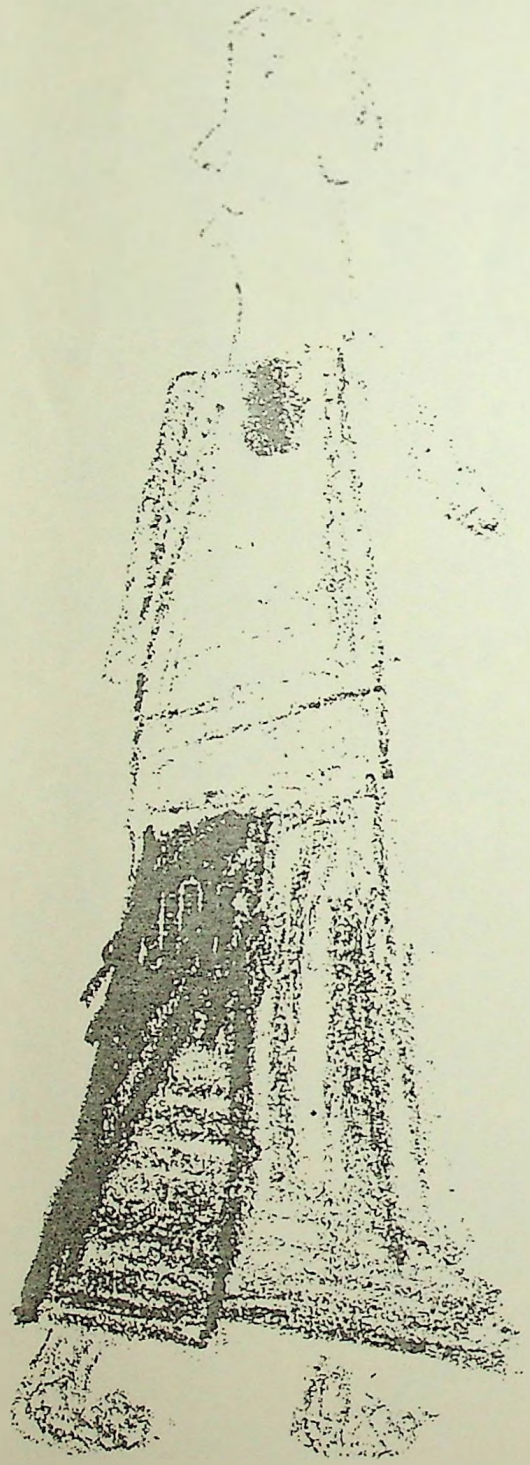
In his interview he appeared attractive and cooperative but quiet and somber. He did not recall the content of his sleepwalking episodes, although he vividly remembers people screaming while they were drowning during the flood. David drew a bizarre person with a strange colorless face looking backward and a brightly multicolored body with feet pointing in the opposite direction from the face (figure 3). Diagnostically, he had symptoms of a traumatic neurosis with a dissociative-type hysterical neurosis (exemplified by his somnambulism) encapsulated within it. It seemed likely that his trancelike sleepwalking was a repetition of the original escape; this interpretation was supported by his grotesque drawing of a person whose profile, while colorless, had a fixed smile and slightly quizzical or puzzled eyes. Facial distortions and poor fit to the body are evident in the picture.

David's pathology was focused and severe. Sleepwalking usually occurs in stage 4 sleep when central nervous system motoric inhibition of REM dreams cannot occur (3). Certain types are called "somnambulistic trances" and may represent physical reenactments or abreactions of traumatic situations (4). David's bizarre picture suggests an unconscious connection between his sleepwalking state and his conscious imagery.

Marie has become subtly but severely traumatized through her direct relationship with a chronically anxious and flood-traumatized mother, while Richard and David's more conspicuous and overt traumatic reactions stem more directly from their flood experiences. The contrasts in the symptom choices of Richard and David are probably multiply related to their constitutional backgrounds, developmental experiences preceding the trauma, and the exact circumstances of the moment of greatest trauma each experienced in the disaster.

[1]Many children were barefoot or half barefoot in the escape from the flood and suffered frostbite.

FIGURE 3
A 9-Year-Old's Drawing That Suggests a Link Between His Somnambulism and Conscious Imagery



OBSERVATIONS ON OTHER AGE GROUPS

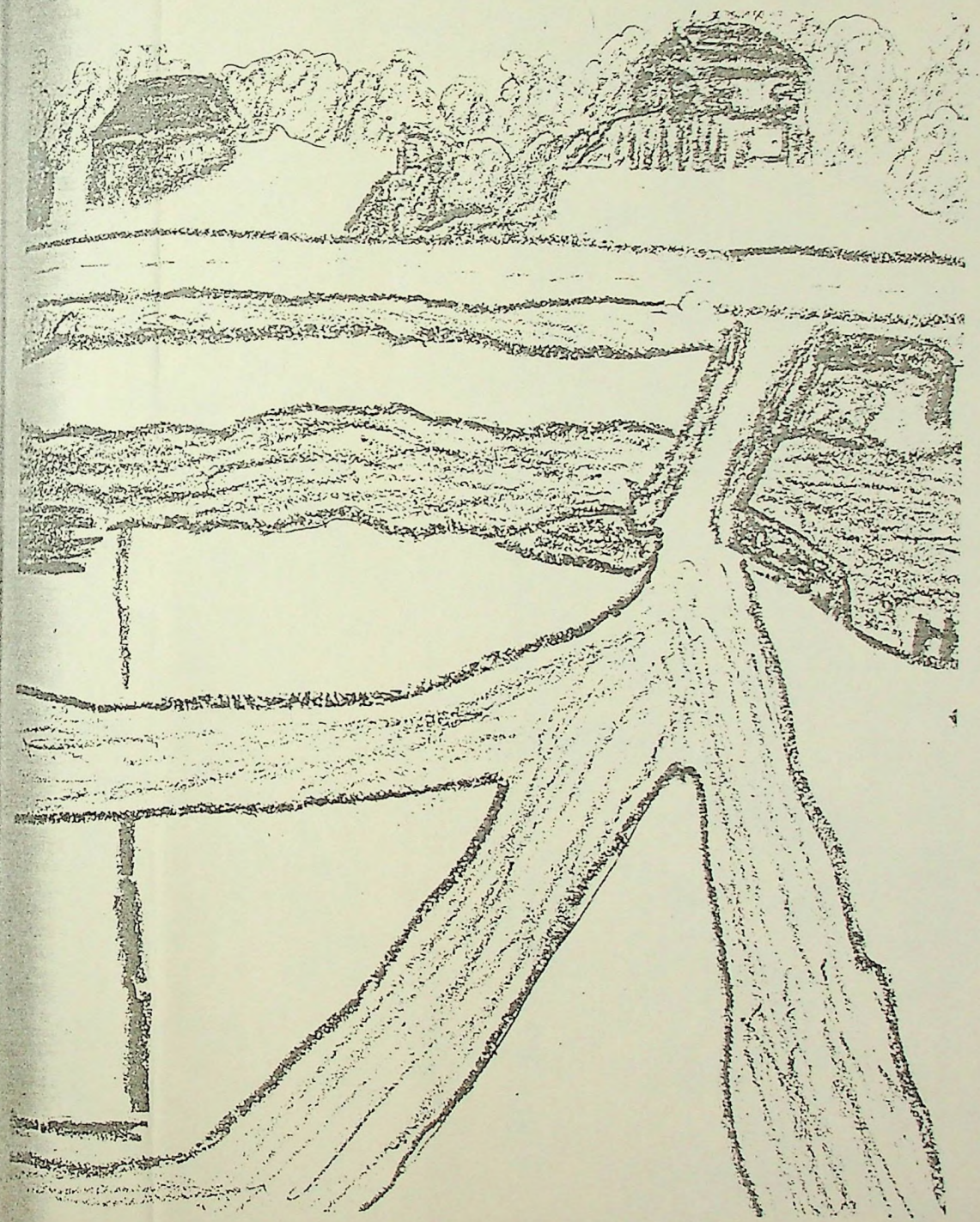
I have not mentioned another group of children those who were in utero during the flood. Often, their preciousness lies in having survived the pregnancy of a frantic mother. Among their future stresses may be the never-ending tales or the silent allusions of the family about the disaster these children never experienced. The parents may see them as magically and profoundly linked with the flood. These children, as well as those born later (who will also feel left out, yet involved), will be unpredictably but importantly influenced by the catastrophe.

Although this paper has focused on preadolescent children, a few words must be said about adolescents' special vulnerabilities to the psychological effects of the disaster. Because the almost total community destruction, the loss of communality described elsewhere in this section by Dr. Kai Erikson, was so disruptive, especially to adolescents, they often had to choose between rebellious predelinquent behavior or compliant social withdrawal. They suffered deeply but privately when their parents broke down under stress. For example, in one family, the favored older brother, who had been the "good one" before the disaster, changed his behavior markedly—he missed 68 days of school, threatened the teaching staff, was suspended five times, and is currently on probation because of his behavior. At home he sat up at night apprehensively listening to rain or roared away on his motorcycle. However, his next younger brother continued to attend school regularly and made every effort to concentrate. The contrast between his very chaotic flood picture and a carefully drawn pink dove of peace that his teacher had praised as "best in the class" shows the range and conflict of his inner experiences, which he has internalized, but with unknown emotional strains.

Creative expressions emerged in many cases. Out of a highly disturbed large family living in two trailers in a state of chaos came a touching picture drawn by an 11-year-old boy (figure 4). Denying the turbulence of the flood, he drew an intellectually complex picture with excellent perspective that showed a trestle, road intersections, and a quiescent creek. He labeled one "the road to where we used to live." In the background, brightly colored idyllic homes in red, blue, and orange nestled among the woods on the hillside. There were no people in the picture, but there were possibilities for human reconstruction. The three dramatically split roads suggest important choices to be made, and the colorful homes in the background suggest hope.

Finally, some older children did follow the lawsuit and psychiatric interviews with great interest and sophistication. They recounted hopes of being lawyers and nurses, even though they were often having problems in their basic school courses. They wrote themes on safety regulations and dam construction as school projects and tried to master their experiences emotion-

FIGURE 4
A Hopeful, Creative Picture Drawn by an 11-Year-Old Child



ally and intellectually. They will never forget this experience, and they will be watchful of all the adults who have participated in it; they either idealize or are disillusioned with parents and other adults. When they grow up, they will watch the world closely. They will have learned enormously both in and out of school.

CONCLUSIONS

Children in traumatized families within a shattered community form their own theories of a disaster from their own reactions and their perceptions of the reactions of their parents and other adults. Their conceptions are also influenced by the social and legal processes associated with the disaster. All of these factors permanently affect their sense of self in growing up. The common heritage of most children of disaster is a modified sense of reality, increased vulnerability to future stresses, an altered sense of powers within the self, and a precocious awareness of fragmentation and death. In contrast to most of their parents, some of the children manifested clear and enduring evidence of hopefulness and creativity, despite obvious current limitations in their ability to achieve specific goals. Their sense of hope existed side-by-side with serious signs of developmental limitations and serious pathology. Indeed, the widening discrepancies between social sensitivities and academic achievement could lead to severe "after-trauma" in later life. They would require unusual life adaptations or special help to respond constructively or creatively to the traumas they had undergone.

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Discussion of the Buffalo Creek Disaster: The Course of Psychic Trauma

LEO RANGELL, M.D.

The specific contribution of the psychiatrist to the study of the human disaster at Buffalo Creek focuses on the course of psychic trauma. The initial violent intrusion by the flood waters was followed by a second phase of the traumatic cycle, the physical dislocation of the survivors, with disruption of their "ground" and "surround." During this long subsequent period the level of trauma did not recede but kept rising, although at a slower pace. Distant effects of the trauma may succeed the more immediate ones. The finite psychic space of the survivors is encroached upon by traumatic memories for an indefinite period of time, leaving fewer resources available for normal effective living. The absorption and merging of traumatic stimuli into a traumatophilia poses still another potential problem. The unprecedented legal decision as to the linear effects of psychic trauma on a succession of connected individuals will need further interdisciplinary clarification.

IN OFFERING OPINIONS on the overwhelming human experience of the Buffalo Creek disaster, the challenge is to separate our reactions of empathy and horror (which, as Lifton and Olson [1] have pointed out, were quickly and painfully shared by all mental health professionals who came to the valley after the disaster) from the potential contributions of our specific professional expertise. Toward this end, I will focus on the realm of psychic trauma (2), its nature and its effects, to complement the findings of the interdisciplinary team of sociologists, psychologists, attorneys, and others who took part in the evaluation of the effects of this experience on those who survived it.

The articles in this section range from the individual to the collective, from the child to the adult, and from the deepest inner effects to the widest outer consequences of this sudden, unassimilable disruption of man's relationship to his physical world. These studies address not only the inundation of psychic structures in a horizontal sense but also the longitudinal effects of the flood—the disturbed continuity with the past, the shattering of the present, and the inescapable portents for the future.

The work of the interdisciplinary evaluation team retained by the law firm representing the 625 survivor-plaintiffs to assess the psychological impact of this catastrophe has profound implications, reflected in its effects on the social decision-making process. The unprecedented legal decision, reported elsewhere in this section by Mr. Gerald Stern, permitted people who were not on the scene of an accident to be awarded reparations for the psychic damages they suffered. The principle acknowledged in this case could well shake all existing rules of the social order about the responsibility of man to man.

THE FIRST PHASE: PSYCHIC NUMBNESS

To turn to the central focus about which psychiatrists can reflect and from which other observations will stem, the Buffalo Creek flood was a violent intrusion into the peaceful psychic life of the community massively beyond the "average expectable environment" (3). This eventuality was not, however, completely unexpected—the people in the valley had long lived with this possibility and knew it could be prevented, but they said they had put it out of their minds. Actually, it had been put not out but deeply in, had become part of their living unconscious. It was in some ways like the earthquake situation in California but worse and more constant. The dam that finally broke physically existed just above the valley and was visible and ever present. Another difference, which added the makings of a latent inner eruption to the potential external occurrences, was that there were in the minds of valley residents people (the owners of the dam) who could and should have done something about the situation. Like the cave-in of a coal mine in a community that has always lived in dread of such an occurrence, the flood had been part of the mental as well as the physical geography of Buffalo Creek, a feared event buried in the minds of the people. The massive convulsion of the physical world that took place on February 26, 1972, was a mental imprint come true. It was a nightmare from which this time they did not awake.

The black waters that roared through Buffalo Creek

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valley when the fantasied, feared, and repressed event became reality could be said to have flooded the egos of those who lived through the disaster. All control functions were overrun by the sudden influx; it was a maximum dosage per unit time, a psychological overkill. The result was universal and with a common base to all, the traumatic state, the condition of psychic helplessness that the anxiety signal presages and that all of the ego's defenses constantly work to prevent (4, 5). This was the phase of psychic numbness observed in all of the studies of the survivors. The goal was merely to live through it, to survive. Each individual held on to whoever or whatever was left. "Psychological conservatism," which Drs. Titchener and Kapp describe in "Family and Character Change at Buffalo Creek," served to reduce excitation; no further stimuli were wanted.

This stage of psychic numbness, of apathy, withdrawal, and sluggishness, was still visible when the evaluation teams arrived in Buffalo Creek 2 years later. Some of the observers were surprised that the traumatic neurosis was still visible, but what evidence is there to assume that the residual or even basic effects of so massive a trauma would not last a lifetime? Psychological testing of survivors of the Nazi holocaust has shown that after 30 years they still show such lasting effects as impairment in perceptual-cognitive functioning, withdrawal from objects, inability to sustain close relationships, and other subtle and overt sequelae.

While the legal experts perhaps needed to be concerned about the claim of preexisting states, I would prefer to maintain clarity and not to have to use the word "impairment," to blur the fact that there *was* loss, injury, and illness. The effects of the disaster were as ravaging as an epidemic of typhus or plague, which is similarly visited upon a city from without, and the preexisting vulnerabilities in the hosts to receive the invading organisms are not an issue. The traumatic neuroses overshadowed psychoneuroses. I do not mean to say that there were no preexisting psychoneuroses, but rather that they no longer had a chance to assert themselves. This is an issue that has plagued every psychiatrist who has served in the military. Combat neuroses in their acute phases are more uniform than different in their presenting syndromes; only later can individual differences reappear and assert themselves again. During the years to come, as normalcy returns to the Buffalo Creek survivors, they will have the luxury of becoming individually neurotic again.

THE SECOND PHASE: "GROUND" AND "SURROUND"

What happened to this community in terms of incoming traumatic stimuli did not stop with the cataclysmic events of that Saturday morning. As disorienting and time-stopping as the flood was, it was only the first phase. An individual who suffers a loss, however shattering, generally returns to his home to start the long and difficult process of repair. His "ground," the background into which the self can merge, is the base for his security, the source of the nurturing supplies that sustain the processes of reparation. This was not possible in Buffalo Creek. The dazed survivors were returned not to their familiar ground but to new and strange surroundings. This may have been the only possible course, but it was still depriving and further threatening. Rather than nurturance, the survivors continued to face challenges, for a long time and during a raw and vulnerable state.

In this double and almost death-dealing blow, these survivors repeated the experiences of other holocausts known to our generation. Those who survived and escaped from Nazi Germany wandered into new lands. The survivors of the atom bomb returned to craters where their homes had been. Many South Asians have had to leave their land after having left their dead. In all of these cases, the survivors' earth is also gone after their fellow humans have disappeared.

Years ago, writing at another level and about more comfortable aspects of human troubles, I described "attachment to ground" as the psychic prerequisite for the maintenance of the social state of poise (6, 7). The opposite condition, a wavering hold on one's surrounding psychic ground, results in a basic anxiety with the threat of crumbling and even annihilation of the self. This is the source of the primitive anxiety that people feel at the first threatening tremor of an earthquake. In the more mundane case of seasickness, the fear has been said to be not that one will die, but that one might not. Underlying both of these disturbing states is an elemental anxiety that stems from a disorientation in the relationship of the organism to the earth under its feet.

In the course of ontogenetic development, this relationship extends from the ground beneath one to the space around him, to people, institutions, atmosphere, and the culture. This is the common background in the phenomena described by Freud in the oral stage (8), in the attachment studies of Bowlby (9), in Mahler's contributions on separation-individuation (10), the effects of motherlessness on the primates studied by Harlow (11), and in the natural experiments on human infants studied and documented by Spitz in cases of marasmus resulting from early and massive deprivation (12).

Not only did the ground of the Buffalo Creek valley literally sink beneath the feet of its inhabitants, initiating the most primeval regression man can experience, but when the survivors reached solid high ground, they were again deposited on an insecure terrain, into a social "envelope."—an intriguing term used by Dr. Kai Erikson—of unfamiliar space. The trauma thus did not end, it merely changed. There are strain traumata (13), shock traumata (14), cumulative traumata (15), and sudden overwhelming disruptive events. The stimulus barrier can be bent as well as rent (16). At this point, the trauma of the survivors changed from sudden to cumulative. The flood receded, but the level of trauma did not; rather, it kept rising, although at a slower pace.

This was the phase studied intensively by Dr. Kai Erikson, described in this section from the sociological standpoint as a loss of communality, the social tissue that binds people together. While this loss was universal, we should not overlook the fact that it was an individual trauma as well. Just as the original traumatic state, although universally shared, was individual in suffering, so was it with this second phase of the traumatic cycle. The change from the familiar to a strange surround during the period when rest and nurture were needed superseded the initial trauma and prolonged and compounded its effects in each survivor.

THE THIRD PHASE: FUTURE EFFECTS OF THE TRAUMA

The articles presented in this section survey the effects of the disaster to date. Less measurable are the future effects, especially those which are more subtle and internal. Are the children Dr. Newman interviewed who are now getting along well in school less vulnerable to future stresses than those who are currently more turbulent and disturbed? Or is the reverse the case? Only long-term longitudinal studies (which are not likely to be practical or feasible) would answer this and similar questions.

There are subtle and far-reaching issues facing the survivors. In spite of the vastness of the unconscious, psychic space is limited. There is room and time in any individual psyche for only a limited amount of cognitive ideation and a finite number of memories, fantasies, and accompanying affects. The product of such space and time comprises the psychic life of an individual, the amount already spent and the amount still left. Mourning is a model of such an occupation of psychic space, a paradigm of how obsessive thoughts and memories related to psychic work that needs to be done crowd and consume the psychic capacity. Traumatic memories of any kind encroach on this psychic time-space and reduce its available quantity; this is why psychic traumata age people.

I have been treating a woman in her mid-seventies and have discovered that her apparent senility is due not to an organic aging process but to the repression of decades of a traumatic life. She had told herself—she brought this out with clarity through her foggy memory in sessions that had a hypnotic quality—that she did not want to remember any part of her married life of close to 50 years. The volume and intensity of the traumatic memories being repressed left her almost no room for normal living. She had by now assumed the posture, both mentally and physically, of a diffuse cortical atrophy, without evidence, either neurological or radiological, of any organic syndrome nor even convincingly of cerebrovascular disease. She was like a young, acute, traumatic amnesia, except that this was chronic, old, and massive. Her mental state undulated dramatically with the emergence and rerepression of forbidden thoughts. This poignant clinical experience has made me wonder about the general psychopathology of "old age."

How much space will the Buffalo Creek experience occupy in the minds of the survivors in their future lives? We routinely treat patients who react to a deprived childhood by sacrificing a certain percentage of their psychic lives. I have treated a patient who has occupied perhaps a quarter or a third of her free associations with obsessive preoccupation over her screaming mother; her thoughts are similarly occupied outside of the analysis. Another of my patients has been unable to enjoy his current life because of the constant crowding of his psychic space by the coalesced memories of the threats of castration that pervaded his tortured childhood. I have pointed out elsewhere (17) the role of such chronic traumata in producing the cacophony of human relationships in ordinary life.

These situations represent fairly common developmental traumata. How much more of a role do cataclysmic traumata like the Buffalo Creek disaster play? What will be the long-term effects of the vivid, massive "death imprint" described by Lifton and Olson (1)? What will be the effects on children in whom death anxiety has been violently added to the normal anxieties of separation and castration? It seems likely to me that their memories will repeat the accumulated traumata over time like a long-acting timed-release capsule.

There was an element in this disaster that is not present in truly natural catastrophic events, which serves to explain further why the "Buffalo Creek syndrome" is not limited to reactions to external events, but rather reflects added internal idiosyncratic forces. I am referring to the human element, the thought and the accusation that this horrible occurrence could have been prevented. Unlike a natural disaster such as a tornado, where inanimate forces of nature are solely responsible, the human object was involved in the Buffalo Creek Flood, which arouses impulses of aggression and retaliation. Channels for discharging these impulses do not keep pace with the amount and quality of the impulses aroused. The ego is bombarded from two directions, and feelings of rage, impotence, anxiety, guilt, and depression are added to the usual responses to disaster.

The more external normalcy returns, the more will traumatic neuroses and psychoneuroses be in a reciprocal relationship to each other. The residual trauma will stimulate individual neuroses, and latent neuroses will feed upon and perpetuate the traumatic state. Such restitutional movements are already evident in the survivors and will increase with passing time. Phobias, obsessions and depressions, and private anxieties and conflicts have already been noted by various observers, and survivors' dreams are beginning to reveal their predisaster concerns.

There are other more subtle unknowns to cloud the future. What happens when a traumatic effect merges

over time into a traumatophilia? Such an outcome can represent a repetition compulsion not in the service of mastery but to satisfy a sense of guilt or a need for punishment, a trauma that is absorbed and utilized by the psychic forces "beyond the pleasure principle" (18). Or what will be the result when the pleasure formulae or safety mechanisims themselves become altered and individually fashioned as a result of the traumatic experience? I am reminded of a patient who was traumatically raped and now finds her husband and all other men to whom she turns passive and weak. Or a patient who, from a traumatic rejection in her first love, has come to no longer believe in love. Another patient, similarly hurt, now feels "I'll never again have a best friend." What will be the effects of the life-threatening insult at Buffalo Creek, seen by the survivors as a result of neglect by people in authority, on trust, love, and object relations? One can hardly begin to tell, but one can be prepared so as not to be surprised.

In surveying this event and the reports that have been presented in this section, we should not overlook the effects of the studies themselves on the 625 survivor-plaintiffs evaluated. Aside from the legal result, the interest displayed by caring individuals from the society outside the valley probably introduced a therapeutic influence, however circumscribed. This influence might be compared to the effects on a therapeutic ward of the mere announcement of a program of treatment. However, there may also be negative effects: divisiveness has been introduced in the valley. Just as the untreated "control ward" suffers by comparison with the therapeutic community, those survivors who were not among the litigants may feel left out and discriminated against.

While an important and unprecedented legal decision has been achieved that greatly extends the definition of psychic trauma following an external event, the full implications of the human phenomenon described in this section cannot be estimated. Anyone who is lost, hurt, or otherwise affected under traumatic circumstances affects others in an endless chain that is attenuated only by emotional distance. It would be illusory to believe that it is within our power or professional expertise to accurately describe ethical guidelines for the rectification of the linear progress of traumatic effects. I recently knew of an elderly couple who were being displaced from their home for the building of a federal project. During the process, the husband, distraught over the dislocation, suffered a fatal heart attack. What can we say or what should we do about the effects on his wife? Or the children? Or a chain of others? There are more questions than we can answer. We must work side by side with the law, with sociology, philosophy, and all thinking and feeling people. No one or no group has a corner on ethics or on wisdom.

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BRIEF COMMUNICATIONS

Carbon Monoxide Encephalopathy: Need for Appropriate Treatment

BY ROY GINSBURG, M.D., AND JOHN ROMANO, M.D.

The authors describe severe psychiatric and neurological sequelae in a patient who suffered carbon monoxide poisoning as a result of a suicide attempt. A review of the literature revealed that 15 to 40% of survivors of carbon monoxide poisoning develop neuropsychiatric symptoms, often following a period of apparent recovery. The authors advocate an aggressive treatment approach to carbon monoxide poisoning, emphasize the diagnostic value of extensive laboratory testing, and suggest that 2 to 4 weeks of bedrest may prevent delayed neuropsychiatric sequelae.

RECENT OBSERVATION of a patient with carbon monoxide poisoning drew our attention to the great variety of neurological and psychiatric symptoms in this disorder and to the lack of clarity concerning its clinical course and treatment. This paper describes the clinical course of a patient with carbon monoxide encephalopathy, reviews some of the major findings from the literature, and suggests some new approaches to treatment.

CASE REPORT

The patient, a 59-year-old housewife of Italian extraction, became depressed in June of 1973 and tried to commit suicide by car exhaust inhalation. A neighbor who was a registered nurse investigated within an hour and found the patient cyanotic and unresponsive. She was taken to the nearest hospital emergency room, where she was stuporous but not comatose, and was not "cherry red." Neurological examination was unremarkable, and a carboxyhemoglobin level was not obtained. An EEG and brain scan were within normal limits. There was no history of neurological or psychiatric illness.

After admission the patient became more alert but appeared depressed and could not concentrate. She was given three electroconvulsive treatments within a week. At first the patient seemed less depressed, but then she became increasingly confused and withdrawn, refused to eat, and developed stereotyped picking movements. Three more ECT treatments were given 3 weeks after admission, but the patient's confusion increased. Because of the unclear nature of her illness, she was transferred to Strong Memorial Hospital for further evaluation.

A physical examination on admission revealed a mute, uncooperative patient with intermittent posturing. She responded with body movements to some commands but would not open her eyes or talk. The only positive physical or neurological finding was a bizarre gait: the patient would stand in place and make small shuffling movements with her feet while moving her body in a clockwise rotation.

Laboratory tests revealed that the patient's hematocrit was 35% and the hemoglobin revealed beta-thalassemia. Electrolyte levels, calcium, phosphorous, blood urea nitrogen, serum glutamic oxalacetic transaminase, lactic dehydrogenase, alkaline phosphatase, creatinine, total protein, albumin, glucose, uric acid, urinalysis, serology for syphilis, T-4 by Murphy Pattee, brain scan, and skull X-rays were all within normal limits. A lumbar puncture revealed normal opening and closing pressures and no cells; cerebrospinal fluid protein and glucose levels were within normal limits. Electroencephalogram on admission and repeated five times since to the present revealed persistent symmetrical monorhythmic three-cycle per second activity which was only present during drowsiness.

The patient spent most of her 4 months in the hospital on the floor, sitting, rocking, and staring blankly. She occasionally responded by giving her name in a faint whisper but otherwise would not talk to the nurses or her physicians. She often defecated in bed, and was sometimes physically aggres-

When this work was done the authors were with the Department of Psychiatry, Strong Memorial Hospital, University of Rochester School of Medicine and Dentistry, Rochester, N.Y., where Dr. Ginsburg was Associate Resident and U.S. Public Health Service Fellow in Psychiatry, and Dr. Romano is currently Distinguished University Professor of Psychiatry. Dr. Ginsburg is now a Grant Foundation Fellow in Psychopharmacology, Department of Psychiatry and Behavioral Science, Stanford University, Palo Alto, Calif. Address reprint requests to Dr. Romano at the Department of Psychiatry, University of Rochester, Rochester, N.Y. 14620.

The authors would like to thank Drs. Robert Joynt, Lowell Lapham, and John Strauss for reviewing the manuscript.

Family and Character Change at Buffalo Creek

BY JAMES L. TITCHENER, M.D., AND FREDERIC T. KAPP, M.D.

Psychiatric evaluation teams used observations of family interaction and psychoanalytically oriented individual interviews to study the psychological aftereffects of the 1972 Buffalo Creek disaster, a tidal wave of sludge and black water released by the collapse of a slag waste dam. Traumatic neurotic reactions were found in 80% of the survivors. Underlying the clinical picture were unresolved grief, survivor shame, and feelings of impotent rage and hopelessness. These clinical findings had persisted for the two years since the flood, and a definite symptom complex labeled the "Buffalo Creek syndrome" was pervasive. The methods used by the survivors to cope with the overwhelming impact of the disaster—first-order defenses, undoing, psychological conservatism, and dehumanization—actually preserved their symptoms and caused disabling character changes.

On February 26, 1972, an enormous slag dam gave way and unleashed thousands of tons of water and black mud on the Buffalo Creek valley in southern West Virginia. This Appalachian tidal wave destroyed everything in its path, killing 125 people and leaving 4,000 homeless and carrying away human bodies, houses, trailers, cars, and other debris. It expended its force in no more than 15 minutes at any one point in the 18-mile-long valley.

Just below the dam and the tipple of the Buffalo Mining Company stood the town of Saunders; there was no trace of this town minutes after the black water broke through the dam. The sides of the valley are steep at this point, and the wall of water and mud cascaded from side to side, miraculously sparing some homes but destroying many others as it slammed down the valley.

The wall of water sped through 14 mining hamlets with names like Crites, Becco, Lundale, and Pardee, hitting their schools, churches, taverns, stores, and homes, leaving no trace of some and damaging nearly all. The sides of the valley become less steep and it spreads out, so the black sludge and water became more of a "flash flood" at Amherstdale and just an overflow at Man, where it reached the Guyandotte River.

None of the settlements in Buffalo Creek, which had a total population of 4,000–5,000 inhabitants, were incorporated. There was no governmental organization beyond the commercial structures provided by post offices, schools, and churches. There are five deep mines in operation and evidence of stripmining is everywhere. In spite of the stripping, the ugly tipples, the dozen or so huge black heaps of waste, the railroad and highway construction, it is still a beautiful valley, and young adults there will tell you it was once much more beautiful, with pleasant homes and gardens where there are now primarily mobile homes. It was and is a middle-class area. Nearly all families are supported by employment in the coal mines or in the supporting industries and services. There is an accepted (but not documented) belief that this valley had not had the degree of emigration of young people that typified others like it since the Depression.

There had been rumors for years that the dam would give way, but hundreds of people reported they did not believe it had really happened until a few moments after the fearsome sight and sound of the advancing water. All the survivors know that the time of the dam break (8:00 a.m. on a Saturday morning) was fortunate. Few people were down in the road, and the children were not in or waiting for the school buses. Nevertheless, 125 were killed, and most lost their homes and possessions.

Subsequently, a group of 654 survivors of this disaster from 160 families began a legal action against the

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company that owned the dam. This group contacted the law firm of Arnold & Porter in Washington, D.C., and a legal team headed by Mr Gerald Stern traveled to the area to interview survivors. His observations of the psychological effects of the disaster and a summary of the litigation are presented in "From Chaos to Responsibility" in this section. The law firm first contacted Robert J. Lifton, M.D., who assessed "The Human Meaning of Total Disaster" (1), and Kai Erikson, Ph.D., whose observations of the situation in the community are presented in "Loss of Communality at Buffalo Creek." The suit was settled in July 1974 for $13.5 million of which $6 million was for psychological damages.

The legal team then retained one of us (J.L.T.) to organize a group of experts to interview the survivors and assess for the court the psychological impairment they had suffered as a result of the flood. This paper presents our findings on the severity and duration of these psychological effects, a symptom complex we have labeled the "Buffalo Creek syndrome." The size and composition of the evaluation teams varied with the nature of the families assigned to them. A full-sized team consisted of a general psychiatrist, a child psychiatrist, and two psychologists or case workers. These teams did their work in the valley itself, visiting the respondents' mobile homes and those houses that were still standing.

We conducted a pilot study consisting of interviews of 50 survivors in June of 1973. The court then directed that all of the survivor-plaintiffs be interviewed, as all were bringing suit separately. These evaluations were carried out on several long weekends in the spring of 1974.

We began each evaluation with a family interview in which we asked the survivors to talk about their experiences on the "day of the black water" and during the weeks and months that followed. As they talked, we were able to see beyond the immediate clinical phenomena to these people's underlying feelings and their ways of coping with them. The family sessions were followed by psychoanalytically oriented individual interviews with each family member, conducted in backyards, living rooms, or on porches.

EVALUATION FINDINGS

Disabling psychiatric symptoms such as anxiety, depression, changes in character and lifestyle, and maladjustments and developmental problems in children were evident more than 2 years after the disaster in over 90% of the individuals we interviewed. We asked ourselves whether we were examining people who were presenting major symptomatology and character problems that resulted from basically weak ego structures and who were using the disaster in order to win a large settlement from the mining company. Our answer was and is "no." In our evaluations, we witnessed difficult and prolonged struggles with powerful feelings and ideas aroused by the traumatic experience of the disaster and the very uneven attempts of the survivors to reorganize themselves and redevelop shattered coping and adaptive mechanisms. The affects associated with the catastrophe and its aftermath, as well as the psychological and social ways these people chose to deal with them, must be seen against the background of the universal crises of human development. The attendant threats of separation, abandonment, castration, and death—residuals of the developmental crises of separation and individuation—provided the context for the meaning of the catastrophe to the survivors (2, 3).

We found a definite clinical syndrome in the survivors of the Buffalo Creek disaster that arose from both the immediate impact of the catastrophe on each individual and the subsequent disruption of the community and that affected everyone living there. We are all predisposed by previous experiences to be traumatized by pathogenic forces as destructive and awesome as the Buffalo Creek catastrophe. Variations in the clinical picture resulted from individual differences in modes of processing and reorganizing the traumatic experience (4).

A clear pattern emerged from our evaluations and analyses. A traumatic neurotic syndrome was diagnosed in more than 80% of the survivor-plaintiffs, and changes in character structure were equally widespread. These changes, although they were attempts at readjustment, occasionally resulted in maladjustment in the social sense and always went in the direction of psychologically disabling limitations.

Character changes represent the stabilizing neurosis, the psychologically hardening and fixating consequences of the catastrophe. We found conscious and latent meanings and understandings and misunderstandings of the disaster and its aftermath, all of which were associated with the feelings and conflicts aroused by the trauma. The result of this was changes in object relations and attitudes toward the self. We delineated various processes of reorganization—attempts at putting personality functions back together—that were directed toward reintegration and resumption of a retraumatized life.

We shall indicate below how this personality reorganization, which was so aimed at prevention of recurring experience of the traumatic state, actually *suffered* with flexible and effective recovery and thus preserved symptom patterns and forced changes in the way of life.

SYMPTOMS AND CHARACTER CHANGES

During the first days and on into the weeks and months after the disaster, the survivors reported disorganization and sluggishness in thinking and decision-making. They complained of having difficulty controlling their emotions. These problems ranged from emotional outbursts to the simple inability to feel

Some described transient hallucinations and delusions. Almost all reported anxiety, grief, and despair, with severe sleep disturbances and nightmares. Later, the anxiety was manifested in obsessions and fears about water, wind, rain, and any other reminder that the disaster could recur. Occasionally these obsessive disturbances coalesced and became a group phenomenon. For instance, the wife of a community leader never slept when he was asleep so that one of them would always be on the alert. On rainy nights, the man received phone calls regarding rumors that another dam was about to give way. He would then take his rifle and spend the night sitting on the supposedly weakened dam, guarded by others to protect him from attack.

Grief over the loss of relatives, friends, possessions, and mementos such as family Bibles, as well as the loss of the feeling of communality discussed by Dr. Erikson, was widespread. For many, unresolved grief turned into depressive symptoms, ideation, and behavior, and some developed a depressive lifestyle (5). In some individuals, depression was channeled into a wide range of somatic complaints, with probable increases in the incidence of duodenal ulcer and hypertension.

Many of these people have become listless, apathetic, and less social since the disaster. They cling to their families, lack ambition, and are disinterested in former hobbies and sports. These changes have led to an overall limitation of essential expression, a lack of zest for work and recreation, and despair about ever again resuming the lifestyle they once had.

THOUGHTS, FANTASIES, AND FEELINGS AROUSED BY THE DISASTER

The survivors referred to the disaster as "the end of time" or "the end of everything," and noted that "No one who was not there could ever really know what happened." They were haunted by visual memories and emotions associated with the drownings of relatives and friends and of blackened bodies and parts of bodies that were uncovered for weeks after the flood.

All of the survivors had to confront the loss of a sense of personal invulnerability. The former feeling of comfort and assurance about the continuity of life had depended partly on magical beliefs that horrible things like this disaster do not happen to one; that they could not occur in nice sane communities in this country. Then the impossible happened. The shock was overwhelming and a new outlook took form that reflected a swing from the former sense of invulnerability to pessimism, emptiness, and hopelessness. We heard such comments as "Nothing counts anymore"; "What's the use now?"; and "Since we lost everything, what's to be gained by trying?" The disaster took on the meaning of chaos, helplessness, and death, giving rise to feelings of personal insignificance.

Three other reactions contributed to depressive symptoms and lifestyles. The first was a feeling of impotent rage over the destruction to life, property, and a way of life. This rage is an explosion of feeling against the attack on the self. The victim has little outlet for his anger or hope of satisfaction. This feeling had special intensity because the destruction in Buffalo Creek was man-made; it was caused by the inexplicable inhumanity of a powerful corporation that gave terrible evidence of not caring about its employees or their community. The survivors' guilt was expressed in a wide variety of derivative feelings about the self, in symptoms, in character change, and in behavior through self-denial and lack of hope. These conflicts were not resolved, and their persistence took form in identification with the dead in dreams, actions, and attitude toward life (6).

No one behaves exactly as he thinks he should in a hazardous situation, particularly in a situation he is powerless to influence. Memory becomes clouded and feelings of helplessness influence the way one looks back on the traumatic event. Many people in Buffalo Creek manifested "survivor shame." One of the actual heroes of Buffalo Creek, who had been extraordinarily effective in mobilizing and leading rescue efforts, was able to fend off depression and anxiety in the first four weeks after the flood while he worked relentlessly to help others. When he attempted to return to his former work, he was overwhelmed by anxiety and depression connected with feelings of inadequacy. He developed a phobia connected with his job, began drinking heavily, and became clinically depressed.

We noted in many people a sense of isolation and feelings of alienation combined with an increased need for vigilance and a tightening of the ring around the family. Former feelings of self-assurance, sociability, trust in neighbors, and enjoyment of community activities disappeared. The isolation we observed clinically can be explained by the depressive reactions, the chronic anger, the loss of a way of life, and the dissolution of self-confidence and basic trust.

It has been hypothesized that the emotional disturbances aroused in the victims of disaster quickly disappear after the stress has subsided. Our work at Buffalo Creek suggests that this is rarely the case; the manifestations of a traumatic neurosis do not subside with the receding flood waters. The effects may seem to disappear quickly if one is not alert to the subtle covering-up behavior of the victims of a psychic trauma.

Lifton and Olson (1) explain the persistence of traumatic effects on the basis of an analysis of the nature of the disaster itself and the special psychological effects of such an experience. Our study complements their work by showing how the effects of a traumatic event are preserved by the modes of adaptation to overwhelming fears and hopelessness. The very attempts to protect self, family, and community from a recurrence of helplessness and loss are responsible for the individual and societal neurosis and restrictive character change. Our combined approach has been to show what occurred, the nature of its impact on the psyche,

and why its effects became chronic.

One can analyze the sequential formation of the "Buffalo Creek syndrome" as follows. The disaster activated intense affects, including fear, rage, and helplessness. These waves of external and internal overstimulation overran the stimulus barrier and the ego's capacity to integrate the traumatic experience and control and discharge the affects. There was temporary ego collapse and the ego was damaged. We estimate that reorganization of the ego in whole or in part required 6 to 24 months. The course of the reorganization and the way individuals processed these affects, memories, and the associated conflicts made the ultimate difference in outcome. The survivors' course of ego reorganization and their manner of processing the disaster experience were reflected in their symptoms and character change (2, 4, 7, 8). The variables in the reconstitution of the personalities of the survivors we studied can be divided into four categories.

PERSONALITY RECONSTRUCTION

First-Order Defenses

There was a continuous and steady deployment of a coordinated system of character-shaping first-order defenses (9), i.e., projection, externalization, and denial. Projection defended against feelings of guilt and shame aroused by the disaster. The constructors of the dam, state and federal agency representatives, and intrusions from the society outside of the valley became objects of increasing anger and fear. Externalization blocked awareness of this anger and fear as well as feelings of helplessness. Individuals became sensitive to and acutely observant of the anxiety and unrest in their families, coworkers, and the social group. Denial defended against recognition that the self had been changed in any way; it disavowed the feeling of helplessness and the awareness of psychological scarring (10). Denial enabled people to believe that while much had happened to them and to those around them, they had not been affected in an *essential* way, and that they were the same people they had been before the flood. This defensive complex protected against emotions that would have otherwise reactivated memories and feelings of fright and helplessness. It was oriented to the present and functioned continuously, preventing the gradual recollection and discharge of the feeling of helplessness and blocking recognition of the irrationality of shame and guilt. Although one can never be the same after an experience with disaster, this defensive system provides a desperate sort of status quo that substitutes for personal regrowth.

Efforts to "Undo" the Disaster Experience

Undoing consisted of efforts to change the past by reliving the disaster in dreams and other ways, giving it a different outcome. Survivors' memories of the early postdisaster period contained fantasies of magical reliving of childhood stresses. Attempts at undoing also appeared in strange, symbolic reenactments of the trauma, sometimes leading to violence to the self or others. Freudian repetition compulsion was often replaced by the mechanism of undoing, which is a defense against facing the anxiety associated with the trauma.

The dreams of the survivors during the period of initial shock and (in many cases) for months thereafter were fantasied attempts to relive the disaster, but with a less painful outcome. At first, such dreams were unsuccessful and people awoke from them in terror. As time passed, the dreams were modified. Although the affects remained frightening, the subject matter shifted from the flood to previous, often long-past, images of chaos and threats of annihilation. The dreams no longer involved direct reliving of the disaster but instead depicted stressful episodes that represented repetitions of normal developmental crises such as separation, abandonment, castration, and guilt (1, 8).

The regressive process in these traumatic neuroses differs from that in other psychoneuroses. The goal is not gratification or mastery of infantile conflicts, but rather an attempt to work through recent trauma via anxiety. The anxieties of infantile and childhood phases of personality development become the focus of undoing because these problems had been successfully contained or overcome; dreams of long-past stresses that had been mastered provided reassurance to the survivors that they could overcome the recent trauma. Just as "examination dreams" attempt to deal with anticipatory anxiety by fantasying a past stress that had been overcome, dreams that are characteristic of traumatic neuroses attempt to neutralize the overwhelming anxiety of the traumatic event by recalling successful past adaptations to difficult situations. Each of these phases of dealing with normal stress is reproduced in the survivors' dreams, is common to all persons as part of human epigenesis. Each past crisis included not only a deprivation of instinctual demand but also a threat to the continuity of life. The latter aspect is what makes them particularly suitable for undoing the threat of annihilation experienced in a trauma like the Buffalo Creek disaster.

Because undoing relies on omnipotence and magic it prevents recognition of the influence of guilty shameful attitudes toward the self. The undoing process—aimed at fending off fearful anticipation of a recurrence of the traumatic experience—is a continuing obstacle to the relatively nonanxious acceptance of human vulnerability that is necessary for readaptation.

The Psychological Emphasis on Survival

Psychological conservatism consisted of avoidance of situations that might raise the level of excitation either internally or externally. It is the defensive counterpart of the psychic numbing described by Lifton and Olson (1). We perceive psychic conservation as mental activity designed to control behavior by banking energies, surrendering ambition, reducing enthusiasm, dampening socializing and

reating, and discouraging novel experience (11). Psychological conservatism accepts survival as the only goal of existence. It is a trade-off: the individual accepts hopelessness in the present to prevent helplessness in the future, as if to say, "Better to live without hope than not to live at all." Psychological conservatism functions as if the disaster will recur tomorrow, thus totally distorting an individual's view of the future. If you live as though the dreaded uncertainty is certain to occur, you become a psychic conservative.

Dehumanization

Dehumanization affects one's view of life and human relationships and has a direct toxic effect on personality function. Every disaster places man at the mercy of forces beyond his control. The feeling of being a pawn of fate is dehumanizing—people feel without appeal, beyond empathy, and cannot be persuaded or assuaged. When the catastrophe is man-made, dehumanization is magnified. In Buffalo Creek, there was the terrible realization that other human beings had planned, built, and maintained an unsound dam and then acted irresponsibly and uncaringly after the resulting disaster. The defense of dehumanization is an example of identification with the aggressor. It destroyed pride and joy in being human.

Dehumanization may be mitigated by corrective experiences with empathic people in the helping professions and private and public institutions. Collaboration with other sufferers in a law suit against the dehumanizing aggressor may also be useful in that it can ensure that it will be more difficult for such organizations to risk human life in the future.

CONCLUSIONS

It is our belief that the reactions we have described are not those of individuals with weak egos who were exaggerating their complaints in order to win a law suit. These people, by and large, did not exaggerate their complaints; the majority minimized or denied them. If their reactions were merely exacerbations of old neurotic symptoms and problems, we would have encountered a wider range of psychoneurotic reactions. Although there were differences in modes of response, the uniformity of the psychological reactions comprising the Buffalo Creek syndrome was striking. Our analyses of dreams and early memories, reported elsewhere (12, 13), support the consistency and severity of this syndrome.

We found a definable clinical entity characterized by a well-delineated group of clinical symptoms and changes in character and lifestyle that were related to clear-cut psychopathogenic factors precipitated by the disaster. All of us have in our unconscious memory systems encounters with the various forms of dread that a disaster reawakens. There need not be any preexisting neurosis for the Buffalo Creek syndrome to become disabling and chronic. All of us are susceptible to traumatic neurosis and the "death imprint."

To be successful in treating these traumatic neuroses, we must substitute active recall and working through of the painful memories of helplessness and separation for counterphobic behavior, passive reproduction of the experience in dreams, and magical ways of living out and reenacting the trauma. The change from passive to active experience, from reproduction to re-creation is the essential thing. By linking long-past and previously worked-through childhood anxieties with the overwhelming anxieties aroused by the recent disaster, we may be able to strengthen the ego of the individual with a traumatic neurosis. Through his relationship with helping and capable persons and institutions, the disaster survivor is given an opportunity for regrowth, much like the ego development that came about as the individual met and dealt with the normal crises of growing up.

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DM 7-2

From Chaos to Responsibility

BY GERALD M. STERN, L.L.B.

The litigation initiated by the 625 survivors of the Buffalo Creek flood who refused to settle with the coal company claims office was a landmark case. For the first time, individuals who were not present at the scene of a disaster were allowed to recover for mental injuries. Psychic impairment, the term coined for these injuries, was found in virtually all of the survivor-plaintiffs. In an out of court settlement, the survivors were awarded $13.5 million, $6 million of which was distributed on the basis of a point system as compensation for the psychological damages.

THE DESTRUCTION of the Buffalo Creek community gave rise almost immediately to the creation of a new kind of group—a community of 625 survivors from 160 families who joined together to sue the coal company that owned the dam. These individuals, unlike the majority of the survivors, refused to settle their cases at the coal company claims office. Instead, they sought legal help outside the state of West Virginia.

This group contacted Arnold & Porter, a law firm in Washington, D.C., and we agreed to represent them.[1] We immediately went to Buffalo Creek and spent many days interviewing survivors at Charlie Cowan's gas station, one of the few buildings remaining in the Buffalo Creek valley. Mr. Cowan was the leader of the citizens' committee that called to ask for our legal help. The survivors' legal right to sue for traditional damages was clear; they could sue for lost property, for their homes and all their possessions, for physical injuries, or for the death of family members. However, it soon became apparent that they also had significant mental injuries, and it was not so clear whether the law would permit recovery for these damages.

The magnitude and significance of these mental and emotional damages hit me personally when I interviewed a coal miner who had lost his 22-month-old son and his pregnant wife in the disaster. The flood waters caught this family asleep in their home. As the wife disappeared in the black water, she cried out to her husband to save their son. He held the child tightly and tried to struggle to safety, but houses and debris battered him and the child as they were washed miles down the valley. Somewhere in this maelstrom, he lost his grip on his son, who disappeared forever into the black waters. Eventually, this man was able to struggle to safety, although his body was badly lacerated by the jagged wood in the water. At the time I interviewed him, my own son was exactly 22 months old. I was terribly upset by his story and decided to try to expand the lawsuit to recover for his mental agony and for the mental suffering of others like him.

We contacted Robert J. Lifton, M.D., who had studied the survivors of Hiroshima. He agreed to interview a number of our clients and to help us explain to the court in lay terms the common psychiatric injuries of these survivors. He also suggested that we ask Dr. Kai Erikson, whose findings are reported in this section, to study the sociological aspects of this disaster. With these two men as our principal experts, we articulated for the court and for the coal company defendant what we called the "psychic impairment" damages suffered by every one of our survivor-clients.

We coined the term "psychic impairment" to include both the psychiatric damages identified by Dr. Lifton and the loss of communality found by Dr. Erikson. We wanted to avoid alleging that the survivors suffered mental illness and felt that the phrase "psychic impairment" had a less negative connotation.

Eventually we also employed a team of psychiatrists from the University of Cincinnati, some of whose findings are also presented in this section, to interview each of our clients. The coal company also retained a psychiatrist—actually, a physician whose principal field was neurosurgery—and a young psychologist in training, who also examined each of the 625 men, women, and children involved in the lawsuit.

Our psychiatric studies indicated that almost all of the survivors were suffering from psychiatric damage of varying degrees as a result of this disaster. In contrast, the physician retained by the coal company determined that the survivors generally suffered only transient situational disturbances that he felt should have abated soon after the disaster. The fact that the survivors still had disturbances when he examined them some 18 months after the disaster led him to presume almost invariably that these people were suffering primarily from preexisting mental conditions.

Under traditional legal principles, if the survivors had been physically injured by the flood waters and as a result, had suffered psychiatric damages, they could recover full monetary damages unless their claims

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[1]A much more detailed report of my observations and involvement in this case will be presented in a forthcoming work (1).

conditions were merely the result of an aggravation of preexisting mental conditions. Our physicians insisted that the survivors' psychiatric damages were caused solely by the disaster. The coal company physicians disagreed. This is a dispute juries must often resolve in cases involving psychiatric damages.

One more interesting and more difficult legal question presented by this case was whether the survivors could recover monetary damages at all, even if the jury found that all of the survivors' present psychiatric injuries were caused by the disaster. Traditionally the law does not permit recovery for psychiatric injury on the sole ground that the injury can be proven to have been caused by another person or persons. For example, a mother who sees a truck run over and kill her child may suffer severe psychiatric trauma, but the law traditionally has denied the mother recovery for her own suffering, terming her a mere bystander. Needless to say, an individual who sees a friend killed has even less chance in the courts of recovering for mental suffering.

In this case, most of the survivors were not seriously injured physically. Many of them had run up the side of the valley just ahead of the flood waters, and some of them were not even in the valley at the time of the disaster. For example, one survivor was visiting in New Mexico, another was in Florida, some were in jail, and others were in hospitals in nearby towns outside the valley. Nevertheless, we insisted that all of the survivors were entitled to recover for their mental suffering, even if they suffered no physical injury, saw or heard no relative or friend in peril, or were absent from the valley on the day of the disaster. We argued that each resident of the valley, even those who were not there during the flood, was a direct victim of the coal company's reckless conduct and not merely a bystander.

The court agreed with this contention and held that the survivors—even those who were outside the valley at the time of the disaster—could collect for mental injury if we could convince the jury that the coal company's conduct was reckless (i.e., more than merely negligent), and that this reckless conduct caused the survivors' mental suffering (2).

Once the coal company realized that the court would not dismiss the psychic impairment claims of any of the 625 survivor-plaintiffs in this lawsuit, we reached a settlement for a total of $13.5 million, to be divided among the survivors by their own attorneys. We first calculated the payments for real and personal property losses, for wrongful deaths, lost wages, other miscellaneous claims, expenses, and legal fees. This left approximately $6 million to be distributed for psychic impairment. We distributed this money to the 625 plaintiffs using a point system based on their immediate involvement with the disaster, their medical disability, their loss of community ties, and the disruption of their way of life. Each survivor received between $7,500 and $10,000 after all expenses and legal fees were deducted. Approximately $2 million of the $6 million was placed directly in a trust fund for the 224 children under the age of 18 who were plaintiffs in the case.

The court's approval of this substantial monetary settlement for survivors' psychic impairment established a significant legal precedent for recovery in cases of mental suffering. The court was not bound by concepts of space and time. Instead, the court recognized that it is the permanence of loss, rather than the witnessing of the disaster, that causes mental suffering. In other words, the court (and eventually the coal company) was persuaded that the relief provided by the law should be determined not by narrow traditional legal principles but by fairly modern psychiatric and sociological principles.

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DM 7:3

Loss of Communality at Buffalo Creek

BY KAI T. ERIKSON, PH.D.

The survivors of the Buffalo Creek disaster suffered both individual and collective trauma, the latter being reflected in their loss of communality. Human relationships in this community had been derived from traditional bonds of kinship and neighborliness. When forced to give up these long-standing ties with familiar places and people, the survivors experienced demoralization, disorientation, and loss of connection. Stripped of the support they had received from their community, they became apathetic and seemed to have forgotten how to care for one another. This was apparently a community that was stronger than the sum of its parts, and these parts—the survivors of the Buffalo Creek flood—are now having great difficulty finding the personal resources to replace the energy and direction they had once found in their community.

THE TRAUMA experienced by the survivors of the Buffalo Creek disaster can be conceptualized as having two related but distinguishable facets—the individual trauma and the collective trauma.

By individual trauma, I mean a blow to the psyche that breaks through one's defenses so suddenly and with such force that one cannot respond effectively. As the other papers in this section make abundantly clear, the Buffalo Creek survivors experienced just such a blow. They suffered deep shock as a result of their exposure to so much death and destruction, and they withdrew into themselves, feeling numbed, afraid, vulnerable, and very alone.

By collective trauma, I mean a blow to the tissues of social life that damages the bonds linking people together and impairs the prevailing sense of communality. The collective trauma works its way slowly and even insidiously into the awareness of those who suffer from it; thus it does not have the quality of suddenness usually associated with the word "trauma." It is, however, a form of shock—a gradual realization that the community no longer exists as a source of nurturance and that a part of the self has disappeared. "I" continue to exist, although damaged and maybe even permanently changed. "You" continue to exist, although distant and hard to relate to. But "we" no longer exist as a connected pair or as linked cells in a larger communal body.

The two traumas are closely related, of course, but they are distinct in the sense that either of them can take place in the absence of the other. For instance, a person who suffers deep psychic wounds as the result of an automobile accident, but who never loses contact with his community, can be said to suffer from individual trauma. A person whose feelings of well-being begin to wither because the surrounding community is stripped away and no longer offers a base of support (as is known to have happened in certain slum clearance projects) can be said to suffer from collective trauma. In most large-scale human disasters, of course, the two traumas occur jointly and are experienced as two halves of a continuous whole. For the purposes of this paper, however, it is worthwhile to insist on the distinction at least briefly, partly because it alerts us to look for the degree to which the psychic impairment observed in settings like Buffalo Creek can be attributed to loss of communality, and partly because it underscores the point that it is difficult for people to recover from the effects of individual trauma when the community on which they have depended remains fragmented.

I am proposing, then, that many of the traumatic symptoms experienced by the people of Buffalo Creek are as much a reaction to the shock of being separated from a meaningful community base as to the actual disaster itself.

It should be noted that "community" means much more in Buffalo Creek than it does in most other parts of the United States. Much has been said in the literature on Appalachia about the importance of kinship and neighborliness in mountain society. Although it is true that coal camps like the ones along Buffalo Creek differ in many ways from the typical Appalachian community, the people of Buffalo Creek were nonetheless joined together in the close and intimate bonds that sociologists call *gemeinschaft*. The rhythms of everyday life were largely set by the community in general and governed by long-standing traditions, and the main linkages by which people were connected were very strong. In Buffalo Creek, tightly knit communal groups were considered the natural order of things, the landscape in which people live.

Long stories must be made short in a presentation like this, so I will simply summarize my theme by saying that the human communities along Buffalo Creek were essentially destroyed by the disaster and that

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The flood itself forced the residents of the hollows into a number of nearby refugee camps from which they were, for a variety of reasons, unable to escape. The result was that the majority of the Buffalo Creek survivors remained in the general vicinity of their old homes, working in familiar mines, traveling familiar roads, trading in familiar stores, attending familiar schools, and sometimes worshipping in familiar churches. However, the people were scattered more or less at random throughout the vicinity—virtually stranded in the spots to which they had been washed by the flood—and this meant that old bonds of fellowship and neighborhood, which had always depended on physical proximity, were effectively severed. People no longer related to one another in old and accustomed ways. The threads of the social fabric had snapped.

A year after the disaster (which is roughly when most of the authors represented in this section first encountered these people) visitors to Buffalo Creek were struck by a number of behavioral manifestations that seemed to be exhibited by almost everyone in the valley and, for that matter, continue to this day. Several of these manifestations are discussed elsewhere in this section. I would like to mention three by way of illustrating a larger point.

DEMORALIZATION

First, the survivors clearly suffer from a state of severe demoralization, both in the sense that they have lost much personal morale and in the sense that they have lost (or so they fear) most of their moral anchors.

The lack of morale is reflected in a profound apathy, a feeling that the world has more or less come to an end and that there are no longer any sound reasons for doing anything. People are drained of energy and conviction, not just because they are still stunned by the savagery of the flood but because activity of any kind seems to have lost much of its direction and purpose in the absence of a confirming community surround. They feel that the ground has been pulled out from under them, that the context in which they had worked, played, and cared for others has more or less disappeared. One survivor said,

> I don't know. I just got to the point where I just more or less don't care. I don't have no ambition to do the things I used to do. I used to try to keep things up. But anymore I just don't. It seems I just do enough to get by, to make it last one more day. It seems like I just lost everything at once, like the bottom just dropped out of everything.

I suppose the clinical term for this state of mind would be depression, but one can hardly escape the impression that it is, at least in part, a reaction to the amenities of postdisaster life in the valley. The survivors are literally out of place and uprooted. They had never realized the extent to which they relied on the rest of the community to reflect a sense of security and well-being, or how much they depended on others to supply them with a point of reference.

The people of Buffalo Creek are also haunted by a suspicion that moral standards are beginning to collapse all over the valley, and in some ways it would appear that they are right. As is so often the case, the forms of misbehavior people find cropping up in their midst are exactly those about which they are most sensitive. The use of alcohol, always a sensitive problem in Appalachian society, has apparently increased, and there are rumors everywhere that drugs have found their way into the valley. The theft rate has also gone up, and theft has always been viewed in the mountains as a sure index of social disorganization. The cruelest cut of all, however, is that younger people seem to be slipping away from parental control and are becoming involved in nameless delinquencies. This is an extremely disturbing development in a culture so devoted to the family and so concerned about generational continuity.

This apparent collapse of conventional morality has a number of curious aspects. For one thing, observers generally feel that there is much less deviation from community norms than the local people seem to fear. Moreover, there is an interesting incongruity in these reports of immorality—one gets the impression that virtually everyone is coming into contact now with persons of lower moral stature than they did formerly. This, of and by itself, does not make very much logistical sense. One survivor said flatly,

> The people of Buffalo Creek tended to group themselves together; therefore the breaking up of the old communities threw all kinds of different people together. At the risk of sounding superior, I feel we are living amidst people with lower moral values than us.

Perhaps this is true—but where did all these sordid people come from? Whatever else people may say about their new neighbors in the refugee camps, they are also from Buffalo Creek, and it is hard to avoid the suspicion that their perceived immorality has as much to do with their newness as with their actual behavior. It may be that relative strangers are almost by definition less "moral" than familiar neighbors. To live within a tightly knit community is to make allowances for behavior that might otherwise look deviant. New neighbors do not qualify for this clemency—not yet, at least—and to that extent, their very unfamiliarity may seem to hint at vice all by itself.

The collapse of morality in Buffalo Creek thus seems to have two edges. We have sufficient evidence to believe that certain forms of deviation are actually on the increase, although this is a difficult thing to measure accurately. However, we also have reason to believe that the breakdown of accustomed neighborhood patterns and the scattering of people into unfamiliar new groupings has increased the level of suspicion people feel toward one another.

DISORIENTATION

The people of Buffalo Creek are also clearly suffering from a prolonged sense of disorientation. It has often been noted that the survivors of a disaster are likely to be dazed and stunned, unable to locate themselves meaningfully in time and space. Time seems to stop for them; places and objects suddenly seem transitory. They have trouble finding stable points of reference in the surrounding terrain, both physical and human, to help fix their position and orient their behavior. All of this can be understood as a natural consequence of shock, but the people of Buffalo Creek seem to have continued to experience this sense of dislocation for months and even years after the crisis. "We find ourselves standing, not knowing exactly which way to go or where to turn," said one individual. Another survivor noted, "We feel like we're living in a strange and different place, even though it is just a few miles up Buffalo Creek from where we were."

Professional observers who have gone into the valley on medical or research errands have noted repeatedly how frequently the survivors seem to forget simple bits of everyday information—the names of close friends, their own telephone numbers, etc. People are often unable to locate themselves spatially, even when they are staring at fixed landmarks they have known all their lives. It is not at all uncommon for them to answer factual questions about time—their own age or their children's grade in school—as if history had indeed stopped on the date of the disaster. In general, people all over the valley live with a lasting sense of being out of place, disconnected, and torn loose from their moorings, and this feeling has far outlasted the initial trauma of the catastrophe itself.

People normally learn who they are and where they are by taking soundings from their fellows. As if employing a subtle form of radar, we probe other people in our immediate environment with looks, gestures, and words, hoping to learn something about ourselves from the signals we get in return. But when there are no reliable objects off of whom to bounce those exploratory probes, people have a hard time calculating where they stand in relation to the rest of the world. In a very real sense, they come to feel that they are not whole persons, not entirely human, because they do not know how to position themselves in a larger communal setting.

> Well, I just don't feel like the same person. I feel like I live in a different world. I don't have no home no more. I don't feel normal anymore. I mean, sometimes I just wonder if I'm a human being. I just feel like I don't have no friends in the world, nobody cares for me, nobody knows I even exist.

LOSS OF CONNECTION

A third manifestation of the disaster's psychosocial effects is a condition that might be described as loss of connection—a sense of separation from other people. For better or worse, the people of the hollow were deeply enmeshed in the tissues of their community; they drew their very being from them. When those tissues were stripped away by the disaster, people found themselves exposed and alone, suddenly dependent on their personal resources. The cruel fact is that many of the survivors proved to have few resources—not because they lacked the heart or the competence, but because they had spent so many years placing their abilities in the service of the larger community that they did not really know how to mobilize them for their own purposes.

Many people feel that they have lost meaningful connection with themselves. Much of their apparent former strength was actually the reflected strength of the community, and they are learning—to their very great discomfort—that they cannot maintain an enduring sense of self when separated from that larger issue. They find that they are not very good at making individual decisions, getting along with others, or establishing themselves as separate persons in the absence of a supportive surround. "Lonesome" is a word many of them use, and they do not use it to mean the lack of human company. One woman who has moved to the center of a large neighboring town said of her new home: "It is like being all alone in the middle of a desert." A man who continued to live in his damaged home on Buffalo Creek said,

> Well, there is a difference in my condition. Like somebody being in a strange world with nobody around. You don't know nobody. You walk the floor or look for somebody you know to talk to, and you don't have nobody.

In addition, the inability of people to come to terms with their own individual isolation is counterpointed by an inability to relate to others on a one-to-one basis. Human relations along Buffalo Creek took their shape from the expectations that pressed in on them from all sides like a mold: they were regulated by the customs of the neighborhood, the ways of the community and the traditions of the family. When that mold was stripped away, long-standing relationships seemed to disintegrate. This is true of everyday acquaintances but it is doubly—and painfully—true of marriage. Wives and husbands discovered that they did not know how to nourish one another, make decisions, or even to engage in satisfactory conversations when the community was no longer there to provide a context and set a rhythm. There has been a sharp increase in the divorce rate, but that statistical index does not begin to express the difficulties the survivors have relating to their spouses. It is almost as if communal forces of one sort or another had knit family groups together by holding them in a kind of gravitational field, but when the forces of that field began to dissipate, family members became scattered like atomic individual particles. Each individual nurses his or her own hurts and tends to his or her own business.

...know how to care for one another or to coordinate emotionally, because the context that lent substance and meaning to their relationships has disappeared. Two survivors put it this way:

> Each person in the family is a loner now, a person alone. Each of us is fighting his own battles. We just don't seem to care for each other anymore.

> The family is not what they was. They're not the same people. I don't know how you'd put this, but before there was love in the home. But now it seems like each one is a different person, an individual by himself or herself, and there's just nothing there.

Finally, the difficulty people experience in sustaining warm relationships extends beyond marriages and families out into the rest of the valley. In places like Buffalo Creek, relationships are part of the natural order—being inherited by birth or acquired by physical proximity—and the very idea of "making" friends or "forming" relationships is hard for these people to understand and harder still for them to achieve.

One result of all the problems I have described is that the community (what remains of it) seems to have lost its most significant quality—the power it gave people to care for one another in moments of need, to console one another in moments of distress, and to protect one another in moments of danger. In retrospect, it is apparent that the community was indeed stronger than the sum of its parts in this regard. When the people of Buffalo Creek were clustered together in the embrace of a community, they were capable of remarkable acts of generosity; when they tried to relate to one another as separate individuals, they found that they could no longer mobilize the energy to care. One woman summed it up in a phrase: "It seems like the caring part of our lives is gone."

CONCLUSIONS

To end with an oversimplified metaphor, I would suggest that the people of Buffalo Creek were accustomed to placing their individual energies and resources at the disposal of the larger collectivity—the communal store, as it were—and then drawing on those reserves when the demands of everyday life made this necessary. When the community more or less disappeared, as it did after the disaster, people found that they could not take advantage of the energies they once invested in that communal store. They found themselves almost empty of feeling, devoid of affection, and lacking all confidence and assurance. It is as if the cells had supplied raw energy to the whole body but did not have the means to convert that energy into usable personal resources once the body was no longer there to process it.

DM 7-4

Children of Disaster: Clinical Observations at Buffalo Creek

BY C. JANET NEWMAN, M.D.

Most of the 224 children who were survivor-plaintiffs of the Buffalo Creek disaster were emotionally impaired by their experiences. The major factors contributing to this impairment were the child's developmental level at the time of the flood, his perceptions of the reactions of his family, and his direct exposures to the disaster. The author focuses on children under 12, describing their responses to fantasy-eliciting techniques and their observed behavior after the flood compared with developmental norms for their age and reports of their previous behavior. These children share a modified sense of reality, increased vulnerability to future stresses, altered senses of the power of the self, and early awareness of fragmentation and death. These factors could lead to "after-trauma" in later life if they cannot make the necessary adaptations and/or do not receive special help to deal with the traumas.

AS PART of the psychiatric evaluation of the survivors of the Buffalo Creek flood, 224 children were interviewed and evaluated; most were found to be significantly or severely emotionally impaired by their experiences during and after the flood. In this paper I will focus on children under the age of 12, using as a sample 11 of the children I assessed personally.

As has been described elsewhere in this section, the evaluation procedure began with an interview of the total family and proceeded to individual interviews. In interviews of mothers, outlines of each child's developmental history and functioning before and after the disaster were obtained. This information was passed on to the child psychiatrists in order to help us place each child in his parents' developmental perspective. Children were usually seen in their own rooms. They were encouraged to recall their own experiences of the flood; such expressions had often been submerged or inhibited amidst the outpourings of more vocal family members. The issues we discussed included past and present family life, personal feelings, school experiences, and the childrens' perceptions of future hopes, the nature of the disaster, and the meaning of the lawsuit.

We used such fantasy-eliciting techniques as "three wishes," "draw a person," and story telling. Preadolescent children were asked to draw a picture of the flood as they remembered it. Special education from the Children's Psychiatric Center obtained school data to confirm or correct parental impressions of major losses of academic achievement that persisted long after the disaster.

The effects of the disaster on children can be attributed to three major factors: 1) their developmental level at the time of the disaster, 2) their perceptions of the family's reactions to the disaster, and 3) their direct exposures to the disaster. This paper illustrates each factor and examines their numerous interactions.

DEVELOPMENTAL LEVEL

The developmental factor will be illustrated by contrasting the clinical evidence gathered from 3 latency age children and 2 preschoolers. A depressed, hopeless, and guilt-ridden 11-year-old boy who had discovered human remains in his immediate environment after the flood drew a starkly realistic picture of a completely submerged trailer that contained two people screaming for help. A house above the trailer was half filled with water, and a panic-stricken figure tried to keep afloat amidst the waves and debris of the flood waters. Drawings by 2 younger children showed a possible symbolic meaning of mountains to Appalachian children, i.e., the provision of humanlike functions of cradling and life sustenance (this contrasts with Lifton and Olson's remarks about the "overall environment, including nature itself, as threatening and lethal" [3]). An 8-year-old boy with a chronic anxiety reaction drew the "house-mountain" depicted in figure 1 as life-saving compensation for his temporarily lost and helpless parents. The drawing represents a traumatic regression to a wishful merging of parental security to a house-mountain in a partially beneficent environment. A 7-year-old child also indicated security in nature in a picture of himself climbing a steep hill behind his mother and aunt. He drew a tree behind him saying, "This is a tree I can hang onto if I slide down." Nature offers support when human beings suddenly seem helpless. In Appalachia, the mountains represent not only slag heaps and flood threats but tangible reassuring security.

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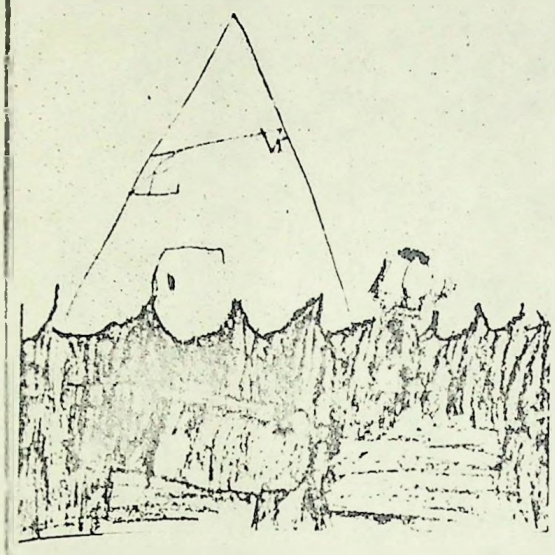
Figure 1
3-Year-Old's Drawing of a "House-Mount



...ws that the trailer is destroyed, while the safe "mountain" acquires door ...d windows.

The experiences of 2 younger boys will be described to isolate developmental factors at the preschool level. ...ry, who was 3 years old at the time of the disaster and 5 at the time of our interview, was the only son and favorite child of his mother's second marriage. He was the first to awaken on the morning of the flood. ...oking out his window, he viewed the uncanny and perplexing sight of a house moving down the creek. ...nsure whether this was real or a dream, he awakened his parents, conveying more cognitive bewilderment than fright or anxiety. He remembered saying, "Come and look!" The parents rose instantly and managed to evacuate the family to safety on high ground just in time.

Two years after the flood, his mother told us that Henry frequently slept in the same bed with her and loved to be rocked, although he had rarely needed this type of attention before the disaster. She reported that he often talked about the houses and cars that had floated by in the flood and how they "went boom!" I felt that because Henry was the first to awaken and, in a sense, rescued his family, they regarded him with special gratitude and admiration. During the family interview Henry was hyperactive—he was friendly but restless. In his individual interview, he recalled seeing the house going by his window and asking his parents to come and look. He denied being scared, but said, "I didn't like it." Henry also remembered seeing a screaming baby on top of an upside-down store that was floating downstream. He said, "I didn't like that either. I hated it."

Henry's flood picture started with a creek as an almost perfect circle. Then a curving line showed "how the creek goes here." A rounded object near the path of the flood conveyed its force: as he explained, "The flood threw this rock." Then Henry spontaneously drew a 3-sided rectangular but bottomless form nearby with "windows" for eyes, explaining that this was a person killed in the flood. Most children Henry's age, drawing their first human figures, use crude circles for heads or head-and-body combinations. In a precircle phase they use primitive scribble-strokes to indicate human figures. Henry had already manifested a capacity for drawing circles but had applied this skill only to his representation of the flood, using a bottomless rectangle with windows for eyes as a human figure. Such faces or human figures were interpreted as condensations of humans with buildings, stimulated by this 3-year-old's view of a peculiarly and perhaps awesomely floating house and other buildings, including the one the screaming baby was on. His flood experience started as he awakened from sleep, and sorting dream from waking perception and reality is typically difficult for young children. Developmentally, Henry was at a stage of tenuous differentiation of dream from reality and animate from inanimate objects, and motility is the first characteristic differentiating living from inanimate objects.

To summarize, Henry's drawing showed the human figure as dehumanized and fused with a seemingly animated building. The bottomlessness of the human face-figure suggests his lack of security, which was shown clinically by hyperactivity and an excessive need to be closer to his mother than he had been before. The circular flood moving huge rocks suggests the projection of superhuman powers to nature. His barely developed abilities to separate animate from inanimate and actuality from fantasy or dreams help to explain his current bewilderment, excessive anxiety, and hyperactivity. His favored position in the family and his role as "rescuer" have accentuated his sense of narcissistic omnipotence, which allays his underlying feelings of helplessness and anxiety. It is likely that his problems of immaturity, anxiety, and developmental deviations in cognition will become more evident when he starts school.

Peter was interviewed 2 years after the disaster, which occurred when he was 26 months old. His parents reported that he had been a happy baby, developing at normal rate. His father, a chronically disabled miner, described how the family scrambled up the side of the mountain behind their home and watched as their house was swept away and a nearby bridge crumbled from the force of the flood. A frantic passerby yelled to Peter's father to aid in the rescue of two children clinging to a floating mattress. As he ran to help, his wife screamed for him to come back. Realizing the danger, he ran back to his own children and led them to higher ground, carrying Peter on his chronically weak back.

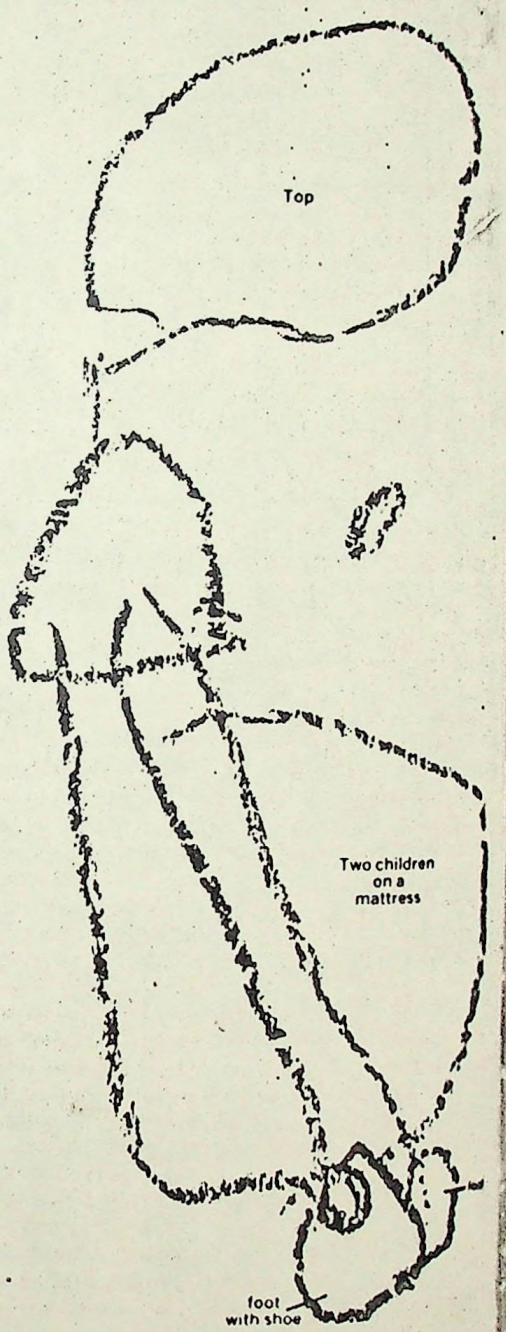
Since the disaster, Peter cannot take a bath without screaming, and he still wets the bed frequently and screams in his sleep. He gets mad easily and always

wants his own way. Peter's memories of the flood involved concerns over the safety of his friends and an older brother's loss of his best friend. He referred to the "two kids on a mattress" and worried aloud whether "their daddy, he might just not want them." This must have represented his own fears at the hands of his own father, who did not save all children, limiting his efforts to the rescue of his own family. When asked about troubles or worries he said, perhaps stoically, "I don't be sad: that's all." When asked what would make him happy he said, "I don't know, maybe if my daddy was handy."

Peter's response to the three-wishes question was touching and highly original and was probably related to a 4-year-old's determination to hold on to reality, with a resulting fear of pretending, even for a moment: "I don't wish," he said proudly. His drawings, made at age 4, about his flood experience when he was 2 years old, should remind the reader of Henry, who, although he was perfectly capable of drawing good circles, drew a person as a house with a rectangular bottomless face. Peter, although younger, is involved with deeper, more sophisticated, more human views of the disaster.

Peter's first flood picture included irregularly round or oval outlines of what he then chose to call windows—an "ugly" window, a "shoe" window, and a "big" window. (Windows with views of the creek became highly important for many families.) As an afterthought, Peter drew a longer shape and told me to write "two kids on a mattress in the creek" within it. I then said, "Let's do that one again on a bigger page." Peter drew a mattress and started to draw the 2 children in the form of lines. However, in the process, he appeared to convert the children into 2 legs (one barefoot and one with a shoe)[1] and then drew a body and a head labeled "top," creating a total human figure. He was influenced by the fact that his siblings were drawing people. Figure 2 is Peter's second drawing: the writing is that of the interviewer during the process of drawing and records Peter's words. This is a powerful condensation of a traumatic scene, combining his father's failure to save all of the endangered children, particularly those on the mattress. These 2 children became the 2 legs of the larger total human figure in the picture. As with Henry, we see a variety of serious developmental interferences and emotional distortions in the development of perception and cognition as manifested in body image concepts.

FIGURE 2
A 4-Year-Old's Picture of Two Lost Children Condensed Into a Human Figure



REACTIONS BASED ON DIRECT FLOOD EXPERIENCES

Marie was the cute, articulate daughter of a strong father and a dominating hypertensive mother; she was 8 years old at the time of the disaster. During the flood Marie's mother bundled her in blankets and carried her to shelter, never allowing the child to see the awful stages of the flood.

During Marie's interview, her "draw-a-person"

[1] Many children were barefoot or half barefoot in the escape from the flood and suffered frostbite.

...ns of smiling, childlike parents in flowered cloth... Her flood picture, drawn from hearsay, seems ... at first glance. However, the bubbly clouds ... drew were duplicates of the floral prints of the fa... shirt and the mother's skirt in the draw-a-person ... The houses stood high above the languid ... and the many bodies appeared mostly in cheer... upright positions. Only 2 small figures yelled, ... Marie exemplifies a child reacting to maternal ...ties, reminding us of the children described by ...na Freud and Dorothy Burlingham in *War and Chil...* (2), who reacted far more strongly to maternal ...ons than to bombs.

The major clue to the anxieties underlying the fa... of pollyannaish denial was Marie's response to ... Desert Bird Fable, which elicits a child's story of ... a baby bird who can fly a little will do if a strong ... blows the family nest from the tree, scattering ... mother and father and baby bird. Marie asked, "Were they all close together or were they far apart?" ...hen said. "What do you think?" Marie replied,

> Mother makes another nest, with twigs, on a stronger branch. The little bird grows up to have a family. Or, maybe the mommy bird might get sick or die, or a cat might eat her. Or maybe the little bird might get sick or poisoned. It might mistake weed-killer for seed. That could happen. Oh well, the little bird probably got old and then died.

This story reveals a rapid descent from superficial ...alth into violent and even paranoid ideation, in...ving the death of both mother and baby by violence ...d poison. This rapid weakening of defenses reveals ...arie's vulnerability to and identification with a chron...ally anxious mother, whose exacerbated anxieties ...e had been intimately exposed to in the apparent ...vice of being protected herself.

Richard, who was 7½ years old at the time of the di...ster, was the middle child of 3, born to mature par...nts. On the day of the disaster, as soon as the water ...d fell, Richard and his father searched for relatives. ...ey were concerned about the safety of Richard's ...der sister, who had stayed overnight with a girl ...end. The sight of the mutilated body of a boy Rich...d's age was shocking to both the child and his father. ...ichard was described as a changed boy since the ...od, having become tense, nervous, talking little to ...s parents, and suffering from terrifying nightmares of ...one coming back from the black water to take ...m to the spirit world. When interviewed, he said that ...e usually slept with a blackjack under his pillow.

Richard's flood picture conveyed a firm sense of ...ality, a strong sense of form combined with creative ...ability. He drew a truck carrying 5 bodies wrapped ...sheets, set against a background of a burning slag ...p and a house with a large chunk missing. The sky ...overcast and it was raining. His draw-a-person pic...e, a clever, strutting, colorful comic book character ...wn in profile, shows color, movement, and detail and indicates creativity and ego strength. Despite enduring strengths in peer relationships, good school performance, and basically warm family ties, Richard has a chronic traumatic anxiety reaction manifested by trembling hands, tension, inner tremulousness, difficulty sleeping, and nightmares. In contrast to Marie, who looks deceptively healthy and self-assured but whose reawakened inner problems stem from close ambivalent ties to a chronically anxious mother, Richard's symptoms represent more purely a chronic overt traumatic reaction to the disaster, in the context of considerable ego strength.

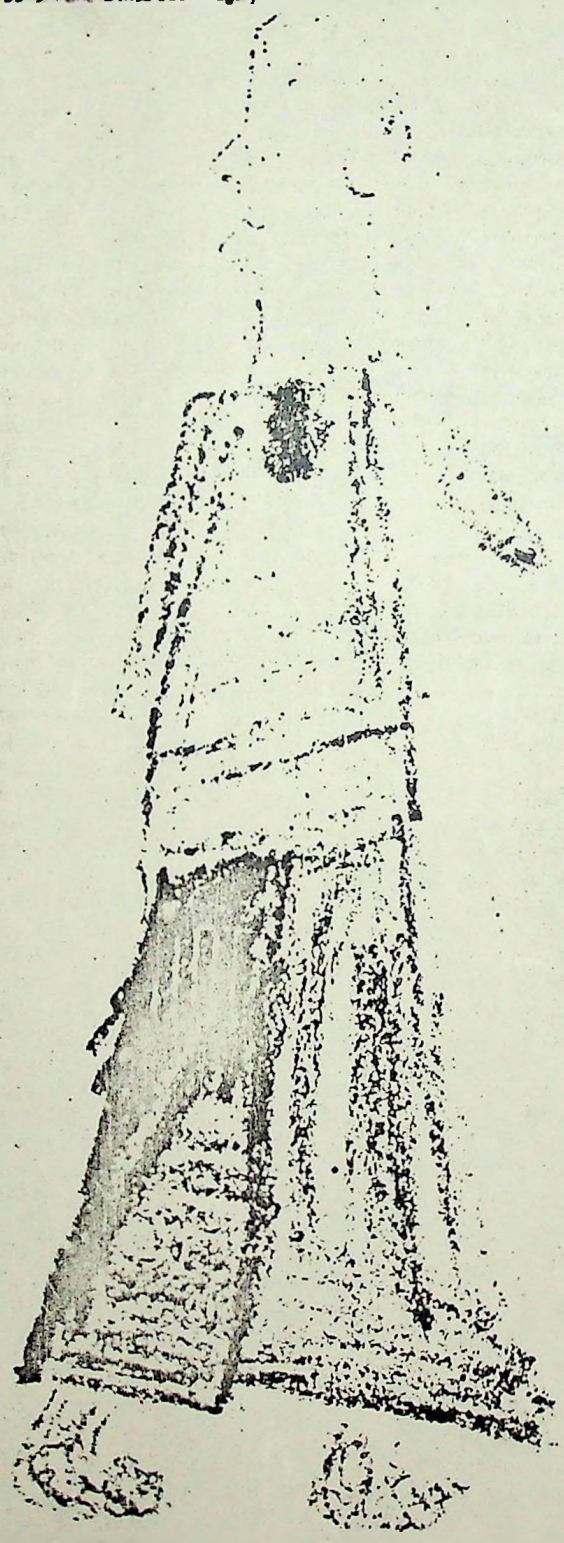
David, 7 years old during the flood and 9 when interviewed, was apparently well-adjusted before the disaster. Afterward his grades fell, he tended to keep to himself, and got into fights. His most severe symptoms, however, were crying in his sleep, sleep-talking (saying he wants to "get home again"), and somnambulism—he seems to be walking *out* of the house. Although others direct him back to bed, he does not wake up during these episodes but appears frightened. Since the disaster he has been wetting his bed several times a night, something he did not do previously

In his interview he appeared attractive and cooperative but quiet and somber. He did not recall the content of his sleepwalking episodes, although he vividly remembers people screaming while they were drowning during the flood. David drew a bizarre person with a strange colorless face looking backward and a brightly multicolored body with feet pointing in the opposite direction from the face (figure 3). Diagnostically, he had symptoms of a traumatic neurosis with a dissociative-type nysterical neurosis (exemplified by his somnambulism) encapsulated within it. It seemed likely that his trancelike sleepwalking was a repetition of the original escape; this interpretation was supported by his grotesque drawing of a person whose profile, while colorless, had a fixed smile and slightly quizzical or puzzled eyes. Facial distortions and poor fit to the body are evident in the picture.

David's pathology was focused and severe. Sleepwalking usually occurs in stage 4 sleep when central nervous system motoric inhibition of REM dreams cannot occur (3). Certain types are called "somnambulistic trances" and may represent physical reenactments or abreactions of traumatic situations (4). David's bizarre picture suggests an unconscious connection between his sleepwalking state and his conscious imagery.

Marie has become subtly but severely traumatized through her direct relationship with a chronically anxious and flood-traumatized mother, while Richard and David's more conspicuous and overt traumatic reactions stem more directly from their flood experiences. The contrasts in the symptom choices of Richard and David are probably multiply related to their constitutional backgrounds, developmental experiences preceding the trauma, and the exact circumstances of the moment of greatest trauma each experienced in the disaster.

FIGURE 3
[illegible]-Year-Old's Drawing That Suggests a Link Between His Somnambulistic and Conscious Imagery



OBSERVATIONS ON OTHER AGE GROUPS

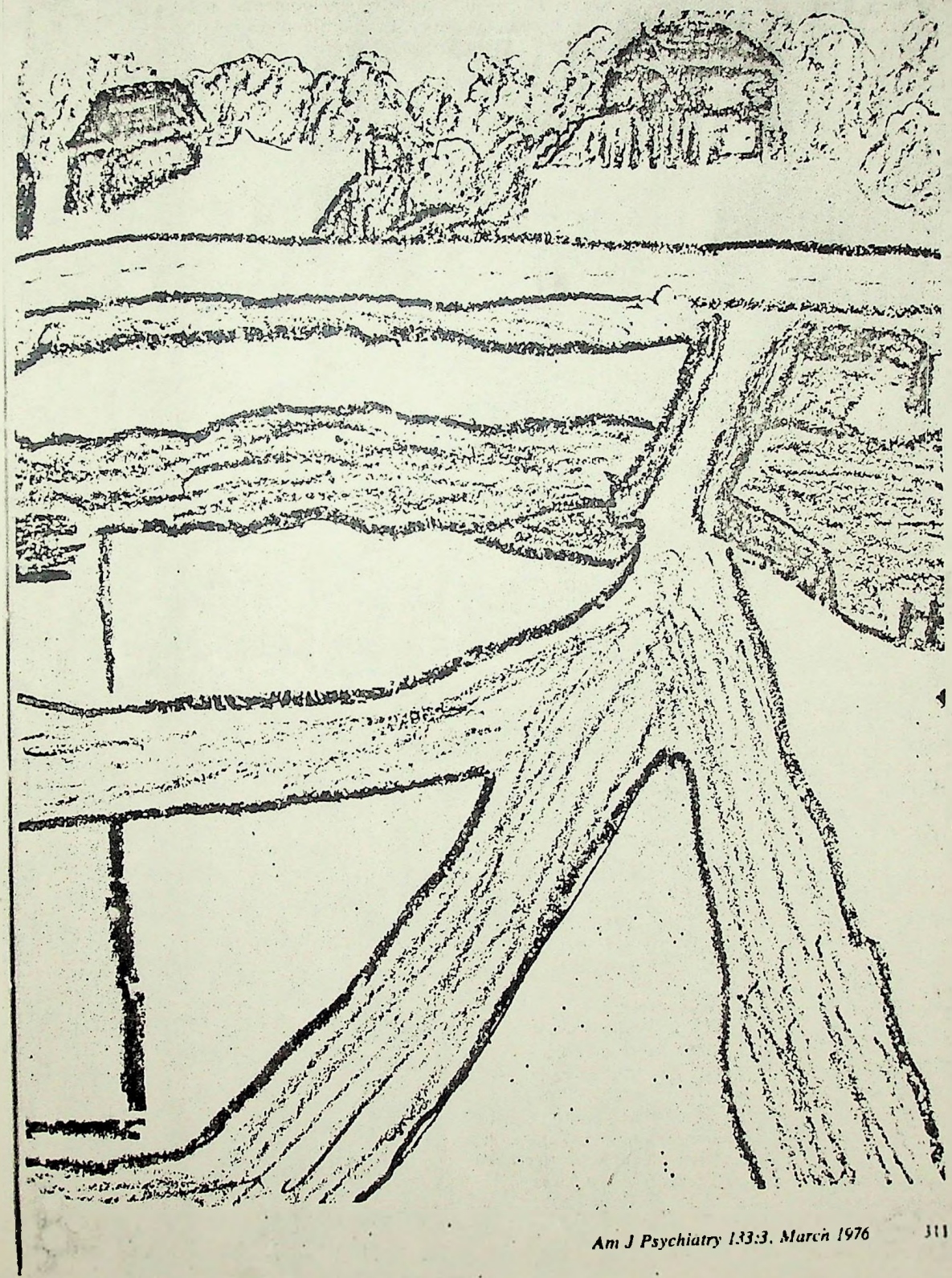
I have not mentioned another group of children those who were in utero during the flood. Often preciousness lies in having survived the pregnancy frantic mother. Among their future stresses may be never-ending tales or the silent allusions of the fam about the disaster these children never experienced The parents may see them as magically and profoundly linked with the flood. These children, as well as those born later (who will also feel left out, yet involved) be unpredictably but importantly influenced by the tastrophe.

Although this paper has focused on preadolescent children, a few words must be said about adol[illegible] special vulnerabilities to the psychological effects of the disaster. Because the almost total community de struction, the loss of communality described elsewhere in this section by Dr. Kai Erikson, was so disruptive, especially to adolescents, they often had to choose between rebellious predelinquent behavior or compliant social withdrawal. They suffered deeply but privately when their parents broke down under stress. For example, in one family, the favored older brother, who had been the "good one" before the disaster, changed his behavior markedly—he missed many days of school, threatened the teaching staff, was suspended five times, and is currently on probation because of his behavior. At home he sat up at night apprehensively listening to rain or roared away on his motorcycle. However, his next younger brother continued to attend school regularly and made every effort to concentrate. The contrast between his very chaotic flood picture and a carefully drawn pink dove of peace that his teacher had praised as "best in the class" [illegible] the range and conflict of his inner experiences, which he has internalized, but with unknown emotional strains.

Creative expressions emerged in many cases. Out of a highly disturbed large family living in two trailers a state of chaos came a touching picture drawn by an 11-year-old boy (figure 4). Denying the turbulence of the flood, he drew an intellectually complex picture with excellent perspective that showed a trestle, four intersections, and a quiescent creek. He labeled it "the road to where we used to live." In the background, brightly colored idyllic homes in red, [illegible] and orange nestled among the woods on the hillside. There were no people in the picture, but there were possibilities for human reconstruction. The three symmatically split roads suggest important choices to be made, and the colorful homes in the background suggest hope.

Finally, some older children did follow the law and psychiatric interviews with great interest and sophistication. They recounted hopes of being law [illegible] and nurses, even though they were often having problems in their basic school courses. They wrote essays on safety regulations and dam construction as well as projects and tried to master their experiences [illegible]

Creative Picture Drawn by an 11-Year-Old Child



ally and intellectually. They will never forget this experience, and they will be watchful of all the adults who have participated in it; they either idealize or are disillusioned with parents and other adults. When they grow up, they will watch the world closely. They will have learned enormously both in and out of school.

CONCLUSIONS

Children in traumatized families within a shattered community form their own theories of a disaster from their own reactions and their perceptions of the reactions of their parents and other adults. Their conceptions are also influenced by the social and legal processes associated with the disaster. All of these factors permanently affect their sense of self in growing up. The common heritage of most children of disaster is a modified sense of reality, increased vulnerability to future stresses, an altered sense of powers within the self, and a precocious awareness of fragmentation and death. In contrast to most of their parents, some of the children manifested clear and enduring evidence of hopefulness and creativity, despite obvious [illegible] limitations in their ability to achieve specific [illegible]. Their sense of hope existed side-by-side with [illegible] signs of developmental limitations and serious [illegible] gy. Indeed, the widening discrepancies between [illegible] sensitivities and academic achievement could lead [illegible] severe "after-trauma" in later life. They would require unusual life adaptations or special help to respond constructively or creatively to the traumas they had undergone.

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DM 7-5

Discussion of the Buffalo Creek Disaster: The Course of Psychic Trauma

ALEXANDER RANGELL, M.D.

The specific contribution of the psychiatrist to the case study of the human disaster at Buffalo Creek is focused on the course of psychic trauma. The initial massive intrusion by the flood waters was followed by a second phase of the traumatic cycle, the physical dislocation of the survivors, with disruption of their "around" and "surround." During this long subsequent period the level of trauma did not recede but kept rising, although at a slower pace. Distant effects of the trauma may succeed the more immediate ones. The finite psychic space of the survivors is encroached upon by traumatic memories for an indefinite period of time, leaving fewer resources available for normal effective living. The absorption and merging of traumatic stimuli into a traumatophilia poses still another potential problem. The unprecedented legal decision as to the linear effects of psychic trauma on a succession of connected individuals will need further interdisciplinary clarification.

IN OFFERING OPINIONS on the overwhelming human experience of the Buffalo Creek disaster, the challenge is to separate our reactions of empathy and horror (which, as Lifton and Olson [1] have pointed out, were quickly and painfully shared by all mental health professionals who came to the valley after the disaster) from the potential contributions of our specific professional expertise. Toward this end, I will focus on the realm of psychic trauma (2), its nature and its effects, to complement the findings of the interdisciplinary team of sociologists, psychologists, attorneys, and others who took part in the evaluation of the effects of this experience on those who survived it.

The articles in this section range from the individual to the collective, from the child to the adult, and from the deepest inner effects to the widest outer consequences of this sudden, unassimilable disruption of man's relationship to his physical world. These studies address not only the inundation of psychic structures in a horizontal sense but also the longitudinal effects of the flood—the disturbed continuity with the past, the shattering of the present, and the inescapable portents for the future.

The work of the interdisciplinary evaluation team retained by the law firm representing the 625 survivor-plaintiffs to assess the psychological impact of this catastrophe has profound implications, reflected in its effects on the social decision-making process. The unprecedented legal decision, reported elsewhere in this section by Mr. Gerald Stern, permitted people who were not on the scene of an accident to be awarded reparations for the psychic damages they suffered. The principle acknowledged in this case could well shake all existing rules of the social order about the responsibility of man to man.

THE FIRST PHASE: PSYCHIC NUMBNESS

To turn to the central focus about which psychiatrists can reflect and from which other observations will stem, the Buffalo Creek flood was a violent intrusion into the peaceful psychic life of the community massively beyond the "average expectable environment" (3). This eventuality was not, however, completely unexpected—the people in the valley had long lived with this possibility and knew it could be prevented, but they said they had put it out of their minds. Actually, it had been put not out but deeply in, had become part of their living unconscious. It was in some ways like the earthquake situation in California but worse and more constant. The dam that finally broke physically existed just above the valley and was visible and ever present. Another difference, which added the makings of a latent inner eruption to the potential external occurrences, was that there were in the minds of valley residents people (the owners of the dam) who could and should have done something about the situation. Like the cave-in of a coal mine in a community that has always lived in dread of such an occurrence, the flood had been part of the mental as well as the physical geography of Buffalo Creek, a feared event buried in the minds of the people. The massive convulsion of the physical world that took place on February 26, 1972, was a mental imprint come true. It was a nightmare from which this time they did not awake.

The black waters that roared through Buffalo Creek

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valley when the fantasied, feared, and repressed event became reality could be said to have flooded the egos of those who lived through the disaster. All control functions were overrun by the sudden influx; it was a maximum dosage per unit time, a psychological overkill. The result was universal and with a common base to all, the traumatic state, the condition of psychic helplessness that the anxiety signal presages and that all of the ego's defenses constantly work to prevent (4, 5). This was the phase of psychic numbness observed in all of the studies of the survivors. The goal was merely to live through it, to survive. Each individual held on to whoever or whatever was left. "Psychological conservatism," which Drs. Titchener and Kapp describe in "Family and Character Change at Buffalo Creek," served to reduce excitation; no further stimuli were wanted.

This stage of psychic numbness, of apathy, withdrawal, and sluggishness, was still visible when the evaluation teams arrived in Buffalo Creek 2 years later. Some of the observers were surprised that the traumatic neurosis was still visible, but what evidence is there to assume that the residual or even basic effects of so massive a trauma would not last a lifetime? Psychological testing of survivors of the Nazi holocaust has shown that after 30 years they still show such lasting effects as impairment in perceptual-cognitive functioning, withdrawal from objects, inability to sustain close relationships, and other subtle and overt sequelae.

While the legal experts perhaps needed to be concerned about the claim of preexisting states, I would prefer to maintain clarity and not to have to use the word "impairment," to blur the fact that there *was* loss, injury, and illness. The effects of the disaster were as ravaging as an epidemic of typhus or plague, which is similarly visited upon a city from without, and the preexisting vulnerabilities in the hosts to receive the invading organisms are not an issue. The traumatic neuroses overshadowed psychoneuroses. I do not mean to say that there were no preexisting psychoneuroses, but rather that they no longer had a chance to assert themselves. This is an issue that has plagued every psychiatrist who has served in the military. Combat neuroses in their acute phases are more uniform than different in their presenting syndromes; only later can individual differences reappear and assert themselves again. During the years to come, as normalcy returns to the Buffalo Creek survivors, they will have the luxury of becoming individually neurotic again.

THE SECOND PHASE: "GROUND" AND "SURROUND"

What happened to this community in terms of incoming traumatic stimuli did not stop with the cataclysmic events of that Saturday morning. As disorienting and time-stopping as the flood was, it was only the first phase. An individual who suffers a loss, however shattering, generally returns to his home to start the long and difficult process of repair. His "ground," the ground into which the self can merge, is the source of his security, the source of the nurturing supplies to sustain the processes of reparation. This was not possible in Buffalo Creek. The dazed survivors were returned not to their familiar ground but to new and strange surroundings. This may have been the only possible course, but it was still depriving and further threatening. Rather than nurturance, the survivors continued to face challenges, for a long time and by being a raw and vulnerable state.

In this double and almost death-dealing blow, the survivors repeated the experiences of other holocausts known to our generation. Those who survived and escaped from Nazi Germany wandered into new lands. The survivors of the atom bomb returned to cities where their homes had been. Many South Asians have had to leave their land after having left their dead. In all of these cases, the survivors' earth is also gone after their fellow humans have disappeared.

Years ago, writing at another level and about more comfortable aspects of human troubles, I described "attachment to ground" as the psychic prerequisite for the maintenance of the social state of poise (6). The opposite condition, a wavering hold on one's surrounding psychic ground, results in a basic insecurity with the threat of crumbling and even annihilation of the self. This is the source of the primitive anxiety that people feel at the first threatening tremor of an earthquake. In the more mundane case of seasickness, the fear has been said to be not that one will die, but that one might not. Underlying both of these disturbed states is an elemental anxiety that stems from a loss of orientation in the relationship of the organism to the earth under its feet.

In the course of ontogenetic development, this relationship extends from the ground beneath one to the space around him, to people, institutions, atmosphere, and the culture. This is the common background of the phenomena described by Freud in the oral stage (7), in the attachment studies of Bowlby (9), in Mahler's contributions on separation-individuation (10), the effects of motherlessness on the primates studied by Harlow (11), and in the natural experiments on human infants studied and documented by Spitz in cases of marasmus resulting from early and massive deprivation (12).

Not only did the ground of the Buffalo Creek valley literally sink beneath the feet of its inhabitants, creating the most primeval regression man can experience, but when the survivors reached solid high ground they were again deposited on an insecure terrain as a social "envelope,"—an intriguing term used by Kai Erikson—of unfamiliar space. The trauma did not end, it merely changed. There are strain traumata (13), shock traumata (14), cumulative traumata (15), and sudden overwhelming disruptive events. The stimulus barrier can be bent as well as ruptured. At this point, the trauma of the survivors changed

sudden to cumulative. The flood receded, but the level of trauma did not; rather, it kept rising, although at a slower pace.

This was the phase studied intensively by Dr. Kai Erikson, described in this section from the sociological standpoint as a loss of communality, the social tissue that binds people together. While this loss was universal, we should not overlook the fact that it was an individual trauma as well. Just as the original traumatic event, although universally shared, was individual in its suffering, so was it with this second phase of the traumatic cycle. The change from the familiar to a strange environment during the period when rest and nurture were needed superseded the initial trauma and prolonged and compounded its effects in each survivor.

THE THIRD PHASE: FUTURE EFFECTS OF THE TRAUMA

The articles presented in this section survey the effects of the disaster to date. Less measurable are the future effects, especially those which are more subtle and internal. Are the children Dr. Newman interviewed who are now getting along well in school less vulnerable to future stresses than those who are currently more turbulent and disturbed? Or is the reverse the case? Only long-term longitudinal studies (which are not likely to be practical or feasible) would answer this and similar questions.

There are subtle and far-reaching issues facing the survivors. In spite of the vastness of the unconscious, psychic space is limited. There is room and time in any individual psyche for only a limited amount of cognitive ideation and a finite number of memories, fantasies, and accompanying affects. The product of such space and time comprises the psychic life of an individual, the amount already spent and the amount still left. Mourning is a model of such an occupation of psychic space, a paradigm of how obsessive thoughts and memories related to psychic work that needs to be done crowd and consume the psychic capacity. Traumatic memories of any kind encroach on this psychic time-space and reduce its available quantity; this is why psychic traumata age people.

I have been treating a woman in her mid-seventies and have discovered that her apparent senility is due not to an organic aging process but to the repression of decades of a traumatic life. She had told herself—she brought this out with clarity through her foggy memory in sessions that had a hypnotic quality—that she did not want to remember any part of her married life of close to 50 years. The volume and intensity of the traumatic memories being repressed left her almost no room for normal living. She had by now assumed the posture, both mentally and physically, of a diffuse cortical atrophy, without evidence, either neurological or radiological, of any organic syndrome nor even convincingly of cerebrovascular disease. She was like a young, acute, traumatic amnesia, except that this was chronic, old, and massive. Her mental state undulated dramatically with the emergence and rerepression of forbidden thoughts. This poignant clinical experience has made me wonder about the general psychopathology of "old age."

How much space will the Buffalo Creek experience occupy in the minds of the survivors in their future lives? We routinely treat patients who react to a deprived childhood by sacrificing a certain percentage of their psychic lives. I have treated a patient who has occupied perhaps a quarter or a third of her free associations with obsessive preoccupation over her screaming mother; her thoughts are similarly occupied outside of the analysis. Another of my patients has been unable to enjoy his current life because of the constant crowding of his psychic space by the coalesced memories of the threats of castration that pervaded his tortured childhood. I have pointed out elsewhere (17) the role of such chronic traumata in producing the cacophony of human relationships in ordinary life.

These situations represent fairly common developmental traumata. How much more of a role do cataclysmic traumata like the Buffalo Creek disaster play? What will be the long-term effects of the vivid, massive "death imprint" described by Lifton and Olson (1)? What will be the effects on children in whom death anxiety has been violently added to the normal anxieties of separation and castration? It seems likely to me that their memories will repeat the accumulated traumata over time like a long-acting timed-release capsule.

There was an element in this disaster that is not present in truly natural catastrophic events, which serves to explain further why the "Buffalo Creek syndrome" is not limited to reactions to external events, but rather reflects added internal idiosyncratic forces. I am referring to the human element, the thought and the accusation that this horrible occurrence could have been prevented. Unlike a natural disaster such as a tornado, where inanimate forces of nature are solely responsible, the human object was involved in the Buffalo Creek Flood, which arouses impulses of aggression and retaliation. Channels for discharging these impulses do not keep pace with the amount and quality of the impulses aroused. The ego is bombarded from two directions, and feelings of rage, impotence, anxiety, guilt, and depression are added to the usual responses to disaster.

The more external normalcy returns, the more will traumatic neuroses and psychoneuroses be in a reciprocal relationship to each other. The residual trauma will stimulate individual neuroses, and latent neuroses will feed upon and perpetuate the traumatic state. Such restitutional movements are already evident in the survivors and will increase with passing time. Phobias, obsessions and depressions, and private anxieties and conflicts have already been noted by various observers, and survivors' dreams are beginning to reveal their predisaster concerns.

There are other more subtle unknowns to cloud the future. What happens when a traumatic effect merges

over time into a traumatophilia? Such an outcome can represent a repetition compulsion not in the service of mastery but to satisfy a sense of guilt or a need for punishment, a trauma that is absorbed and utilized by the psychic forces "beyond the pleasure principle" (18). Or what will be the result when the pleasure formulae or safety mechanisms themselves become altered and individually fashioned as a result of the traumatic experience? I am reminded of a patient who was traumatically raped and now finds her husband and all other men to whom she turns passive and weak. Or a patient who, from a traumatic rejection in her first love, has come to no longer believe in love. Another patient, similarly hurt, now feels "I'll never again have a best friend." What will be the effects of the life-threatening insult at Buffalo Creek, seen by the survivors as a result of neglect by people in authority, on trust, love, and object relations? One can hardly begin to tell, but one can be prepared so as not to be surprised.

In surveying this event and the reports that have been presented in this section, we should not overlook the effects of the studies themselves on the 625 survivor-plaintiffs evaluated. Aside from the legal result, the interest displayed by caring individuals from the society outside the valley probably introduced a therapeutic influence, however circumscribed. This influence might be compared to the effects on a therapeutic ward of the mere announcement of a program of treatment. However, there may also be negative effects: divisiveness has been introduced in the valley. Just as the untreated "control ward" suffers by comparison with the therapeutic community, those survivors who were not among the litigants may feel left out and discriminated against.

While an important and unprecedented legal decision has been achieved that greatly extends the definition of psychic trauma following an external event, the full implications of the human phenomenon described in this section cannot be estimated. Anyone who is lost, hurt, or otherwise affected under traumatic circumstances affects others in an endless chain that is attenuated only by emotional distance. It would be illusory to believe that it is within our power or professional expertise to accurately describe ethical guidelines for the rectification of the linear progress of traumatic effects. I recently knew of an elderly couple who were being displaced from their home for the building of a federal project. During the process, the husband, distraught over the dislocation, suffered a fatal heart attack. What can we say or what should we do about the effects on his wife? Or the children? Or a chain of others? There are more questions than we can answer. We must work side by side with the law, [illegible] sociology, philosophy, and all thinking and feeling people. No one or no group has a corner on ethics or on wisdom.

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DISASTER: EFFECTS ON MENTAL AND PHYSICAL STATE*

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Abstract—Although there is an extensive literature on various aspects of disaster, there has been no comprehensive review of its psychiatric consequences. This article brings together the phenomenological and dynamic descriptions of the immediate and longer term mental effects of disaster as observed in the individual and in groups. Present knowledge on management of these effects is summarized and some conclusions are reached on the implications for future planning of disaster relief services.

"Things can be so bad that to be sane is insane"
Nietzsche

THE GENERAL field of enquiry loosely encompassed by the term "disaster" has not yet found an established position in the psychiatric canon. There seem to be theoretical, practical and emotional reasons for this. A disaster besets the researcher with major practical difficulties. In his review article, Hocking [1] identifies the following theoretical difficulties: the subject overlaps with other disciplines (notably sociology), it challenges the existence of a boundary between illness and health, and it is relatively remote from traditional psychiatric approaches such as organic psychiatry, experimental psychology and psychoanalysis. However these factors alone do not appear to be an adequate explanation for a delay of 17 yr before any systematic or detailed study of the psychological and social effects of the atom-bombing of Hiroshima. Until Lifton's classic study published in 1967 [2] all that was available were a few fragmentary, or exaggeratedly technical, reports, and Lifton noted that often researchers were so struck by the human suffering encountered that they ceased research and dedicated themselves to much needed social welfare programmes.

Equally conspicuous is the omission of psychiatry from the disaster canon. The field has been studied by sociologists, medical workers, administrators and military strategists. It is covered routinely by the media and provides a stimulus for the creative arts. But the extensive literature on disaster planning does not consider psychological understanding and the psychiatric needs of the victims.

The absence of disaster in the psychiatric canon is of theoretical interest. However the absence of psychiatry from the disaster canon reflects a lack of insight which is of practical consequence. This was shown in the Hartford Disaster Exercise [3]. In this project, a simulated major explosion was arranged in cooperation with the Health, Police, Fire and Civil Defence Departments, five hospitals, the Red Cross and Ambulance Association, the University Department of Medicine, the State Department of Health, and the local medical association. The episode was videotaped and the "victims" subsequently interviewed. It was found that the rescue personnel became confused and were disturbed by the sight of massive injuries, and that the victims were unnecessarily handled and placed in uncomfortable, inconvenient and dangerous positions. At no time did anyone stay with a specific victim to give comfort

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and reassurance. In the 10 yr prior to this there had been only four other well documented and comparable studies and the findings in these were identical. The explanations offered in the article and subsequent *New England Journal of Medicine* editorial [4] were in terms of "poor rescue" and the existence of a "community problem". There was no mention of psychological understanding.

This article is an attempt to use the information in the literature to develop a psychiatric approach to disaster and to suggest its implications for the planning of services. The nomenclature of Tyhurst [5] and Glass [6] is used. A limited number of outstanding psychiatric papers are described in detail and other documented psychological phenomena are mentioned. The long term effects are examined in the context of the phenomena of World War II.

DEFINITION: CLASSIFICATION: DIFFICULTIES

Disaster is defined, for the purposes of this review, as a situation of massive collective stress. The psychological phenomena of disaster are the consequences of the combined individual stress reactions and of reactions to changes in the social milieu. Hence the psychic distress and behavioural disturbance of an individual cannot be fully understood or managed unless they are analyzed as elements in the disruption of the equilibrium of a social system. "When an entire population is reduced to inferior status" for example "the individual's self-respect is damaged in ways not reparable by himself" (Krystal [7]).

As a consequence, hypothetical models may become unmanageably complex (Barton [8]). But in addition there are more practical obstacles to coherent research and understanding. The physical situation of a disaster is rarely one which lends itself to the usual research techniques, the psychological sequelae powerfully affect the observers, there is a great variation in the types of disaster, and they exist in completely different socio-cultural settings. Often the victims resist investigation, and the relief organisations resist investigators.

There is no generally agreed or obviously fundamental taxonomy. Constructs of classification have included: man-made (e.g. bombs), natural (e.g. fire); internal (e.g. tyranny, inflation), external (e.g. war, flood); acute (e.g. earthquake), chronic (e.g. poverty, racialism). Tyhurst [5, 9] provided a classification of the phases of disaster which was extended by Glass [6] and has been accepted by many psychiatric workers (Table 1). These authors define five phases: pre-impact (threat), warning, impact, recoil and post-impact. During the impact phase the stress is physical, maximum, direct, unavoidable; prior to this it develops from the stress of worry and preparation to one of imminent danger, and subsequently secondary stresses due to the nature of the disaster and its effects on persons and property begin to operate. The detailed descriptions of each of these phases is still incomplete, because most studies are varying mixtures of anecdote, description and analysis. As early as 1957 Demerath and Wallace [10] pointed out the absence of a defined disasterology. However despite the subsequent amassing of data, Barton [8] commented in 1969 that most of it was valueless and that researchers still had not developed a set of propositions to test. The diffuseness of the literature has also resulted in important discrepancies remaining undebated.

METHODOLOGY

The methods vary in the number of victims studied, the detail in which they are investigated and the extent to which the information is systematic and quantifiable. They include single case reports, numerous anecdotal studies, some more systematic studies and experimental work. The peculiar methodological problems have been analyzed by Killian [11].

TABLE I.—THE PHASES OF DISASTER (BASED ON THE CLASSIFICATION OF TYHURST AND GLASS)

Phase	Stress	Duration/time perspective	Psychological phenomena	Social phenomena
Pre-impact (threat)	Of education, worry, preparation etc.	Months–years/future	Denial or over-reaction vs optimal amount of anxiety	"Optimal social stress" Social preparedness
Warning	Imminence of primary stress	Min–hr/present or immediate future	Denial vs protective action	Precautionary activity
Impact	Maximum, direct, unavoidable	Min–hr, months–yr/present (automatic)	12–25 per cent effective, tense, excited, too busy to worry 75 per cent dazed, stunned, bewildered i.e. disaster syndrome (absence of emotion, inhibition of activity, docility, indecision, lack of responsiveness, automatic behaviour + physiological manifestations of fear) 12–25 per cent grossly inappropriate behaviour, anxiety and affective states, hysterical reactions, psychosis	Scope of impact: community to nation Emergency social system: the unorganized immediate response (role definition, role competence) with *ad hoc* leadership. Family as the basic unit
Recoil	Suspension of primary stress. Secondary stresses due to nature of disaster or self	Depends on individual and disaster/immediate past	Normals (90 per cent) show return of awareness and recall. Dependency, talkativeness, child-like behaviour, emotional release. Search for safety. Unstable group formation. Psychopathic liberation. Special phenomena e.g. staring reaction, counter-disaster syndrome	Convergence behaviour Inventory and rescue Organized reconstructive effort, relief and restoration of services
Post-impact	Derivatives of primary and secondary effects: personal and social	Rest of life/past–present–future	Grief, depression, post-traumatic neuroses Psychosomatic illness Increased physical illness/deaths Altered attitudes Recovery (?)	Permanent reconstruction and long-term recovery. New equilibrium with modifications: alterations in morale, economy, cultural values. Feed-back to threat phase

Further details in text and bibliography.

(1) *Single cases*

Except for the psychoanalytical literature, there are surprisingly few case studies. One of the earliest scientific reports was that of the surgeon, Jean Baptiste Henry Savigny following the ship-wreck of the *Meduse*, well known from Gericault's painting [12]. Similarly James [13] recorded his reflections on his mental reactions following the San Francisco earthquake of 1906. In his account of his own ship-wreck experience, Lilly [14] reviews other similar personal experiences which led to hallucinations, confusion, paranoia, suicide, murder and cannibalism. Janis [15] used a transcription of the delirious ramblings following rescue to analyse the fantasies and the elements of the unusual mental resilience of a young man who narrowly escaped drowning. Although this experience would not strictly fall within our definition of disaster, information from such a study is important because studies of individuals during the acute phase of massive collective stress are not available.

(2) *Anecdotal accounts*

Anecdotal accounts vary in sophistication. Often they are produced by "experts" who happened to be on the scene at the time [16–25], but sometimes planned studies are reported in anecdotal form [26–31]. The primary result has been an extensive duplication of certain fundamental observations which will be described in the section on Psychological Phenomena. The data is not sufficiently uniform to permit comparisons to be made, but a number of the papers contain interesting and potentially significant details which do not appear in the more systematic studies.

(3) *Systematic studies*

Methods used for systematically collecting information include clinical studies, structured interviews, questionnaires and hard observations of a limited number of parameters.

Clinical studies contribute most of the information on the opportunities for and the effectiveness of psychiatric intervention [32–40].

Lifton's study of the victims of Hiroshima [2] is one of the best examples of structured interviewing. He picked 33 survivors at random from lists kept by the Hiroshima University Research Institute for Nuclear Medicine and Biology plus 12 survivors who were particularly articulate or personally prominent in the A-bomb problem. The interviews were recorded, transcribed, and translated, and they specifically explored the individual's recollection of the original experience and its meaning in the present, residual concerns and fears of all kinds, and the meaning of his identity as a survivor.

Qualitative case studies using interviewing techniques have been extensively used by sociologists. However, Barton [8] reviewing 21,600 interviews of 103 disasters dealt with by organizations such as the National Academy of Science Disaster Research Council, University disaster investigating committees and the National Opinion Research Centre, found that after excluding false alerts, morale surveys, epidemics, small samples etc. he was left with 5,500 interviews of 22 disasters of which 4,000 were quite unsystematic, leaving 1,500 interviews of the Holland Flood and the Arkansas Tornado. The latter study by Fritz and Marks [41] is very frequently quoted. It demonstrates the importance of the question of retrospective falsification since it reports a much lower incidence of transient shock than is usually described and the validity of the figure is not investigated. Other studies using interview techniques provide useful data [42–45].

Questionnaires, in contrast with more or less unstructured interviews, have the advantage that systematic quantifiable information is obtained from a large population. Their disadvantages are that they depend on recall of a traumatic experience weeks after the event. Also they often cover areas in which the questioners are not expert, and this has produced one source of controversy (Quarantelli and Dynes [46]). This technique has been applied to a limited extent by psychologists and sociologists.

Observations using epidemiological methods give a limited amount of reliable information. A few such studies are available such as Bennet's study of the effects of flooding in Bristol on subsequent mortality rates in the affected population [47].

(4) *Experimental studies*

There are three principal experimental methods. Disasters can be simulated, as described by Menczer [3]; however, this method has not been used to study psychological phenomena. The reactions of people in particular stressful situations can be recorded e.g. the observations by Pope and Rogers of the mental state of a group of scientists during an arctic survival experiment, or Ahearn's [49] study of the reactions of large groups experimentally confined in an austere environment. In addition conclusions relevant to disaster may be drawn from many of the results of laboratory experiments on psychological reactions to special stresses such as sensory deprivation or starvation.

(5) *Journalistic accounts*

Editors find that disasters are an inexhaustible source of excitement for their readers. Newspaper accounts often provide particularly detailed information on emotions and attitudes of the victims and rescuers which is unobtainable elsewhere. One of the best recent accounts of cannibalism is probably the Sunday Times report on the Chilean air crash of October 12th, 1972 [50].

CASE STUDIES

We have selected three papers which together define many of the immediate, short term, and longer term psychiatric complications to be expected in a disaster.

The first of these is the major contribution by Cobb and Lindemann (1944) studying the survivors of the fire at the Cocoanut Grove Nightclub [35]. This study was done at the Massachusetts General Hospital where 114 of the casualties were taken. 39 were alive on arrival. The city fire services and the hospital emergency programme were geared up in expectation of air-raids and handled the disaster with exemplary efficiency. The dead were identified immediately and the survivors listed, thus avoiding feelings of confusion, hostility and despair which have been documented when this is not done. The relatives were interviewed by social workers who involved the psychiatrists in the care of those overwhelmed by acute grief. From the relatives the psychiatrists turned to the injured, all of whom they visited on the 8th day. Fourteen of the 32 survivors had neuropsychiatric problems; the commonest problems (50 per cent) were reactions to bereavement, but there were also cases of psychosis, phobic anxiety and complications of carbon monoxide poisoning. It was this work which enabled Lindemann to provide the first detailed description of the phenomenology of acute grief [34]. Cobb and Lindemann drew the following conclusions: (1) Psychiatric problems will be overlooked unless a psychiatrist sees all the victims of a disaster. (2) Severe emotional problems are due to crises in human relationships involving conflict and guilt rather than to the impersonal horror of the disaster itself, hence the nature of the disaster may not be a useful predictor of consequent psychiatric morbidity. (3) A psychiatrist can be useful in three phases, (i) initially during emergency medical care, when confused excited patients have to be removed to quiet surroundings and sedated: in this phase patients are disturbed by the frequent changes of medical and nursing staff and the psychiatrist can provide continuity by developing a relationship with them: (ii) then during convalescence in hospital: psychiatrists can advise on the timing of bad news and can support the patient in adjusting to bereavement, material loss and disability; (iii) finally when the patient returns to the community: psychiatrists can help to reduce prolonged maladjustment and traumatic neurosis. It is striking that despite excellent planning and numerous precautions designed to minimize psychological stress, there was a high incidence of psychiatric illness. Numerous subsequent studies have confirmed that much serious psychiatric morbidity goes undetected by non-psychiatrically trained medical personnel [51, 52].

The second study by Leopold and Dillon [32] described psychiatric disturbances in 36 survivors of a marine explosion in 1957 on the Delaware River.

Initially almost all had features of a post-traumatic neurosis. In the ensuing 4 yr the symptoms became worse, most of the victims requiring psychiatric treatment. Of particular importance to these conclusions was the elimination of compensation as an aetiological factor in prolonged morbidity.

The third study by Popovic and Petrovic [36] described the Skopije earth quake and consisted of observations made by psychiatrists within 24 hr of a major disaster.

Of the population of 200,000, 3,300 were injured and over 1,000 killed. The Institute of Mental Health in Belgrade sent two psychiatrists, a psychiatric social worker and two nurses; they arrived 22 hr after the earthquake and stayed for 5 days. A team of local psychiatrists was organized to tour evacuation camps and a reception centre was established for acutely disturbed patients. They noted that much of the population was in a mild stupor which the team found infectious, that the victims congregated in small unstable groups and that rumours of doom spread. After the initial confusion, severe psychiatric disturbance was rare, and this they attributed to the rapid evacuation of the more disturbed patients, to prompt outside help, and to responsible reporting by the press which minimized the formation of rumours. Depression was prevalent on the 2nd and 3rd days while after-shocks continued. Children who were evacuated to institutions were transiently disturbed.

Although these studies are detailed and relatively comprehensive, and many subsequent papers have confirmed their principal conclusions, they do not explore some areas of practical and theoretical importance. They do not stratify the population at risk: in practice it would be valuable to be able to predict the more vulnerable sections of the community, their different patterns of response and the appropriate management of these. They document the commoner psychiatric phenomena but

omit the less frequent reactions e.g. pseudopsychoses [53] and hysterical reactions [54]. They are written in behavioural and phenomenological terms but it has been necessary to search elsewhere for dynamic understanding of human experience during the various phases of disaster.

PSYCHOLOGICAL PHENOMENA

The literature on the psychological phenomena of the threat, impact, and early aftermath phases was comprehensively reviewed by Wolfenstein [55]. The principal findings in this monograph are summarized here. There is no comparable review of long-term effects. However the effects of some of the exceptional stresses of the Second World War have recently been studied and the war neuroses, concentration camp sequelae, and the Hiroshima A-bomb effects are used in this paper as paradigms for the understanding of long-term consequences of disaster.

Threat

In the threat phase, denial of the potential disaster may be superficial or deep, it may be continuous or intermittent, it may be total, partial or minimal, but it seems to be universal and in that sense is "normal" (Wolfenstein). Persons who get fearful and go to psychiatrists tend to be diagnosed as "neurotic". Lifton [2] would refer to this denial as a "consistent human adaptation". Like any other adaptation it has its advantages and its disadvantages. All responsibility tends to be displaced onto leaders or authorities. The individual feels that he has neither the knowledge nor the means to affect his own destiny. The authorities attempt to use a rational approach as part of the constructive worrying they are paid to do. However, predictions are often so inaccurate that they seem to be based more on fantasy than reality. For example in World War II, expert advisers to the British Government predicted 20,000–50,000 deaths per day from air-raids, whilst in 2 yr the total number was about 45,000; they predicted mass panic which was totally absent; and by contrast they estimated destruction of property at one thirty-fifth of what it was (Schmideberg [56]). Denial continues through the warning phase and sometimes into impact. Acknowledgement of the danger would result in physical inconvenience and psychic distress. During the Hawaiian tsunami (tidal wave) of May 1960, for example, evacuation was minimal [43]. People may openly refuse to fantasy the danger, e.g. on the banks of the Rio Grande festive crowds watched and cheered the rising flood waters [55].

When the danger is admitted emotional attitudes such as faith and distrust become important, because of the difficulties of knowing the efficacy and reality of the precautionary measures taken by the relevant authorities. The authorities are seen as "parents", and the disaster is attributed to the "powers-that-be". Rules of safety thus become equated with rules of obedience e.g. in the blitz people left uncovered windows which the wardens could not see. Superstition and ideas of magical control flourish, e.g. the fear that disaster may be precipitated by thoughts, speech or actions. Fantastic rumours which indicate a change in the way in which life is construed are common: the classic one is that a drug has been put in the wine or water to reduce libido and potency [55].

Impact

In sudden severe disasters, there is an illusion of centrality. For example in a tornado people believe that only their own house has been hit. The myth of personal invulnerability, so powerful in the threat phase, suffers a sudden reversal: the individual is actually encountering death. There then follows a second major shock when the total destruction is appreciated and the expected sources of refuge and aid are absent. Recollections of this period vary greatly but the evidence suggests that individuals swing between feelings of terror and elation, invulnerability and helplessness, catastrophic abandonment and miraculous escape. The subsequent reconstruction of the illusion of immunity depends on whether the disaster is experienced as a "near miss" or "remote miss", and on the actual amount of loss.

Soon after impact victims appear to be "dazed", "stunned" or "bewildered". They show absence of emotion, inhibition of activity, docility, indecisiveness, lack of responsiveness and automatic behaviour, together with the physiological manifestations of autonomic arousal. This is the "disaster syndrome" (Wallace [42]). It has been explained in various ways: as a psychic closing off from further stimuli, as energy being drained to intense internal work, as a response to fantasies like "if I don't react then nothing has happened" or to feelings of helplessness and the impossibility of undoing all the damage. This reaction is the antithesis of the commonly anticipated one of panic. Panic is

conceived as a reaction to the conflict between egotistic and altruistic impulses. In the face of massive death, people have unacceptable feelings such as sadomasochistic excitement, and ideas and wishes such as "rather him than me" (as if there were a competition for survival) and "he can die instead of me" (as if the death of one person assured the life of another). The thought of sacrificing others to survive oneself is common in fantasy (though the action is rare in reality) and produces guilt feelings. Panic only occurs under very specific circumstances which are not the rule in disaster, and a large body of research indicates that human beings under threat of death are not motivated by a simple drive for physical safety [57]. A complicated social situation with a wide variety of attitudes and motivations develops [58].

Recoil

In the recoil phase, the normal response is a slow return of awareness and recall. The victims become dependent, talkative, childlike, form unstable groups and seek safety. Emotional release occurs. Specific patterns of behaviour have been noted. There may be psychopathic liberation including looting, rape and heavy drinking [18]. Wallace [42] has described a "counter-disaster syndrome" of over-conscientiousness, hyperactivity, loss of efficiency and irrational behaviour, e.g. a surgeon abandons sterile technique. The "staring reaction" also occurs in outside observers as well as those involved, and along with "convergence behaviour" may interfere with rescue and relief. It is accompanied by obsessional preoccupations with the personal implication of the event. Following the murder of J. F. Kennedy, the average U.S. adult spent 8 hr per day for the next 4 days at his T.V. or radio, and Janis [15] interprets this as an attempt to work through the cultural damage.

Early aftermath

As the unorganized immediate individual response gives way to the organized social response, it becomes clear that psychological events have to be understood in the context of a social situation within a particular culture at a given historical moment.

Psychological reactions to loss of loved objects and grief reactions always feature significantly and their characteristics have been well described in the literature (Parkes [59]). The expression of these emotional states may be affected by cultural attitudes. Wolfenstein comments, for example, that in the U.S. there is a prohibition against experiencing despair, helplessness and discouragement which conflicts with the victim's need for acknowledgement of his suffering. Feelings of fear and apprehension commonly persist for some time. Usually they are linked to the idea that the disaster will recur; aftershocks of earthquakes are associated with much more conscious fear than the initial major shock. Also new disasters are fantasied and as rumours these fantasies rapidly spread. For a while the world is an unsafe place and people feel anxious about being left alone or separated from their loved ones.

There are extreme emotional difficulties in dealing with death, especially on a massive scale, and attitudes towards the corpses are coloured by fear and guilt. On the one hand authorities deny them importance ("nothing needs to be done" U.N. Disaster Relief Coordinating Committee) and insist on rapid disposal by incineration and mass burial [60]. On the other hand, survivors have difficulty in mourning their relatives unless they "know" of the death by identification of the body: after the earthquake in Naples in 1968 people spent days searching the rubble for corpses [60]. Following any disaster, relief operations are impeded by enquiries about missing people.

The disaster persists as a "tormenting memory". People are apt to find themselves forced to relive it over and over again and, although this is painful, it seems often to be curative in that the feelings of extreme distress associated with the event are gradually extinguished. Repeated discussion often focusses on regrets and recriminations regarding actions taken before or during the event. For a few the distress and fear do not diminish and they "do not get over it"; others avoid any reminder of the experience and may deny actual consequences. The memory is subject to intrapsychic distortion. William James wrote on the 1906 San Francisco earthquake: "I realize now how inevitable were men's earlier mythological versions (of disaster) and how artificial and against the grain of our spontaneous perceiving are the later

habits which science educates us" [13]. He refers to the re-evocation of primitive animistic views of causality in which the disaster is seen as intentional and purposive. People are unable not to ask the reason why, and they invoke God, destiny, fate, or similar substitutes which are endowed with human qualities and a relationship with humanity. Associated with this intense intrapsychic relationship with the powers-that-be are thoughts and feelings about leading a better life or relaxing moral standards, attitudes of defiance, ideas of being punished, and postures of hope or despair. Survival may be seen as a confirmation of immortality, as being protected again, or as evidence of continued victimization.

A disaster also incorporates many situational therapeutic factors [28] and Wolfenstein describes the well-documented phenomenon of the "rise and fall of the post-disaster utopia". To the survivors it is a relief that the threats and dangers have come from the outside and that he can feel blameless; the remedial needs are specific, immediate, obvious and preponderantly physical, and results are quickly seen from attempts to deal with them; danger, loss and suffering are public not private and are immediately present so that there is a liberation from the past and future; and the most damaged families are a support for the remainder ("relative deprivation"). The initial tendency following a disaster is to give without stint and accept without restraint, but this soon becomes replaced by feelings of hostility, greed, independence, suspicion, envy and competition. For example the relief organizations, which give compensation on needs not losses are resented because the individual's experience is proportional to his loss. The problem of anger, blame and hostility is extremely complex as these affects are always evoked and variously displaced, often with damaging consequences. Lacey [27] comments on the hostility of Aberfan directed towards the National Coal Board, Local Authority and Government which hampered recovery efforts, and towards the Tavistock research workers. Wolfenstein gives many examples of the inappropriate handling of these feelings. Reports repeatedly highlight the irrationality with which such irrational matters are handled.

Following massive destruction of a place, people prefer to move back and rebuild. Relatively few move away and those who do so tend to for "neurotic" reasons. This has been seen many times in tornado cities, bombed cities, Hiroshima, and now in Managua which is being rebuilt on the identical site for the third time after total destruction by earthquake. Material reasons do not seem enough to explain this, nor sentimental attachment. The myths which justify remaining on the site include the inevitability of fate, the belief in the random distribution of disasters, and the idea that running away will provoke further disaster. There are also feelings of loyalty and guilt, wishes to undo the damage or to master the event, and defiant refusal to be scared away.

Special groups: children

The first major group of papers emerged from the experiences of the bombardment and the evacuations and parent–child separations during World War II [61–63]. Acute disturbance was found to be common, but transient, if separations did not occur; separations however had lasting effects sometimes. More recently the effects of disaster on children have been described in detail and some predisposing factors have been defined, e.g. Fraser [64]. Children's reactions must be understood within

the context of the family. In the early phases of disaster their reactions are a function of the way in which reality filters down to them and so they mirror their parents' reactions rather than relating directly to the event [65–67]. The most predominant fear at all ages is separation from the parents. If this does not occur, and if the parents cope with the situation, children may show little awareness of danger and minimal anxiety. The "disaster syndrome" in children takes the form of purposeless excitement. Studies of the Vicksburg tornado [37, 45, 68] in which many children died in a matinee cinema performance confirmed the high incidence of manifest regressive and behavioural symptoms and suggested that the slowest rate of emotional recovery occurred when parents created a tense atmosphere in which the episode had to be "forgotten". Most families could only permit one member to grieve at a time. Parents who were pathologically distant from or demanding of their children became more so at impact and recoil (also 64). In the early aftermath children show compulsive patterns of working over the disaster and associated painful scenes, such as burials, verbally, or in play and dreams, often to the distress of their parents. Post-traumatic fears of recurrence and reactions to reminders of the event are indicative of pathology related to mishandling of the earlier phases. The general conclusion is that children rarely need specialist psychiatric treatment but that they do benefit from an opportunity to ventilate their anxieties to a sympathetic adult. Those most at risk are between 8 and 12 yr. have a previous history of physical or emotional illness, and come from unstable homes.

Special groups: the aged

There are few detailed studies of the behaviour or of the subjective experience of the aged in disaster. The literature has recently been comprehensively reviewed by Friedsam [69], and general aspects are discussed by Townsend [70] and Titmuss [71]. The aged usually receive warnings later than the rest of the population, are less willing to leave their homes, restrict their attention more to immediate family and less to other members of the community and are particularly at risk of physical but not of psychiatric damage, although a brief reaction of agitated depression with confusion is common. In general the old experience a much deeper sense of deprivation than the younger members of the community, this reflecting the real improbability of their being restored to their former state. The aged of low social status experience strong feelings of resignation to yet further unavoidable suffering.

LONG-TERM PSYCHOLOGICAL SEQUELAE

War neuroses

In the 1940's controversy focussed upon whether the acute post-traumatic neurosis of war was determined by a constitutional predisposition, by the trauma itself, or by some combination of these. Brill and Beebe [72] studied 1000 men with acute traumatic neurosis and found that the only factors which correlated with it were low educational level and stress of combat. If units in battle were defeated and cut off, break-down was universal. This was called "battle fatigue" or "combat exhaustion" and it occurred in willing, stable soldiers who had made an efficient adjustment to battle in units of high morale. Swank [73] in his study of combat exhaustion in over 4000 survivors of the Normandy campaign, found that all soldiers became incapacitated after approximately 75 per cent of their companions were killed. Reid [74] found

similar results in studies of bomber crews in the U.K. Acute traumatic neurosis and combat exhaustion are similar stereotyped reactions which involve symptoms of emotional tension (anxiety, insecurity, nightmares, excessive startle responses, phobias), cognitive impairment (apathy, poor memory, preoccupation, retardation, confusion), somatic complaints (chiefly headache, gastrointestinal distress, backache), and rarely, conversion phenomena (ataxia, stuttering, weakness, anesthesia). Swank's account is unusual in noting the polarization of the attitudes of the doctors who tended to assume either that all the soldiers were neurotic, otherwise they would not have broken down, or that they were all stable, otherwise they would have been previously excluded. The treatment regime included rest, sedation, ventilation of anxieties, abreactions, narcosis and rapid return to the front.

The general belief seems to have been that the incidence of acute traumatic neurosis was relatively high compared to that of chronic traumatic neurosis. However, this has not been confirmed by long-term follow-up studies. Lidz [75] studied those involved in the Guadalcanal evacuation and found that every survivor subsequently developed neurotic symptoms in civilian life. Futterman [76], in a study of ex-servicemen 5 yr after the war, found many unsuspected cases of post-traumatic neurosis. Archibald and Tuddenham [77], in a controlled study of a group of victims of acute traumatic neurosis 15 yr after the acute episode found, that 70 per cent suffered from chronic traumatic neurosis, the majority having acquired additional symptoms. One-third were unemployed and one-third were in unstable employment The relationship between stress and physical illness is well documented and has been shown to be quantifiable. The incidence of organic disease in the affected population would therefore be predicted to alter following disaster, as a long-term effect. In 1954 the U.S.V.A. National Research Council studied mortality rate and illness incidence in 8000 soldiers in the 6 post-war years. They found gross differences; the prisoners of war having a higher morbidity and mortality than combat veterans and those in Japanese camps being more severely affected than those in European camps. This was thought to reflect the relative degrees of stress.

As yet there is no literature available on long-term consequences of brief stress reactions. For example, large numbers of persons suffered acute reactions during the London air-raids for which their only, and apparently effective, treatment was tea and sympathy from the wardens, and these have never been traced and studied. An investigation of psychiatric and physical symptoms in such a group would not exclude more subtle sequelae such as changes in attitudes in patterns of emotional response and in beliefs. All these are related to a person's capacity to lead a constructive life, to have some inner contentment, to be a loving parent and so on. Ernest Jones estimated that only 8 per cent of soldiers who lost a leg developed a "normal" response of resignation and acceptance [78]. Kardiner [79] described chronic traumatic neurosis as an alteration of the concept of self and world and a constriction of the life space. In the literature on survivors of the concentration camps and of the Hiroshima A-bomb mental adaptations are examined in detail.

Nazi concentration camps

The concentration camps caused "trauma beyond the comparable and conceivable" (Eissler [80]). The features of the stress included continuous threats of death and torture, separations and humiliation. All drives except hunger had to be suppressed. Extreme cruelty had to be witnessed and endured, and no expression or altruistic response was permitted. Rules were capricious and contradictory and

coping behaviour was often less important than chance. The reactions of the victims were either apathy (the Mussulmann state) leading to death, or the "camp mentality" characterized by irritability, egotistic behaviour, envy, absorption with food, lack of compassion, absence of sex drive and familiarity with death. There has been only one detailed study of the concentration camps: Kogon's *Der SS Staat* in 1947 [81]. There was very little literature on the victims for over 15 yr after the war and then in the early 1960's studies appeared from Israel, Norway, Germany and the U.S.A. [82–87]. The literature is now extensive.

The typical response has been variously called the concentration-camp syndrome, the post-KZ syndrome, and the survivor syndrome. It consists of emotional tension (anxiety, phobic fears, hypochondriasis, nightmares, insomnia, excessive startle response), cognitive impairment (poor memory, preoccupations, loss of concentration), psychosomatic complaints, heightened vulnerability to stress, chronic depression with guilt and isolation and disturbed sense of self- and body-image. Thus it closely resembles post-traumatic neurosis. The syndrome is chronic, severe and resistant to treatment. Chodoff [88] describes the two sets of attitudes typical of concentration camp survivors following the failure of their post-disaster utopian dreams: either seclusiveness, apathy, helplessness, passivity, fatalism and dependency, or suspicion, hostility, mistrust, cynicism and a quiet bitterness or quarrelsome belligerence.

The aetiology has been extensively investigated, particularly in Norway. One of the more recent reports by Strom [89] described a detailed study of 227 non-Jewish Norwegian survivors of the concentration camps. In only 10 was there evidence of psychiatric illness prior to imprisonment, whereas 223 had symptoms at the time of examination. This could not be attributed to previously operative social or psychological factors. The neuropsychiatric picture was due to both psychological stresses and organic brain damage and the symptoms caused by each of these two factors were found to be separable.

It is widely recognized that these patients avoid treatment: of the 1,000 cases studied by Grauer [90] only 10 were prepared to return for free psychiatric help. Many victims make a paradoxically good overt socio-economic adjustment [91].

Hiroshima

The most detailed study of the internal worlds of long-term post-disaster survivors is that of Lifton in Hiroshima [2]. He described the painful immediacy and intense emotion which accompanied the re-creation of the event by the survivors. This is similar to the responses of survivors of the concentrations camps. It was "an indelible imprint of death immersion which has formed the basis of a permanent encounter with death, a fear of annihilation of self and individual identity along with the sense of having virtually experienced the annihilation; the destruction of the non-human environment, of the field or context of one's existence and so of one's being-in-the-world, and replacement of the natural order of living and dying with an unnatural order of death-dominated life." The hibakusha (survivors) suffer a profound emotional disturbance which affects almost all aspects of their life, so profoundly that they seem to have become a different category of being. Lifton emphasized the importance of the concept of the "survivor", one who has come into contact with death in some bodily or psychic fashion and has himself remained alive. The survivor seems to be unable to conclude that it was logical and right for him and not others to survive, and is bound by a conviction that his survival was made possible by others' deaths. Guilt and shame over survival priority developed very rapidly after Hiroshima, and as in concentration camp victims it has been intense and persistent.

The hibakusha seem to be living a life of grief, mourning for family, anonymous dead, and things (houses, streets, personal objects) which are lost symbols of their former self. The dead seem to be always with them. The living identify with the dead and remain preoccupied with the inevitable incompleteness of this process. They fear the dead, need to placate them, and submit to their moral arbitration. Lifton construed the train of thought as: "I was almost dead. . . I should have died. . . I did die or at least am not alive. . . or if I am alive it is impure of me to be so. . . anything which I do which affirms life is also impure and an insult to the dead who alone are pure. . . and by living as if dead, I take the place of the dead and give them life".

The victims are victimized. Although they are eligible for extra benefits, they are discriminated against socially and in business. This is reminiscent of the conflicts that emerge as the post-disaster utopia collapses. The hibkusha crave special care and nurturance, which they then perceive as insincere, humiliating and unacceptable. Consequently they become intensely resentful. They also show survivor paranoia and survivor exclusiveness ("we who have been through it are different") which disturb social integration. The non-hibakusha have attitudes towards the hibakusha similar to those that the hibakusha have towards the dead, i.e. fear and guilt. They are "survivors once removed". This leads to the tendency to cast out the tainted (the hibakusha), and the response of honoring martyrs while resenting survivors.

Formal psychiatric illness is not common. Psychosomatic illnesses are prevalent and hypo-

chondriasis and "neurasthenia" are usual. The hypochondriasis is associated with ideas about cancer and fears of death and dying, and the neurasthenia is manifested by vague complaints such as fatigue, irritability, sensitivity to weather, difficulty in coping, dizziness, malaise and depression.

Lifton suggested a mechanism of mental adaptation to the psychological impact of disaster. Death annihilates at the physical level (bodies, houses) and mastery is required of this death immersion. It also annihilates at the psychological level (friendships, life cohesion). The hibakusha must work firstly to emancipate himself from his bondage to the dead, and secondly to re-establish himself among the living. A process of the formulation of the relationship of the self to the world is necessary for this. Positive formulations involved "non-resistance" which enabled the survivor to absorb the losses and "sacrifice with a sense of special mission" which enabled the survivor to justify the continuation of his life. Negative formulations involved imagery of break-down, revenge, bitterness and continuous strife, which tended to generate more guilt and anxiety. When guilt and anxiety were excessive, they hindered the development of any formulation and this resulted in further difficulties in adjustment.

For many years the experience was relatively intractable as a subject for symbolic transformation in art. The principal factors interfering with the creative response were the guilt and anxiety associated with conflicts between literal and artistic truth, and the resistance of the subject to integration within the wider human framework of death and survival. However with the passage of time, works of art which do seem to encompass the experience have appeared.

MANAGEMENT

There is evidence that specialized psychiatric skills could be useful in all phases of a disaster. However, psychiatrists are rarely called upon and their intervention is actively resisted in the early phases by other helpers and in the late phases by the victims themselves. Although a significant proportion of persons may be disturbed in the acute phase, it is not clear what priority should be assigned to psychiatric help relative to other relief. In the Ancash earthquake psychiatrists were summoned urgently as it became apparent that psychiatric complications were hindering other care [18]. In more developed countries this should be feasible as a routine and in Jugoslavia, for example, the psychological impact of disaster has been considered in planning relief services.

In the acute phase, 10 per cent of the population may be so disturbed as to require specific intervention such as rest, removal from the site, physical restraint, sedation and personal attention. The commoner later complications are grief or depressive reactions, post-traumatic neuroses, and transient emotional disturbances in children. Those most at risk are the bereaved, injured and children separated from their parents. General supportive therapy along simple psychotherapeutic lines is the usual approach and provides at least temporary relief. Apart from the orthodox methods of individual treatment, there is little information on the special problems of treating communities where death, disablement, material loss and bereavement are prevalent. The community response may be therapeutic, aggravating or both.

Barton [8] has produced a model of the factors, individual and collective, that may significantly affect the community response and he suggests that the community as a whole, as well as individuals, must be a target for management. For example it is important to be aware of the significance of the media in both aggravating and ameliorating the individual's psychic distress. An obvious role for psychiatrists would be to set up groups to work through the community's shared experience in a constructive way. Victor Frankl [92, 93] attempted constructive psychological work of this kind within the setting of continual massive psychic assaults in the concentration camps.

Hocking concludes his review by stating: "If extreme stress is prolonged, breakdown is universal, once this occurs removal of the stress may result in only a temporary improvement, the individuals are left with an impaired capacity to adapt to everyday life including the physical and psychological stresses of ageing" [1]. It is not clear whether treatment can reduce the amount of disability. A major problem in psychiatric

treatment is firstly, the reluctance of the victim to recognize his need for help, and secondly, the reluctance of the psychiatrist to acknowledge the need.

Krystal [94] showed that the allocation of restitution payments from Germany was a function not of diagnosis or psychosocial state but of the centre in Germany where the case was handled. He found that even when sickness was identified it was rarely treated: 31 of the 697 potential patients received treatment. In Japan, Lifton estimated that 10–20 per cent of the hibakusha are still unregistered, and although political pressure has resulted in gross, and largely gratuitous, extensions of medical benefits to hibakusha, the existence of mental illness as a consequence of the A-bomb is not accepted.

The main source of information on the outcome of the treatment of the chronic complications of severe stress is the literature on the survivors of the concentration camps. The treatment has generally been psychoanalytic and there is controversy about its efficacy.

De Wind [95] claims that massive stress is neither an indication nor a contraindication to therapy. However, he lists many specific difficulties including the formation of a delusional transference, affect lameness and dread of affects, somatization, special countertransference problems, survivor guilt precluding recovery, loss of basic trust, inability to realize that aggressive wishes are not omnipotent, excessive guilt over enjoyment of sado-masochistic gratification, and the use of the experience as a resistance to the resolution of the infantile neurosis. On the basis of 22 cases treated with psychoanalysis and others treated with psychotherapy, he concludes that the pathogenic influences of the experiences may be relieved and once again it can become possible for a victim to take his existence for granted and to feel that the world is a safe place.

A possible beneficial effects of a community response in the long-term has been demonstrated in Israel.

The kibbutz provides a secure psychosocial milieu which probably facilitates integration and self-acceptance with a possibility of new identity formation, and the country has special museums, periodicals, occasions of public mourning and so on. Community efforts of this kind might also minimize the second generation effects which are well documented [96]. The children are psychologically comparable to those whose parents have had massive deprivation in their childhood. This cultural "working through" seems to be both a spontaneous and purposive development in many countries which have been ravaged by civil war. It takes the form of continual reminders of the struggle and reiteration of its value and of the heroism of those who suffered, expressed in the media, arts and public works.

PREVENTION

Primary

The psychological effect of warnings in terms of social action is discussed by Janis [97]. The problem is one of the human capacity for vigilance, and the tendency to become hypervigilant, or, more usually, to adapt. Because of this extensive use of denial, psychiatrists might have a role in alerting the public. Some kinds of disaster are almost completely preventable.

Psychological work must be done to minimize the psychological impact of disaster. There is agreement that a qualified rather than total belief in immunity and the absence of disaster constitutes a favourable condition for withstanding an extreme event. There must be an admission of the possibility of occurrence yet a belief in survival. In admitting the event to consciousness, Janis refers to the work of worrying. Anticipation is a small-scale preliminary exposure on the level of imagination and can have an inoculating effect. By rehearsing and familiarizing oneself with the coming event one may reduce the risk of being overwhelmed by the experience.

In the Bengal famines of 1943 and 1971, the notable feature was the refusal of the governments (British and Pakistani, respectively) to do this [21]. However Janis gives examples of the ill-considered and highly charged emotional reactions which develop with the forcible breaking down of denial [98]. Jacobson [25], describing the various individual and interpersonal crises which developed in a large group of passengers confined aboard a sky-jacked plane, commented on the "normal" response of refusal to accept emergency, threat and crisis. She suggested the exploitation of normal life crises

and the use of non-insight oriented encounter groups to provide people with an acquaintance with their own feelings and responses to threat.

Secondary

The most important aspect of psychological care is the social provision of physical care: i.e. physical care *is* psychological care, and this is the prime and essential function of relief organizations. General psychological first-aid should be understood by all responsible personnel involved in disaster relief. It involves fundamentally the establishment of effective human contact with those who are disturbed or upset. The principal requirements are for personnel to accept every victim's right to have his own feelings, to accept the victim's limitations as real, and to accept their own limitations [99].

A variety of social factors which influence psychological recovery have been identified [9]. It is essential that local governmental bodies and relief organizations are aware of these. Separations of loved ones (particularly children from parents) are traumatic and every effort should be made to prevent them. The confusion, anxiety and guilt can be minimized by accelerating the natural processes of reorientation and reidentification; leaders are needed, lists of dead and injured are necessary, the establishment of effective communications and centres of information is important, and the spread of rumours must be halted. Competition between relief organizations must be rapidly dealt with.

In addition to the fundamental physical, psychological and social approaches to relief, specialist psychiatric care is required for acutely disturbed victims. Their prompt treatment may be essential for efficient operation of other services, and may have a favourable effect on the long-term prognosis of those affected.

Tertiary

Working through at the individual and group level is an important aspect of the ultimate acceptance of the event and its consequences; and it may also aid in the development of constructive attitudes and efforts. Psychiatric treatment, rehabilitation and general community work may also be needed [7, 79].

PLANNING SERVICES

To outline a plan for an ideal psychiatric disaster relief service, it would be necessary to predict the approximate number of psychiatric casualties of different types and to calculate the amount of psychiatric manpower required at various times after the event to handle this. This involves the following methodological problems. (1) The lack of tools to measure the prevalence of treatable and untreatable psychiatric morbidity in a community. (2) The lack of control groups and "before and after" data for disaster: a disaster is unpredictable and most routinely collected data reflects nosocomial factors which are changed by the crisis rather than true morbidity. (3) Lack of information on the effectiveness of various psychiatric techniques.

Quantitative data is currently available from the various studies described earlier in this paper. The literature on life crises and their relation to mental and physical illness provides models from which further deductions can be made about morbidity following a disaster. A variety of studies [100–105] have compared the number of stressful life events preceding mental illness with that in control groups. Brown *et al.* [100, 101] in an important group of papers have examined the relationship between life events and subsequent mental illness. They conclude that severely threatening events may be formative in depressive illness and may trigger schizophrenic illness, and that depressive illness may also be triggered by milder stresses. Cooper and Sylph [105] suggest that severe life events may cause neurotic illness and milder events may precipitate them. Using the experimental data of these workers, the incidence of depressive illness in a disaster-struck community could increase by

350 per cent and that of unspecified neurotic illness by 1100 per cent. Of the unspecified neurotic illness, 30 per cent would be assumed to be substantially caused by, rather than precipitated by, the disaster. This group at risk might be relatively more difficult to identify. Brown *et al.* wrote "our formulation of the problem is based on the explicit assumption that vulnerability to events varies with the spontaneous onset rate which may be interpreted as the degree of latent psychiatric disturbance" and "nor is it reasonable to reach any sort of final conclusion about the proportion of patients involved in a total environmental effect" (which could be a disaster, for example) "without a complex analysis which takes account of a whole range of other possible social influences". We suggest that their model might be extended to examine data on the psychiatric morbidity following disaster and elaborated to define factors which affect the degree of latent disturbance in an individual which might be useful in identifying those at risk (our reading suggests that age, previous psychiatric history, and ethnic isolation would be important), and the immediate and delayed effects of the total community experience and the type of disaster on the relation between events and illness.

Thus the incidence of illness reaches a maximum shortly after the disaster and is compounded of caused illness, precipitated illness and illness which would have occurred at that time anyway. The incidence then falls slowly to below normal for the population, reflecting the premature occurrence of precipitated illness, and eventually returns to normal. The prevalence will of course persist above normal reflecting the existence of long-term complications. To predict the amount of manpower which can be productively introduced into the area, data is required on the effectiveness of intervention. This urgently needs investigation. Until it is clarified no definite conclusions can be drawn regarding the relative priorities of psychiatric, medical and other relief services in situations of limited resources. We would make the following suggestions for present-day practice:

(1) A psychiatrist should visit all major disaster areas in the first few days after the event and should advise on first aid and on the psychiatric services which are likely to be needed in the immediate and longer term future. This judgement will clearly be related to the normal standards of care available in the area.

(2) A world-wide register of psychiatrists particularly interested and experienced in the various aspects of disaster should be set up. These might advise as expert consultants to regional psychiatric centres.

(3) Teams of psychiatrists and auxiliary personnel should be available for integration with the general relief response in areas where there are no developed psychiatric services.

GENERAL DISCUSSION

Disaster and the concept of disease

Much of the controversy in documenting and in managing the psychiatric sequelae of disaster is a reflection of the confusion between a variety of different models of illness, such as the pathological, the statistical, the sociological and the psychodynamic. This discussion considers some of the consequences of this confusion. A major problem in describing human behaviour in psychiatric terms is its definition as normal or abnormal in the context of a particular model. The study of a disease as a specific entity has been heuristically convenient, but it must also be understood by the clinician as a state of being, a dimension of the person's way of life [106]. Engel and others have used grief as a model for this approach [107, 108].

Responses to stress: psychodynamics

The concept of the continuity of disease process is related to the fact of the continuity of stress. It is not clear exactly what mental processes are involved in sustaining

and dealing with stress, in "coping", "surviving", or "getting over it", nor what are the mental sequelae.

Physical stress and psychic trauma cannot be equated because psychic trauma is not so much determined by the physical intensity of a situation as by the meaning and affects evoked in a particular individual. Any experience which provokes distressing effects (fright, anxiety, shame, physical pain etc.) is potentially traumatic. The essence of the traumatic situation is an experience of helplessness on the part of the ego in the face of the accumulation of such internal excitation [109]. This is universal in infancy, but rare in adulthood; however a disaster can be just such a situation. What is threatening to a particular person depends on the amount of psychic pain and painful affects he can tolerate; with maturity and emotional development this tolerance increases [109, 110].

In children, "developmental studies have demonstrated that trauma may result, not only in the fixation of defences and inhibitions, but also in the disruption of ego capacities and the narrowing of the range of techniques and patterns of behaviour available for dealing with objects and with the environment" [111]. This is closely comparable with Kardiner's description of the psychopathology of the adult with chronic traumatic neurosis [79].

A distinction may be made between the single massive experience (shock trauma) comparable to the acute disaster, and the accumulation of difficult experiences (strain trauma) comparable to the chronic disaster. In the latter case a variety of accumulating tensions and affective states results in an increasing state of ego strain, and eventually, as the adaptive responses fail, a strain trauma, with the subsequent development of new ego organization to preserve a feeling of safety [112].

Many writers [7, 90, 94] emphasize that the psychopathology during and following prolonged states of disaster is to be understood as a reality oriented adaptation (albeit to the abnormal reality of the disaster situation) rather than as attempts to benefit from secondary gain, or as defensive regressions to ward off reactivated inner conflicts. Other work [2, 94, 113] suggests that one of the fundamental and more obvious alterations in an adult subjected to severe stress is in his formulation of existence. With increasing age, formulations may take on a negative pessimistic diminishing quality [32, 72, 114].

Classification of responses to stress

Although evidence shows that disaster alters the affects, ideas, attitudes and physical health of those exposed, there is not much literature contributed by organically-oriented psychiatrists. The reactions are often not functionally disabling, somatization and real physical ill health leads the patient to general physicians, and few victims present as psychiatric patients with formal abnormalities in their mental state. By contrast the psychoanalytically-oriented psychiatrists find a plethora of symptoms and often severe pathology. They claim that this discrepancy arises because when the psychiatrist is experienced as unreceptive, emotional catharsis is inhibited, and the patient retires into a defensive isolation and takes up a posture of health. Where psychiatric disturbance is overt and less disputed, it is often difficult to accommodate in existing taxonomies. Roth takes some of the more severe reactions to disaster as examples of syndromes falling outside the traditional division between neurosis and psychosis [53]. The typical stress response known as post-traumatic neurosis, post-KZ syndrome, and combat exhaustion has been relatively clearly delineated but is not recognized in the International Classification of Diseases as a separate diagnostic category. Attempts to assess the psychiatric morbidity in the survivors of concentration camps in traditional nosological terms resulted in the improbable conclusion that the incidence of mental illness in this group is lower than that of a control group [115].

The age of the survivor [2]

Langer [116], in a review of historical studies of the great plagues, postulated the aggregate effects of psychological trauma as the mechanism whereby disaster brings changes in a society or culture (also cf. ref. [117]). Following the Black Death there was an age marked by misery, depression, anxiety and a general sense of impending doom. The plague was a chronic frightening threat about which nothing could be done. However, today we both expect and demand survival; society admits the narcissistic entitlement, the right to survive.

Whether we face the traditional disasters such as natural disaster, economic disaster and disasters involving deprived minorities, or the more modern disasters of overpopulation and environmental pollution, our close contact with them in a world shrunk and made emotionally immediate by television-satellite communication turns us all into both participants and survivors. As such the sequelae of disaster discussed in this paper are relevant to us all.

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DM 7-7☆

DISASTER RELIEF THROUGH VOLUNTARY AGENCIES

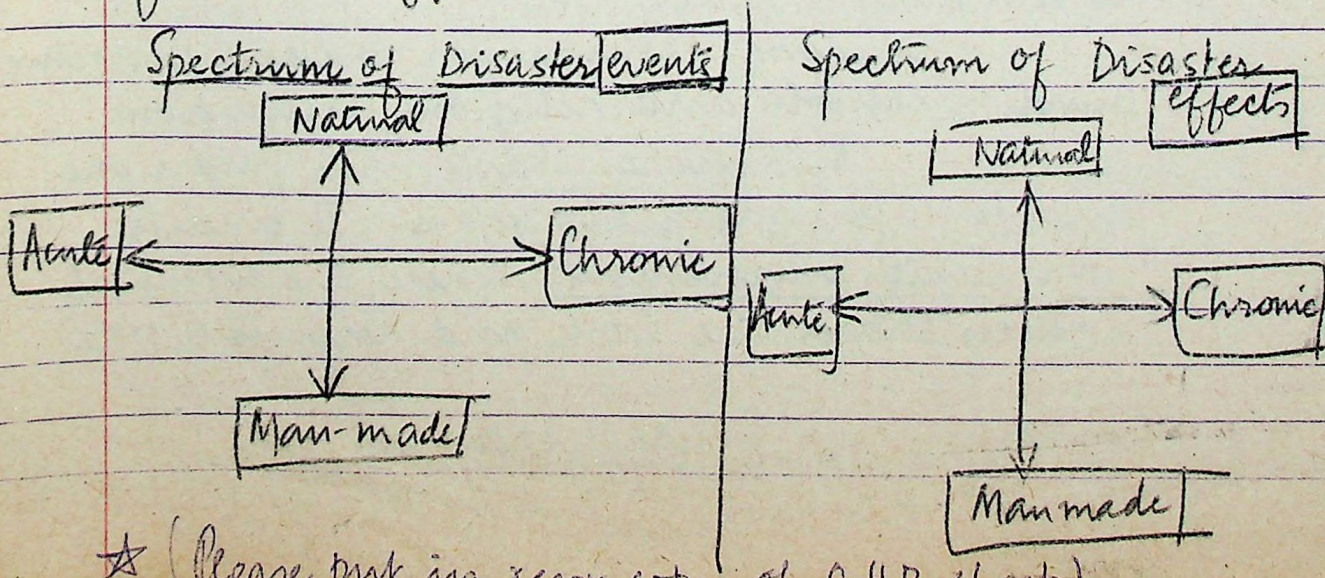
Disaster is defined by the Oxford English Dictionary as 'a sudden, great misfortune'. For practical purposes, it has to be understood that disaster is not the event itself.

Disaster is the situation arising out of an event where disruption of a great magnitude occurs in life (human, animal and plant) and life supporting systems (water, air, sunlight, food, etc.) This separates a disaster from an accident or incident.

Disasters could be simplistically classified as 'natural' or 'man-made' with effects ranging from 'acute' to 'chronic' states of disruption. This is misleading

A complex relationship is now being increasingly appreciated between natural and man-made disasters, while most acute states lead on to a long-term or chronic phase.

Hence, a spectrum of disaster events is suggested as in the diagram below, ranging from the natural to man-made in origin and acute to chronic on a time-scale. This is true of disaster effects too.



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What should be of great concern to us is the disruption (of a great magnitude) in various systems needed for survival in the individual, family and the community during a disaster.

RESPONSE TO DISASTERS:

The response to disasters usually occurs in three phases:

(1) Rescue and Relief: This is directed towards
- Rescue - Food - Water - Shelter - clothing
- Emergency medical aid - communication and census operations.

This phase lasts between one to three months, involves predominantly external agencies and is a 'welfare' effort

(2) Short-term Rehabilitation

- Here, health work continues with medical aid and is also directed to environmental sanit°. and safe drinking water.
- Economic measures with food and money for work, while the local industry is helped to get re established.
- Social measures towards the family, tracing missing persons and a start in community organisation.
- Building activities for shelter, protective bunds, schools and religions institutions.

This phase starts with phase one, and lasts for one to two years. It entails 'community involvement' where the external agency shares the work and responsibilities.

(3) Long-term Rehabilitation:

This is mainly a development activity, with community organisation for development in social, economic, health and other related areas. Also, preparations to face any other disaster are made.

This is predominantly a community activity, requiring 'community participation' and extend beyond two years.

PLANNING SHOULD IDEALLY AIM AT SELF SUFFICIENCY OF THE COMMUNITY (i.e community participation) IN TACKLING DISASTERS FROM PHASE ONE ITSELF.

Key concepts which emerge when we consider these three phases are,

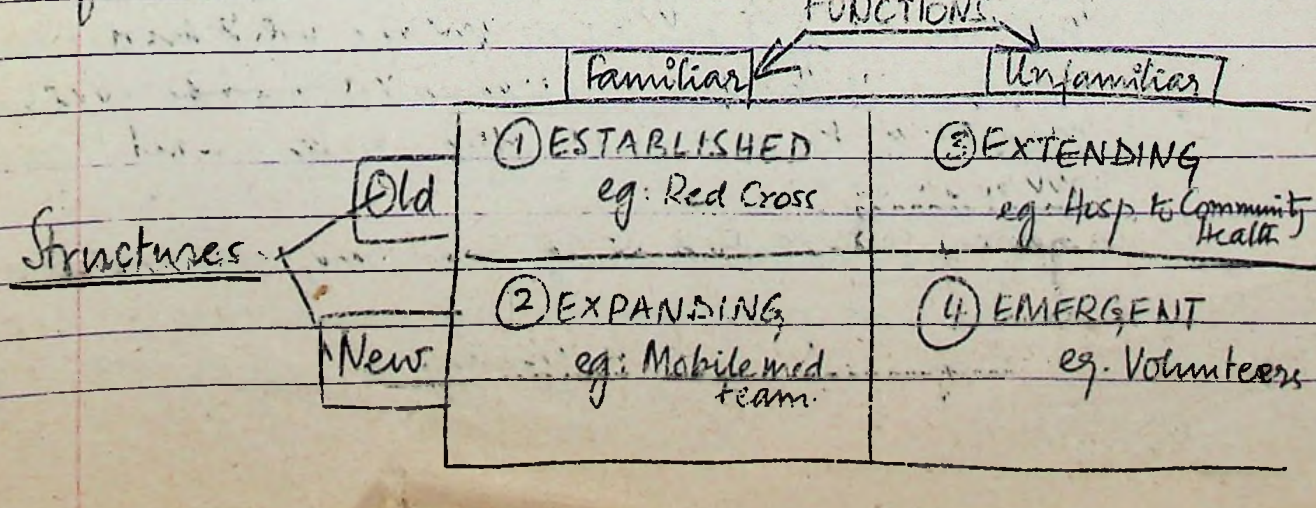
a) the relationship of disasters and their management to development processes, &

b) the relationship of these three phases to each other and how one phase should set the stage for the next.

A similar relationship is true of the pre-disaster, disaster and post-disaster phases of human life.

AGENCIES INVOLVED IN DISASTER MITIGATION:

The diagram below explains the types of agencies, depending on their 'structure' and 'function'.



The training needs of each of these group differ
- the ESTABLISHED need updating to newer needs and techniques,
- the EXPANDING need orienting to a changing scenario,
- the EXTENDING need adaptation to change in role, while
- the EMERGENT need to know the basics of all aspects of health/disaster management.

VOLUNTARY AGENCY RESPONSE EXPERIENCES:

A brief review of Volag response to the recent Bangladesh Cyclone disaster 1991 is attempted below on two planes (a) Bangalore & (b) Bangladesh.

(a) Bangalore: As news reports came in on TV, AIR, newspapers etc., some of us who felt concerned started discussing the tragedy and meet a few times to see if we could help.

A team of eight out of nineteen volunteers was formed. The team consisted of three doctors, two nurses and three paramedics (- those involved in community health in some way or the other, with no trained 'medical' skills)

The team prepared itself by meeting more frequently (while resources were being mobilised) gathered all information possible about Bangladesh and the cyclone, trained by learning from other Volags who had been to other disasters earlier and made positive efforts to know each other better - viz 'team building'.

(b) At Bangladesh: we were separated and could not function as one team due to local exingencies and differing needs on site.

The major groups of volunteers working at Bangladesh were, (i) Students - who were very helpful in rescue operations, census, documentation and general volunteer duties in all areas,

(ii) A federation of development agencies who operated in phases I and II mentioned earlier

(iii) A federation of health agencies who were mainly involved in health work along with the other groups, and

(iv) Organisations like the Gonoshastya Kendra which integrated all activities (health & development) in their approach.

The experiences of the volags in past which helped build up this paper were,

- the Bangladesh refugee camps in 1971
- the Bhopal gas tragedy,
- the Andhra cyclone and floods,
- the drought in Karnataka, and
- the Bangalore liquor and circus-fire tragedies.

ESSENTIALS OF THE VOLAG RESPONSES.

Voluntary agency responses are straight from the heart, and take an activist approach. They are - motivated to mitigate suffering
- responsive to emerging needs
- involved in all phases of disaster management at all levels.
- learning as they proceed, and
- have a positive bias to the most needy.

Some additional features of the responses have been

- issue-raising - to make people aware,
- keeping issues alive, as in Bhopal,
- Research of cause and effects of a disaster - eg. Karnataka drought/Bhopal

- Lobbying for justice - eg. Bhopal,
- Planning for future disaster management, eg. PREPARE / ARTIC etc.

LESSONS LEARNT

(1) ~~Pre~~ Pre-disaster, Disaster, Post-disaster continuum:
- All conditions which existed before a disaster are likely to exist afterwards, in a more acute form, whether medical, social, economic, political, or whatever.

(2) The worst affected is the most needy
- Socio-economically backward
- Women, children and the aged, and,
- Destitutes & daily wage earners.

(3) Peoples response to disaster depends on their level of awareness:
People try to seek safety and evolve a quick adaptive response at a personal, family social and community levels.
Some behaviours patterns, like expected panic flight, helplessness, paralysing trauma, anti-social behaviour and a shattered community are just myths

(4) The family is a basic and most important coping mechanism people have.

(5) There is an intense need felt for information about - disaster victims / secondary threats / emergency needs / emergency activities - by the people.
Such information helps reduce uncertainity and promote positive action.

(6) Psychological response: A majority of people show a stress reaction, ~~that is~~ no incapacitation or long term impairment.

People go through phases of heroic feeling, anguish, disillusionment and recovery. The time taken in each of these phases is variable in individuals.

(7) The training needs of disaster relief workers are in areas of

- Skills - First aid / Public health / Epidemiology
  Psychosocial skills / Team building.
- Attitudes - to tackle the situational characteristics of a disaster, which are,
  a) Great uncertainity
  b) Urgency
  c) Need for adaptability
  d) Loss of autonomy and
  e) Changing basis of participation

These are needed at all levels of training.

(8) Public awareness:

is directed to people living in disaster prone areas, so that they are

- aware of the risks
- know how to mitigate loss
- are able to build their own processes

to face future disasters.

The characteristics are,

a) the process has to be on-going
b) participatory
c) community specific
d) risk specific
e) Target population specific
and f) Integral part of working and response systems.

VOLAG RESPONSE

- Weaknesses are
  - small size/reach
  - ideological priorities
  - resource constraints, and
  - variable relationship with Govt. agencies
- Strengths are,
  - commitment/activist approach
  - sensitivity to
  - adaptability
  - informal approach
  - participatory and appropriate responses, which help mobilize people, since their focus is always on increasing awareness.

DM 7.8

NTTC-JIPMER AJV/KRS

CURRICULUM SESSION - V

Situation Analysis:

1. We are not aware of any national policy or guidelines for health personnel on disaster management.

2. Lack of effective linkages with organizations like UNDRO and between civil and defence sectors - especially during interdisaster phase with regard to transfer of knowhow.

3. Lack of adequate formal training of various personnel so that policies made by the centre are translated into practical action.

4. Lack of adequate communication both horizontally (intersectoral) and vertically (down to community level)

5. The various training programmes that take place in India at present are only short term activity and adhoc arrangements.

6. Lack of adequate resource mobilisation.

7. Lack of hard scientific and epidemiological data on all India basis to enable better preparation for future - especially regarding man-made disasters.

GOALS OF THE TRAINING

1. The basic goal is to train manpower on various aspects of disaster cycle and principles of management.

2. Specific skills on disaster management will be decided according to the level of participants and the nature of their work.

KEY PERSONNEL:

LEVEL-I State level personnel:

- Chief secretary and secretaries of civil supplies, water supply, animal husbandry, industry and chemicals, information and broadcasting, ecology, and any other relevant department.
- Director of Medical Services
- Police and Fire Chiefs
- G.C.O of state units of army
- Metereology - state chief
- State level NGOs
- Relief Commissioner

Level II (District level functionaries)
Level III (Block level workers)
Level IV (Community and village level)

JIPNER should first take up level I key personnel for training. Later, if deemed desirable, the levels II may be taken up for training.

Types of Disasters to be covered:

1. General principles of disaster cycle and its management

2. Focus of disasters of south India
(all except earthquake and land-slide)

3. Focus on man-made disasters applicable to India.

Duration of Training for Level-I:

- 3 days workshop and 2 workshops per year

(For level II, content and duration to be decided in consultation with level-I functionaries)

Instructional Methods:

1. Introductory lectures

2. Case studies and simulated problems using sand models or computer.

3. Group discussion with trigger-film/video clips to motivate personnel and sensitize them on emotional/religious/social issues in a disaster.

CONTENT FOR LEVEL-I:

1. Disaster management information system (DMIS)

2. Disaster epidemiology

3. Rapid assessment and response

4. Relief measures

5. Intersectoral coordination

EVALUATION:

Short-term: Feedback and performance in simulation exercises

Long term: Feedback from the key personnel on how they perform in training other levels and their activity during disasters.

FOLLOW-UP ACTIVITIES:

- Observer from JIPMER can visit workshops for level II and III.
- Mock-drills (Dry-runs) at various levels
- Case studies of actual disasters and learn from them
- Revise curriculum from these experiences.

Moderator: Dr.A.J.Veliath Rapporteur: Dr.K.R.Sethuraman

Dm 7.9

A GLIMPSE OF JIPMER

Jawaharlal Institute of Postgraduate Medical Education and Research, (JIPMER) is a living tribute to the memory of late Pandit Jawaharlal Nehru. It is situated in the Union Territory of Pondicherry considered a 'micrcosm' of India. The institute is under the administrative control of the Union Ministry of Health and Family Welfare and provides comprehensive health care to the community besides maintaining high standards of medical education and research.

Historical background:

The origin of JIPMER can be traced back to the establishment of the "Ecole de Medicine de Pondicherry" in 1823 by the French Government. This was considered as one of the oldest schools of tropical medicine. With the defacto transfer of Pondicherry in 1955, the Government of India upgraded the medical school to the Dhanvantari Medical College. By the end of 1958, a separate campus was acquired at Gorimedu, now renamed as Dhanvantari Nagar, 5 Kms away from the Pondicherry town and the construction of the college and hospital buildings started. On the 13th of July 1964, the new college building was declared open by the then President of India Dr. S. Radhakrishnan. The Institute was upgraded to a regional centre for postgraduate medical education and research and was officially named as JIPMER. Since then the activities of the institute have multiplied and diversified.

The goals of the Institute are:

1. To develop patterns of teaching in undergraduate and post-graduate medical education so as to establish and demonstrate high standard of medical education to all medical colleges and other allied institutions in India.

2. To bring together in one place, educational facilities of the highest order for the training of personnel in all important branches of health activity;

3. To attain self-sufficiency in postgraduate medical education;

4. To render medical care of the highest order;

5. To produce teachers of caliber; and

6. To provide a forum for useful research.

Budget:

Planning and policy matters are monitored by the

Advisory-cum-finance committee, with the Secretary, Ministry of Health and Family Welfare as the Chairman and the Director General of Health Services as Vice Chairman. The budgetary allocation for 1989-90 was Rs. 107.5 millions.

Campus:

The institute has a residential campus of 190 acres. There are six hostels for students and about 400 residential quarters for staff. There is well furnished guest house.

Academic:

JIPMER is affiliated to the Central University of Pondicherry. The institute runs following courses:

1) Undergraduate: MBBS

75 students are admitted to the MBBS course annually for which purpose a national level entrance examination is held every year.

2) Postgraduate degree course:

General Medicine, Obstetrics and Gynaecology, Pathology, Pharmacology, Pediatric Medicine, Radio-diagnosis, Anaesthesiology, Dermatology, Biochemistry, Community Medicine, General Surgery, Orthopaedic Surgery, Ophthalmology, Oto-rhino-Laryngology, Anatomy, Microbiology and Psychiatry.

3) Diploma Course:

Diploma in Child Health (DCH), Diploma in Orthopaedics (D.Ortho), Diploma in Ophthalmology (D.O.), Diploma in Medical Radio Diagnosis (DMRD), Diploma in Leprosy (D.Lep).

4) M.Ch. (Genito Urinary Surgery)

5) M.Sc., (Medical Biochemistry)

6) Para-medical courses, Bachelor of Medical Records Science (D.M.R.Sc), B.Sc. Medical Lab Technology, (B.Sc., M.L.T), Medical Records Technician (M.R.T).

The teaching faculty consists of 118 teachers, 333 residents. The undergraduate and postgraduate results in various examinations have been consistently good. In the recent All India PG Entrance Examinations, the first four ranks were secured by JIPMER students. In a statewise survey of pass rate in the primary and final National Board Examinations (NBE), JIPMER was placed in the highest group.

The institute building has four air-conditioned lecture theaters with audio-visual facilities, a set of 8 laboratories, four museum halls and seminar rooms in each floor.

Library:

The library building which has an attached air conditioned seminar hall, houses over 25,600 books and 340 journals. ¡Back volumes of medical journals are available from 1930 onwards and number of bound volumes has exceeded 19,000.

The Library also provides the following facilities/services:

- Interlibrary loan
- Bibliographic reference service
- MEDLINE search facility (through the courtesy of WHO/NIC)
- Translation service
- PG research cubicles (10)
- Book bank for Scheduled Caste/Tribe students

Seating capacity of the Library

Undergraduate section	..	175
Postgraduate section	..	75

The Hospital:

JIPMER hospital caters to the health care needs of the people of Pondicherry and the neighbouring areas of Tamilnadu.

The daily average outpatient attendance exceeds 3000. Majority of the patients come from rural areas traveling long distance. For their convenience three rest houses are available in the campus.

The present bed strength of the hospital is 850 inclusive of 64 paying ward beds.

There is a separate post partum block with a ward of 10 beds for implementing post partum programme and 20 beds for treatment of leprosy. The hospital facilities are available to patients free of cost. Over 30000 patients are admitted annually for various ailments. Nearly 4,55,000 investigations are carried out, besides 40,000 operations.

All patients are provided with laundered cloth during their stay in the hospital to avoid infection and there is a cloak room for keeping their belongings.

Other notable features of JIPMER hospital include a network of ancillary services, viz, central sterile supply department

(CSSD), hospital kitchen, a mechanised laundry, a central workshop, printing press, animal house and a horticulture section.

Medical Records Department:

Medical Records Department maintains case records and furnishes information of patients for patient care, research and planning. The records are maintained at a centralised place with a unique numbering system for each patient. The diseases and procedures are classified as per the World Health Organisation's International Classification, ninth revision for easy retrieval of information. Information about diseases, operations and case records from 1966 are provided by this department for the purpose of research, publications, thesis and dissertation.

Medical Illustrations Division:

The medical illustrations division has a studio for centralised production of colour slides. This division consists of Artist Section, Photographic Section and caters to the needs of all departments, in the preparation of audio-visual materials for teaching, publication and presentation. Annually about 5000 slides in 35 mm size and 2500 clinical photographs are prepared for various departments of this Institute.

Field practice areas for community training:

Rural and urban health centres were established as extension units of JIPMER in 1959 and 1961 respectively. The staff working at these health centres are under the administrative control of the Director, JIPMER and are supervised by the Department of Preventive and Social Medicine. They provide:

1. Training in community health to undergraduate medical students, medical interns (rotatory house surgeons), Postgraduate medical students and other health workers.

2. Service: Primary health care to the community.

3. Research: On community health problems and on various aspects of delivery of health care.

Jawaharlal Institute Rural Health Centre (RHC):

The Rural Health Centre at Ramanathapuram provides family - centered, comprehensive health services to 12 villages in Union territory of Pondicherry with a population of 14680 or 2730 families (1983). It has one sub-centre at Sedarapet and a subsidiary health centre at Coodapakkam.

Participation of other Departments:

Teaching staff from other departments such as Obstetrics and Gynaecology, Ophthalmology and Dermatology visit the centre periodically for providing consultation to referred cases.

Jawaharlal Institute Urban Health Centre (UHC):

The Urban Health Centre was established in May 1959 to serve a population of 2300 of Kurichikuppam area. Subsequently, the service area was expanded in 1964 and 1983. At present, the centre provides comprehensive family centered health care to the population of 8090 (1964) living in 1545 families in Kurichikuppam, Vazhakulam and a part of Vaithikuppam areas of urban Pondicherry.

Some selected health indices to highlight the achievements of the two health centres are given below:-

	RHC	UHC	INDIA	
	1990		Current	2000 AD
Birth rate *	20	18	34	21
Death rate *	9	7	12	9
Infant mortality rate +	44	33	105	60
Maternal mortality rate+	0	0	4	2
Antenatal care (%)	100	100	40-50	100
Antenatal TT (%)	100	100	20	100
Eligible couple protection (%)	51	53	32	60
Immunisation coverage (%)				
BCG	100	100	65	85
DPT	100	100	25	85
Polio	100	100	05	85
Measles	87	99.4	20	80

* = per 1000 population, + = per 1000 live births

Under the Reorientation of Medical Education (ROME) Scheme, JIPMER has established a rural referral complex consisting of six primary health centres, with the dual objective of providing comprehensive health care to the rural population and also to give community orientation to the students and teachers. Under this scheme, mobile clinic camps are held monthly in villages with the participation from eight clinical departments.

On an average over 900 patients are seen in the general OPD at each camp and a further 400-500 receive services from specialists. Laboratory investigations and health education are the other important activities of the Mobile Clinic. The clinics are utilised for training of undergraduates, interns and postgraduate students.

Before each camp a preliminary house to house survey is carried out by interns and residents to identify the prevailing health problems and for selecting the cases which require specialists' care. This is followed by a 5 day visit when the mobile clinic is stationed continuously in the village for providing comprehensive health care services. Teachers from the departments of Ophthalmology, General Medicine, General Surgery, Pediatrics, ENT, Obstetrics & Gynaecology, Dermatology and Dentistry visit the clinic on different days for providing consultancy services. The mobile clinic periodically revisits the villages covered for providing follow-up services. One hundred and five camps have been held so far since 1980 covering 228 villages benefitting over 1,25,000 rural population.

JIPMER participates in National health programmes like:

1. Family Planning
2. Leprosy Eradication
3. Malaria Eradication
4. Programme on prevention of Blindness
5. Universal Immunisation Programme
6. Integrated Child Development Services (ICDS)

National Teacher Training Centre

The National Teacher Training Centre (NTTC) established in 1975 with WHO support is the first such centre for the training of health professionals in educational technology.

Objectives:

1. To promote the training of teachers of health professionals in educational science and technology.

2. To promote the development and application of systematic educational process and

3. To promote and conduct educational research

Educational activities conducted by the NTTC

Activity	Target group	No. of courses	No. of participants
National Course in Educational Science	Medical teachers	25	511, (from 79 medical Colleges)
Workshop on Educational Planning etc.	Deans, Principals	6	76
workshop on Educational Science	Postgraduate Students	12	210
WHO Fellows from other countries			14

The centre is actively engaged in promoting Reorientation of Medical Education through staff development activity and consultancy services.

The concerted action by various departments and the commitment of staff and students have contributed to the academic atmosphere that pervades in this institute and enables it to march ahead with sustained motivation.

Compiled by: Dr.D.K.Srinivas and Mr.B.V.Adkoli, NTTC, JIPMER, (1991).

GROUP DISCUSSION ON CURRICULAR DETERMINATS FOR TRAINING AND FUTURE PLANS OF THE JIPMER CENTRE

JIPMER is expected to train key personnel from the States of Andhra Pradesh, Tamil Nadu, Pondicherry, Karnataka and Kerala in Disaster Preparedness and Response. It is necessary as a first step to develop curricula for organising such training programmes and also to prepare a plan regarding the future role of JIPMER Centre. The participants were therefore divided into two groups for holding group discussions and to make recommendations.

Deliberations and Recommendations of Group-A

The Group-A focussed on curriculum development. Dr. A.J. Veliath was the moderator and Dr. K.R. Sethuraman was the rapporteur. The following points were taken up for discussion:

- What should be the goals of training programme?
- What levels* of key personnel are to be trained?
- What types of disasters should JIPMER Centre focus on for training?
- What should be the duration and frequency of training for different levels* of personnel?
- What type of teaching/learning methods would be effective to achieve the goals?
- What methods of evaluation should be adopted?

(* Level refers to level in hierarchy and also to the type of trainee, for example: administrator, physician etc.)

Situation Analysis:—

It was felt that there is at present a lack of awareness of the national policy or guidelines for health professional on disaster management. There is also a lack of effective linkage with various government and non-government organisations and between civil and defence sections—especially during the interdisaster phase. There is a lack of adequate formal training of various personnel, so that the policies by the Centre are not translated into practical action properly. There is also a lack of adequate communication both intersectorally and vertically down to the community level. The various training programmes in India are only short term adhoc arrangements. Eventhough some data are available, there is a clear lack of hard scientific and epidemiological data on an All India basis to enable a better preparation for the future especially with regard to man-made disasters.

Recommendations:—

In view of the above, it is necessary to have formal and well stipulated goals of training. These should endeavour:

i) to train manpower on various aspects of the disaster cycle and the principles of disaster management.
ii) to develop specific scientific skills on disaster management which should be decided according to the level of the participants and the nature of their work.

The key personnel to be trained are classified as follows:

Level 1: State level personnel:—

- Relief Commissioner of the respective states, Secretaries, Health, Civil Supplies etc.
  Directors of Medical and Health Services.
  other State level officers of different departments.
- State level NGOs.

Level 2: District level functionaries:—

- District Magistrate,
- District Chief Medical Officer of Health and other district health officials.
- District level NGOs.

Level 3: Block level officials:—

- Block development officer.
- Medical Officers and other staff members of Primary health centres.

Level 4 Community and village level workers.—

It was felt that JIPMER should first take up level-1 key personnel for training. Later, if deemed desirable and feasible, Level-2 may be taken for training.

The training programmes should:

1) cover general principles of the disaster cycle and its management;
2) focus on disasters common in South India such as floods, cyclone etc.
3) focus on man-made disasters as applicable to India. The duration of the training for level-1 should be of 3 days. There can be 2 worships per year. It was decided that for level-2, the content and duration should be decided in consultation with level-1 functionaries.

The instructional methods to be adopted for training should include:

1) introductory lectures;
2) case studies and simulated problems using sand models or computer models;
3) group discussions, trigger-films, video clips etc. to motivate the personnel and sensitize them on emotional religious social issues involved in disaster.

The core content for level-1 training must consist of:

1) disaster management information systems (DMIS);
2) disaster epidemiology;
3) rapid assessment and response;
4) relief measures;
5) intersectoral coordination.

There is a need for continuous evaluation of the training programme. This must include a short-term evaluation based on feedback and performance in simulation exercises and a long-term evaluation based on feedback from the key personnel on how they perform in training other levels of workers, and their own activity during actual disasters.

DM 7-11

National Teacher Training Centre

JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL EDUCATION & RESEARCH
PONDICHERRY 605006

CORE FACULTY TRAINING WORKSHOP IN DISASTER PREPAREDNESS
(W.H.O Sponsored)

29th to 31st August, 1991

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Asssoc Professor of Surgery,

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Professor of Anaesthesiology,

Dr.R.Sambasiva Rao
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Dr. D.K. Patro
Assoc Professor of Orthopaedic Surgery,

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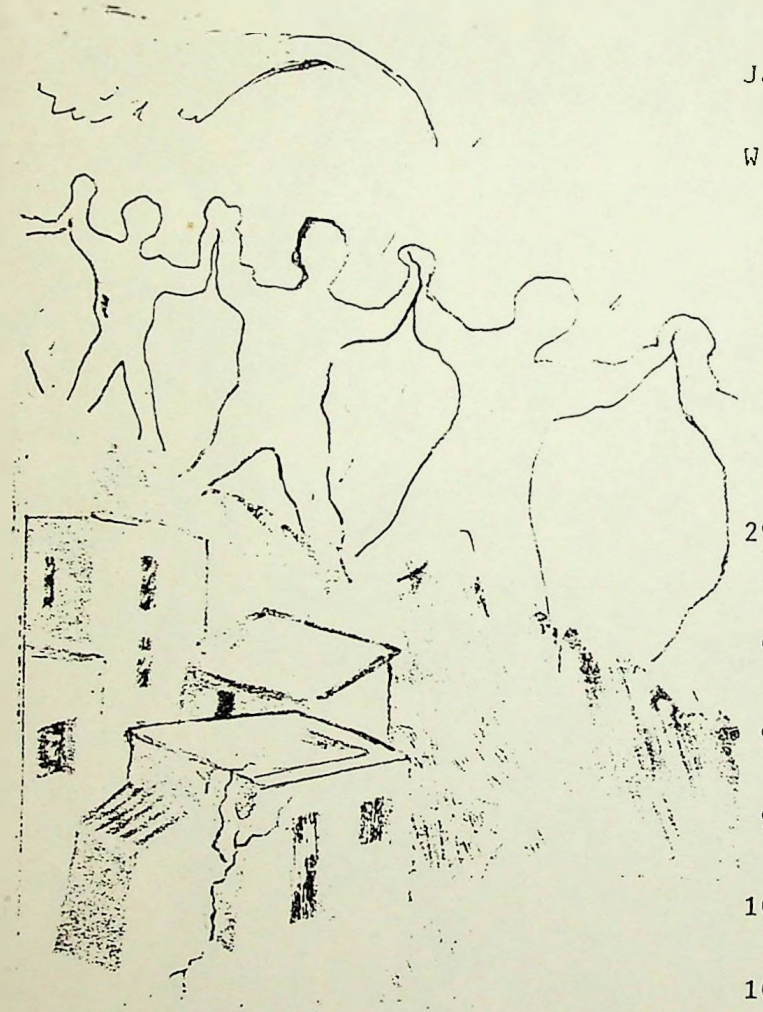
Project Officer, NTTC,



National Teacher Training Centre
Jawaharlal Institute of Postgraduate Medical Education & Research
Pondicherry 605006

W.H.O sponsored workshop for Training Core Faculty in Disaster Preparedness

29th to 31st August, 1991

Venue: Library Seminar Hall

INAUGURAL SESSION

Agenda

29.08.91 Thursday:

9.30 am	Arrival of Dr.Har Swarup Singh His Excellency the Lt. Governor of Pondicherry
9.35 am	Welcome and objectives of the workshop - Dr.S.Chandrasekar, Director, JIPMER
9.50 am	Brief report of NTTC activities - Dr.D.K.Srinivasa, Project Officer, NTTC
10.00 am	Inauguration - Dr.Har Swarup Singh His Excellency the Lt. Governor, Pondicherry
10.15 am	Introduction of Resource Persons and the Faculty
10.25 am	Vote of thanks

JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL EDUCATION AND RESEARCH, PONDICHERRY 605006

NATIONAL TEACHER TRAINING CENTRE

PLANNING MEETING FOR DISASTER PREPAREDNESS TRAINING

PROGRAMME

WEDNESDAY 16.9.92

09.30 am Registration
09.45 am Welcome and Opening remarks - DR. D.S. DUBEY, Director.
10.00 am Objectives of Meeting and How do we work.
10.30 am Presentation by visiting Resource Persons.
Discussion.
12.30 pm Distribution of topics / responisibilities.
Formation of groups.
01.00 pm Lunch
02.30 pm Group Work.
04.30 pm Preview meeting

THURSDAY 17.9.92

09.00 am Group Work (continued)
- Formulate Objectives and Contents of modules on
- Floods & Cyclons
- CPR
- First aid

01.00 pm Lunch
02.00 pm Group Work(continued)

FRIDAY 18.9.92.

PLENARY SESSION

09.00 am to 12.00Noon - Group Presentations
Strategy for monitoring, co-ordination, development of mateirials.
01.00 pm Lunch
02.00 pm Preparation of review of reports and proposals for future activities of JIPMER centre. (core group meetinmg)

NATIONAL TEACHER TRAINING CENTRE

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1. DR. JACOB D. RAJ,
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2. DR. SHIRIDI PRASAD TEKUR,
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3. SHRI SWAMI SWATMANANDA,
   Ramakirishna Mission,
   Rajahmundry Centre,
   ANHDRA PRADESH.

4. LT. COL. SHAMMSHER SINGH,
   Officers Training School,
   Lucknow.

5. DR. BRIJ BHUSHAN,
   Dy. Asst. General of Health Services,
   D.G.H.S.,
   Nirman Bhavan,
   New Delhi.

6. DR. DARA S. AMAR,
   Prof. & Head of the
   Deptt. of Community Medicine,
   St. Johns Medical College,
   BANGALORE

7. DR. G. PRABHAKARAN,
   Rotary SAVE CHILDREN FUND
   Vishakapatinam,
   A.P.

8. LT. COL. N.K. PARMAR, Vr.C.,
   DADG (3-C)
   Office of Director General
   Armed Forces Medical Services,
   Ministry of Defence,
   New Delhi.

9. TWO OFFICIALS FROM ANDHRA PRADESH.

JIPMER PARTICIPANTS

1. DR. D.S. DUBEY,
   Director.

2. DR. A.J. VELIATH,
   Medical Superintendent.

3. DR. D.K. SRINIVASA,
   Director Prof.of P & S.M. and
   Project Officer, NTTC.

4. DR. K.M. RAJENDRAN,
   Prof. of Anaesthesiology.

5. DR. N. ANANTHAKRISHNAN,
   Prof. of Surgery.

6. DR. K.R. SETHURAMAN,
   Prof. of Medicine - Through Proper Channel.

7. DR. D.K. PATRO,
   Assoc. Prof. of Ortho.

8. DR. S. JAYANTHI,
   Assoc. Prof. of Pathology - Through Proper Channel.

9. DR. T.K. DUTTA,
   Assoc. Prof. of Medicine. - Through Proper Channel.

10. DR. S. JAGDISH,
    Assoc. Prof. of Surgery.

11. DR. R. CHANDRASEKAR,
    Assoc. Prof. of Psychiatry

12. DR. VISHNU BHATT,
    Assoc. Prof. of Paediatrics - Through Proper Channel.

13. DR. SANTHOSH KUMAR,
    Sr. Resident, P & S.M. Deptt. - Through Proper Channel.

14. DR. RAVISHANKAR,
    Assoc, Prof. of Anaesthesiology -Through Proper Chennel.

15. MR. K. VIJAYAN PILLAI,
    Technical Supervisor, NTTC - Through Proper Channel.

JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL EDUCATION AND RESEARCH, PONDICHERRY 605006

NATIONAL TEACHER TRAINING CENTRE

PLANNING MEETING ON DISASTER PREPAREDNESS PROGRAMME (WHO)
(From 16th to 18th September, 1992)

LIST OF RESOURCE PERSONS

	Telephone Numbers	
	Office	Residence
1. DR. JACOB D. RAJ, Executive Secretary (PREPARE), 4, Sathalvar Street, Mugappair West (PADI), MADRAS 600 050.	654211 655015	655291
2. DR. SHIRIDI PRASAD TEKUR, Community Health Cell, 326, V Main Ist Street, Koramangala, BANGALORE -560 034.	531518	620740
3. SHRI SWAMI SWATMANANDA, Ramakirishna Mission, Rajahmundry Centre, ANHDRA PRADESH.	73112 78127	
4. LT. COL. SHAMSHER SINGH, Officers Training School, Lucknow.	240181 240182 - Extn.2761	
5. DR. DARA S. AMAR, Prof. & Head of the Deptt. of Community Medicine, St. Johns Medical College, BANGALORE	530724 - Extn.413	531737
6. LT. COL. N.K. PARMAR, Vr.C., DADG (3-C) Office of Director General Armed Forces Medical Services, Ministry of Defence, New Delhi.	3019580	3294660
7. DR. A. MUNAWARKHAN, Joint Director (Epidemiology), Directorate of Public Health and P.M., MADRAS.	454175 454311 Extn.to Jt. Director (Epidemic)	848012 extn Room No.210.
8. DR. A. CHOCKALINGAM, Deputy Director of Health Services, CUDDALORE, Tamil Nadu.	20134	
9. MR. N.K. RANGANATHAN, Addl. Asst. Commissioner, (Revenue Admn.) MADRAS.	830550 Extn. 269.	

National Teacher Training Centre

JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL EDUCATION & RESEARCH
PONDICHERRY 605006

W.H.O Sponsored Core Faculty Training Workshop on Disaster preparedness

Dates: 29th to 31st August 1991.
Venue: LIBRARY SEMINAR HALL , JIPMER.

Project Director:	Project Officer:	Genl. Rapporteur:
Dr.S.Chandrasekar	Dr.D.K.Srinivasa	Dr.N.Ananthakrishnan

PROGRAMME

29.08.1991 Thursday

9.00 am Registration

9.30 am Inauguration

Dr.Har Swarup Singh
His Excellency the Lt. Governor of Pondicherry

10.30 am Tea

SESSION I

11.00 am Chairperson : Dr.S.Chandrasekar
Rapporteur : Dr. A.J. Veliath

Key note address:

'Present Status of Disaster Preparedness at the Global Level'
- By Dr.Olavi Elo

12.00 noon 'Consideration of Environmental Issues: Towards Long-term Disaster Preparedness'
- By Dr.Meher-Homji

01.00 pm Lunch

SESSION II

Chair Person : Dr.Olavi Elo
Rapporteur : Dr.A.J.Veliath

2.00 pm 'Disaster Profile in India'
- Dr.Brij Bhushan

2.45 pm Reaction time and Discussion

3.15 pm Tea

3.30 pm 'Health Aspects of Disasters and their Management'
- Dr.S.P.Mukhopadhyay

4.15 pm Reaction time and Discussion

30.08.1991 Friday

SESSION III

Chairperson : Dr.Brij Bhushan
Rapporteur : Dr.Rajendiran

9.00 am 'Relief and Management of Mass Casualties'
- Lt. Col. S.S.Verma, AMC

9.45 am Reaction time and Discussion

10.00 am 'Role of Statistical Techniques in Quantitative Risk Assessment'
- Dr.A.W.Deshpande

10.45 am Reaction time and Discussion

11.00 am Tea

11.15 am 'Role of Voluntary Agencies in Disaster Relief'
- Dr.Shirdi Prasad Tekur

12.15 pm Reaction time and Discussion

12.30 pm Visit to JIPMER Hospital

1.00 pm Lunch

SESSION IV

Chairperson : Dr.S.P.Mukhopadhyay
Rapporteur : Dr.Rajendiran

2.00 pm 'Disaster Relief'
- Dr.P.N.Pandit

2.45 pm Reaction time and Discussion

3.00 pm 'Disaster Relief - The PREPARE Experience' - Dr.Jacob D Raj

4.00 pm Visit to Auroville

31.08.1991 Saturday

SESSION - V

Chairperson : Dr.Olavi Elo
Rapporteur : Dr.K.R.Sethuraman

9.00 am 'Curriculum Determinants in Relation to Disaster Preparedness'
- Dr.D.K.Srinivasa

9.30 am Group Work on 'Curriculum Development for Training and Future Plans for the Centre'

11.30 am Plenary Session

1.00 pm Lunch

SESSION - VI

Chairperson : Dr.A.J.Veliath
Rapporteur : Dr.K.R.Sethurman

2.00 pm Status Paper on 'Organisation of Relief and Rehabilitation - Tamil Nadu'
- Sri G.S.Ganesan

2.45 pm Status Paper on 'Disaster Preparedness and Relief - Pondicherry'
Collector, Government of Pondicherry.

3.30 pm Valedictory Session

SESSION-V

CURRICULUM DEVELOPMENT AND TRAINING AT JIPMER CENTRE

The JIPMER Centre is expected to train key personnel from the states of Andhra Pradesh, Tamil Nadu, Pondicherry, Karnataka and Kerala in Disaster Preparedness and Response. It is necessary to develop curricula for organising the training programmes. The group is requested to consider the following issues and offer suggestions:

Group-A: On curriculum development and a schedule for implementation.

Group-B: Future plans of JIPMER Centre.

DISCUSSION POINTS FOR GROUP-A

- What should be the goals of training programme?
- What level* of key personnel are to be trained?
- What types of disasters should JIPMER Centre focus on?
- What should be the duration and frequency of training for different levels* of personnel?
- What type of teaching/learning methods would be effective to achieve the goals?
- What methods of evaluation should be adopted?
- What mechanism should be established to aid in follow up?

(* Level refers to level in hierarchy and also to the type e.g. administrator, physician etc.)

Group 'B' : - Future plans of JIPMER

1)- Mechanisms for continuous interaction.
2)- How to acquire & disseminate info.
3)- A model centre ?
4)- Resource centre for case studies & research
5)- Immediate strategies / No of courses / target group.

National Teacher Training Centre

JAWAHARLAL INSTITUTE OF POSTGRADUATE MEDICAL EDUCATION & RESEARCH
PONDICHERRY 605006

CORE FACULTY TRAINING WORKSHOP IN DISASTER PREPAREDNESS
(W.H.O Sponsored)

29th to 31st August, 1991

LIST OF PARTICIPANTS

Dr.Olavi Elo
W.H.O Representative to India
Nirman Bhavan
New Delhi 110 011

Dr.Brij Bhushan
Deputy Addl. Director General (EMR)
Dte. General of Health Services
Nirman Bhavan
New Delhi 110 011

Dr.S.P.Mukhopadhyay,
Professor and Head, Dept of P&SM,
All India Institute of Hygiene
& Public Health,
110, Chittaranjan Avenue,
Calcutta 700 073.

Lt. Col. S.S. Verma
Commanding Officer
Station Health Organization
Delhi Cantt
Delhi 110 010

Dr.V.M.Meher-Homji
French Institute
P.B.33
Pondicherry 605001

Dr.A.W.Deshpande
National Environmental Engineering Research Institute,
Nagpur

Sri.G.S.Ganesan
Director
Cyclone Warning and Research Centre
Regional Matereological Centre
50 College Road, Madras 600 006

Dr.Jacob D Raj
Director, PREPARE,
364 North Main Road
Anna Nagar West
Madras 600 101

Dr.P.N. Pandit
575 16th Block Main
III Block, Koramangala
Bangalore 560 034

Dr.Shirdi Prasad Tekur
Community Health Cell
26, V Main, I Block,
Koramangala, Bangalore 560 034

Participants from JIPMER

Dr.S.Chandrasekar
Director,

Dr.A.J. Veliath
Medical Superintendent,

Dr.K.R.Sethuraman
Assoc Professor of Medicine,

Dr.N.Ananthakrishnan
Asssoc Professor of Surgery,

Dr.K.M. Rajendran
Professor of Anaesthesiology,

Dr.R.Sambasiva Rao
Professor of Microbiology

Dr. D.K. Patro
Assoc Professor of Orthopaedic Surgery,

Dr.S.Jayanthi
Assoc Professor of Pathology,

Dr.D.K.Srinivasa
Project Officer, NTTC,

The Director & the Project Officer

National Teacher Training Centre,

JIPMER

cordially invite to the inauguration of the

CORE FACULTY TRAINING WORKSHOP
on
DISASTER PREPAREDNESS

(W.H.O sponsored)

by Dr.Har Swarup Singh

His Excellency the Lt. Governor of Pondicherry

in the Library Seminar Hall, JIPMER

at 9.30am on 29th August, 1991

National Teacher Training Centre
Jawaharlal Institute of Postgraduate Medical Education & Research
Pondicherry 605006

W.H.O sponsored workshop for Training Core Faculty in Disaster Preparedness

29th to 31st August, 1991

Venue: Library Seminar Hall

INAUGURAL SESSION

Agenda

29.08.91 Thursday:

9.30 am	Arrival of Dr.Har Swarup Singh His Excellency the Lt. Governor of Pondicherry
9.35 am	Welcome and objectives of the workshop - Dr.S.Chandrasekar, Director, JIPMER
9.50 am	Brief report of NTTC activities - Dr.D.K.Srinivasa, Project Officer, NTTC
10.00 am	Inauguration - Dr.Har Swarup Singh His Excellency the Lt. Governor, Pondicherry
10.15 am	Introduction of Resource Persons and the Faculty
10.25 am	Vote of thanks

INDIAN SOCIETY OF HEALTH ADMINISTRATORS (ISHA)

104 (15/37), CAMBRIDGE ROAD CROSS, ULSOOR, BANGALORE-560 008
CABLE: HEALTHADMN ☎ : 574297/ 531979
Fax [INLAND : 0812 - 261468 ICFAX - 569 / FOREIGN : 0091 - 812 - 261468 ICFAX - 569] Telex : 0845/2696 or 8055/ICTP/1071

G-65/92/110 76

3 February,1992

Dr Shirdi Prasad Tekur
Community Health Cell
No.326, V Main, I Block
Koramangala
Bangalore - 560 034

Dear Dr Tekur,

Sub: Workshop on "Disaster Planning and Management of Health Services", for District Health Officers: February 17 - 21, 1992 at Indian Social Institute, Bangalore

1. Kindly refer to our correspondence on the above subject regarding your participation in the above Workshop and sharing with the participants about your experiences in Disaster Planning in the health and allied areas.

2. We are happy to inform you that the Government of India has now confirmed the dates. We shall request your availability on any day, February 18-21, 1992, since on the first day of the Workshop, there would be general discussions on Health Policy and Management. Please let us know the date convenient to you. Also, kindly let us know the exact title of your presentation.

3. We expect approximately 35-40 participants. They would be District Health Officers/District Medical Officers from Karnataka, Madhya Pradesh, Gujarat and Andhra Pradesh.

4. As indicated earlier, we shall provide the local hospitalities and accommodation arrangements at Indian Social Institute, No.24 Benson Road, Bangalore-560046, Phone:575189, which is also the venue of the Workshop. A map showing the directions to reach ISI is enclosed.

We look forward to hearing from you soon, and with kind regards,

Cordially yours,

Dr Ashok Sahni
Professor and
Hony Executive Director

encl:aa
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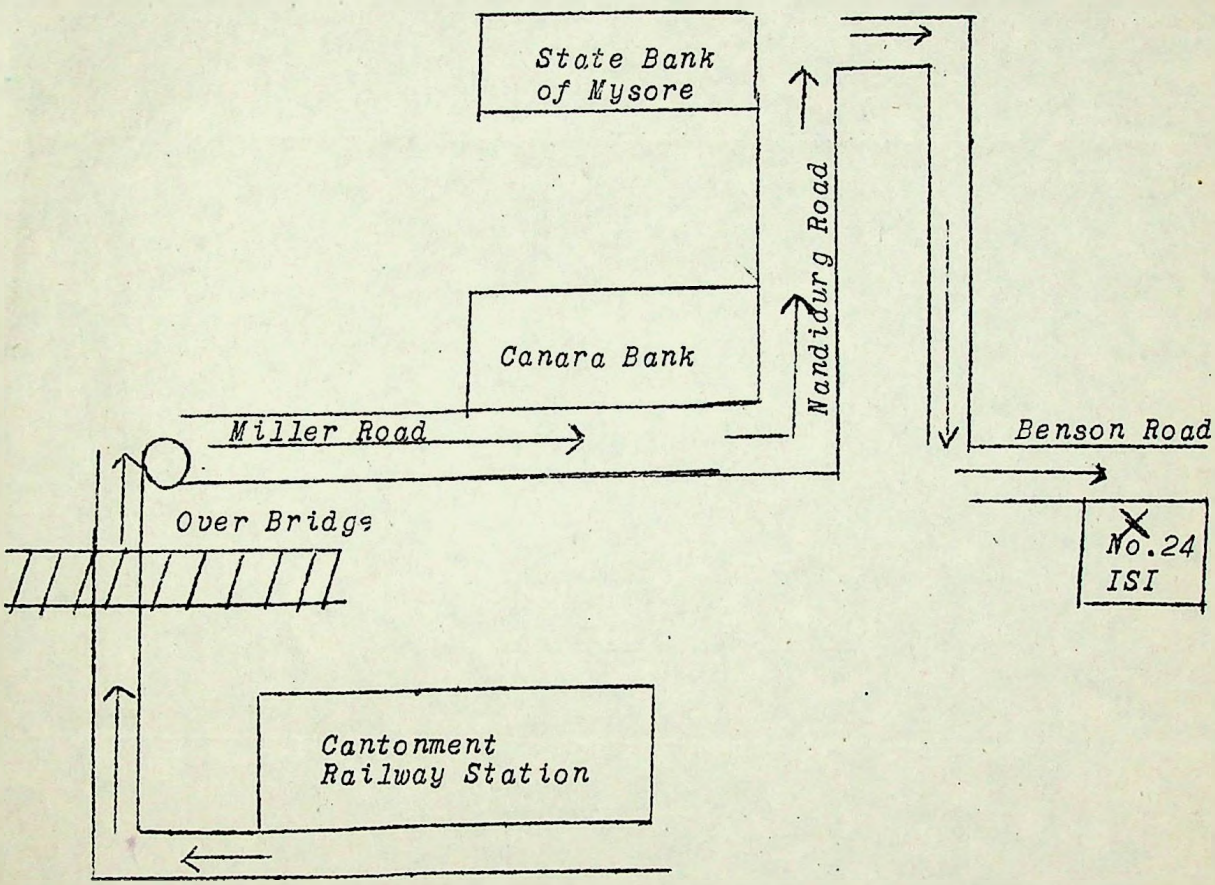
INDIAN SOCIAL INSTITUTE
24 BENSON ROAD,
BANGALORE - 560 046.



INDIAN SOCIETY OF HEALTH ADMINISTRATORS (ISHA)

104 (15/37), CAMBRIDGE ROAD CROSS, ULSOOR, BANGALORE-560 008
CABLE: HEALTHADMN ☎ 574297/531979

Fax [INLAND : 0812-261468 ICFAX-569 / FOREIGN : 0091-812-261468 ICFAX-569] Telex: 0845/2696 or 8055/ICTP/1071

G-65/92/1145 10 February 1992

Dr Shirdi Prasad Tekur
Community Health Cell
No. 326, V Main, I Block
Koramangala
Bangalore - 560 034
KARNATAKA

Dear Dr Tekur,

Sub: Workshop on "Disaster Planning and Management of Health Services", for District Health Officers: February 17-21, 1992 at Indian Social Institute, Bangalore

1. Kindly refer to our telephonic discussion today. Thank you very much for agreeing to take a session for the participants on 20th February, 1992, at 9.00 AM on " Collaboration between Voluntary Agencies and Government Agencies in Disaster Responses". As discussed, we shall be happy to have your participation and professional inputs during the entire workshop from 17-21 Feb. Please feel free to attend any of the sessions as per your convenience. Particularly, we would suggest that you could participate on the first day at the inaugural session when the participants would introduce themselves.

We look forward to meeting you at the workshop.

With kind regards,

Cordially yours,

Dr Ashok Sahni
Professor and
Hony Executive Director

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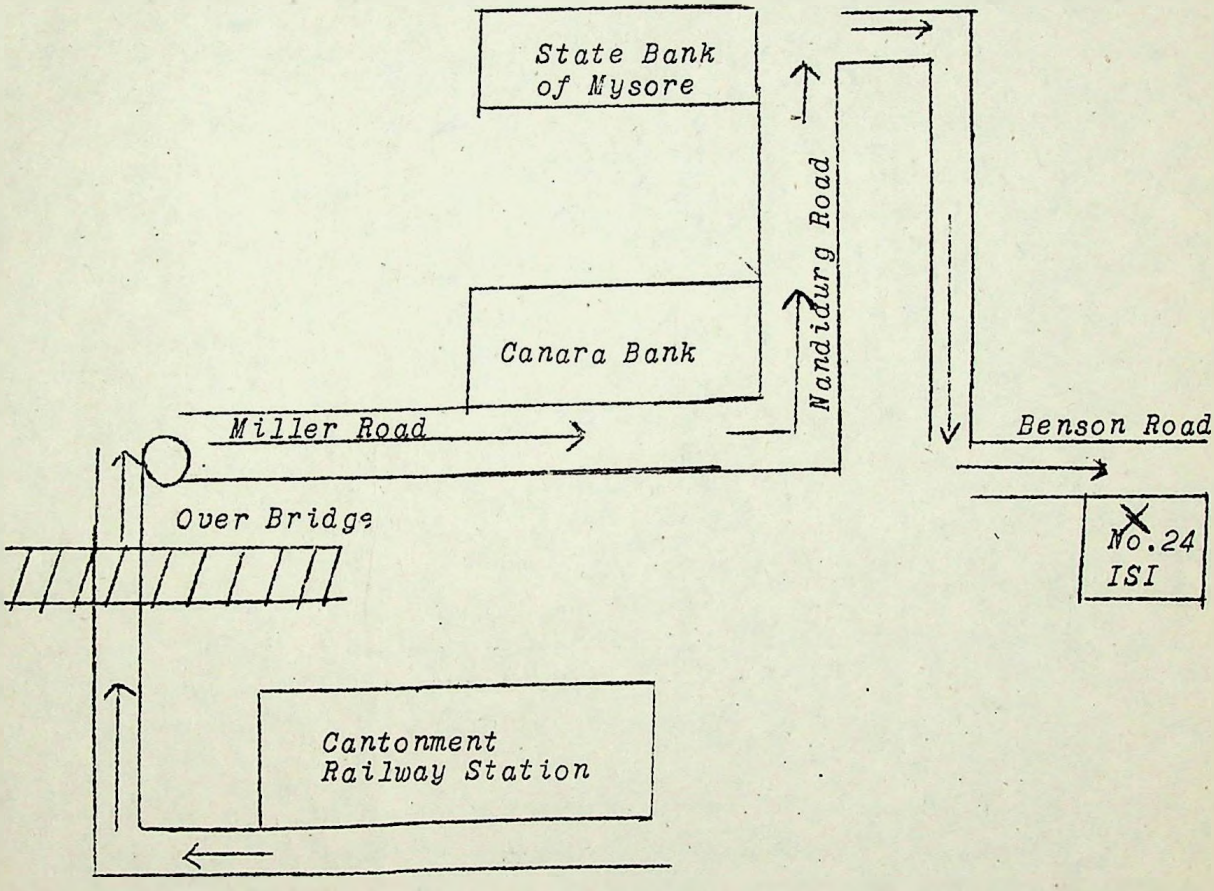
INDIAN SOCIAL INSTITUTE
24 BENSON ROAD,
BANGALORE - 560 046.



Tension in the air

Bihar, already riven by deep social and economic divisions, watches with concern a government move to introduce land reforms.

KALYAN CHAUDHURI
in Patna

THE lack of land reforms has been blamed for many of the ills of Bihar. However, by a curious irony, it is now feared that the likely introduction of land reforms by the Rabri Devi government will trigger the bloodiest round of violence in the State's history.

Driven by political considerations, particularly the outcome of the panchayat elections, which were held in June after a gap of 24 years, the Rashtriya Janata Dal-Congress(I) coalition government has reportedly prepared a set of land reform measures to distribute land to sharecroppers and tillers of the land. The package, according to informed sources in the government, includes "very radical" reforms that were drafted by the Congress(I) government led by Bindeswari Dubey (1985-89) and passed by the legislature. But, the sources say, the measures have been substantially modified by the present government to "suit its own political and caste equations".

According to a senior official, the package contains a provision that seeks to make a sharecropper the legal owner of the land he works on if he pays 15 years' land tax to the government. At current rates, the tax amount would be a pittance. There is also a provision that would enable sharecroppers to have their names registered in government records.

Measures like these are certain to stir a hornet's nest. The more cautious among the landowners have started taking pre-emptive steps. Says Puranjit Sinha, a retired engineer who owns about 20 acres of land in his village in Champaran district: "I have already taken possession of my land because of the imminent trouble. But who knows, even now someone may claim my land."

Puranjit Sinha echoed the sentiments of a large number of people in rural Bihar, including a big section that belongs to the backward classes. Pappu Yadav, an independent Member of Parliament, who has a following among Yadavs, who belong to the Other Backward Classes (OBC), has warned of dire consequences if there is "any attempt to redistribute rural land". Pappu Yadav, who is now undergoing trial in connection with the murder of Communist Party of India (Marxist) leader Ajit Sarkar, hails from the Saharsa-Madhepura area where Yadavs have traditionally been landlords.

The situation is not different in Nalanda, Patna and Jehanabad districts of the violence-prone central Bihar. Landowners belonging to the Kurmi and Yadav communities are in no mood to share their land with sharecroppers. Said a rickshawpuller, a Muslim, from Motihari: "I was a sharecropper for the last 20-25 years but the landowner forced me to hand over the land as he did not want to take chances. The result is that now at my age I have to pull a rickshaw."

There is also the fear of lumpen elements taking advantage of the situation and farmers themselves using them to settle scores with their rivals. Statements by people like Pappu Yadav make it clear that in the matter of land the interests of the upper castes and the advanced sections among the backward classes such as Kurmis and Yadavs converge. This, people fear, may lead to a spate of violence.

There are indications that naxalite groups such as the Maoist Communist Centre (MCC) and the People's War (P.W.) fear that the proposed land reforms will check the growth of their support base among the landless poor. Predictably, they have described the package an eyewash. They may not be averse to inciting violence in order to sabotage the proposals, it is feared. The MCC has entrenched itself in some central Bihar districts where, according to intelligence officials, land revenue collection has fallen substantially.

V. SUDERSHAN

Rashtriya Janata Dal leader Laloo Prasad Yadav with wife and Bihar Chief Minister Rabri Devi and other party leaders outside the Prime Minister's residence in New Delhi on September 2.

Making matters worse is the hostilities between the MCC and the P.W. on the one side and the Communist Party of India (Marxist-Leninist) Liber- ation, another naxalite group, on the other. With its base having shrunk to parts of Patna and Jehanabad districts, the Liberation group is on the defensive. Informed sources say that the group is likely to assert its presence through violence.

A formal announcement of the land reforms package is delayed because Laloo Prasad Yadav, RJD supremo and former Chief Minister, is wary about its ramifications. However, political compulsions may ensure that it is not delayed any further. Non-performance has been a charge levelled against the RJD

DM-7

Floods and drought

KALYAN CHAUDHURI

FLOODS and drought have stalked Bihar simultaneously in the past two months. With very little to fall back upon, people suffer in silence or migrate to other States in search of a livelihood.

The northern planes of the State are flooded by rivers flowing from the hilly regions of neighbouring Nepal, which received heavy rain. According to Agriculture Department officials, rainfall in 34 districts has been below the average this year. In Samastipur, Muzaffarpur, Begusarai, Bhagalpur, Darbhanga and Madhubani districts, the shortfall has been 20 to 35 per cent. But all these districts are reeling under floods, which have claimed 101 lives and damaged standing crops on one lakh hectares. The loss is estimated at over Rs.500 crores. Informed sources said over 60 lakh people in 16 districts had been affected.

After an aerial survey of the flood-affected areas, a Central government team said that the floods had caused "immense damage". The State government has sought over Rs.300 crores from the Centre for flood relief.

The situation worsened in the third week of September when the turbulent Burhi Gandak river breached its embankments in Samastipur district. Vast areas in the Bibhutipur block in the district are under water. Nearly 50 panchayats were affected in this area. Other northern Bihar districts, including Saran, East Champaran, West Champaran and Goplagunj, also faced the fury of the Gandak, the Burhi Gandak, the Adhwara Bagmati and the Kosi. In Gopalganj, Saran and West Champaran, the Army was pressed into service to provide relief. Three people were killed at Aurai in north Bihar on August 6, when the police opened fire on a group of people protesting against "irregularities" in the distribution of relief materials.

IN contrast, the spectre of drought looms large over the districts of Bhojpur, Rohtas, Gaya, Munger, Patna and Aurangabad in central Bihar where the rainfall has been 25 to 45 per cent below the average. The rains were delayed and scanty. The rainfall during June was 95.3 mm as compared to the normal of 178.3 mm; in July it was 156.5 mm, much below the normal of 316.6 mm. As a result, large tracts of land remain barren. Although the time for sowing the kharif crop is coming to an end, paddy saplings have not been planted in about half the cropped area in the State. ■

RANJEET KUMAR

REUTERS

Taking refuge on rooftops, at a flood-affected village in Bihar. (Below) People being evacuated from a village in Gopalganj district.

DM-7.

Oxfam International - India Contingency Plan for Disaster Preparedness

CONSULTATION ON DISASTER PREPAREDNESS IN SOUTH INDIA

Dear Dr. Thelma Narayan,

You are cordially invited for a "CONSULTATION ON DISASTER PREPAREDNESS IN SOUTH INDIA" on **27th March 2004, Saturday** (10.00 a.m. to 5.00 p.m.) at Bangalore. The Venue is:

Student Christian Movement of India Hall
29, 2nd Cross, CSI Compound,
Mission Road, Bangalore – 560 027
Ph: 080 – 22223761

Disaster Contingency Planning

A Disaster Contingency Plan is a framework for intervention, in case of a disaster. The process of planning involves analysing various disaster scenarios and mapping existing resources (human, physical and financial). This mapping is aimed at indicating what is in place for disaster response and which physical and financial resources have to be enhanced, to be fully prepared for an effective response as a proactive humanitarian agency in the region.

India Contingency Plan

Oxfam International is currently developing an *India Contingency Plan* to be prepared for Disaster Response for the whole of India. Much of this information will be drawn from Oxfam GB's four country offices, Government sources (National and State level), surveys of INGOs, as well as other primary and secondary research. In addition, consultations will be held in different regions, to gain an understanding of what various groups are doing to prepare for a disaster in terms of scenario analysis and resource mobilisation. It will be an opportunity for different groups to link up with each other and explore how they could participate in disaster response and preparedness. These workshops are in the states in which Oxfam GB is not currently working, or in which the local office has not undertaken Contingency Planning.

South Indian Consultation

The Consultation on Disaster Preparedness in South India is to be held on **27th March 2004, Saturday** from **10.00 a.m. to 5.00 p.m.** in Bangalore. The aims of the Consultation are:

1) To bring together groups and networks working in the region, to discuss issues related to disaster preparedness.
2) To compile information from networks and groups for analysing disaster scenarios and mapping the resources available (human, physical and financial).
3) To get regional networks and groups to link up for contingency planning.

Please confirm your participation by phone or e-mail (Ph: 080-36858056; E-mail: navthom@yahoo.co.uk).

Sincerely,
Naveen Thomas
Oxfam Associate

(Facilitated and Supported by OXFAM GB in India)

Oxfam International is a confederation of 12 organizations working together in more than 100 countries to find lasting solutions to poverty, suffering and injustice. To achieve the maximum impact on poverty, Oxfams link up their work on development programs, humanitarian response and lobbying for policy changes at the national and global level. Oxfam GB has four Programme offices located in four different regions (Lucknow, Kolkata, Hyderabad and Ahmedabad) that directly support programme activities in their respective regions.

Dis. Disaster preparedness file

26/3/04. NH-pl. inform one 4 invitees telephonically that the program starts at 10am at SCM House

informed to Sandhya.

Oxfam International - India Contingency Plan for Disaster Preparedness

Saturday 27th March 2004 Workshop Timetable (DRAFT)

Time	Session Length	Session	Session Details
10.00 a.m.	30 Minutes	**Introductions**	**Icebreaker:** Personal experiences of a natural disaster. Each Person to introduce themselves and say one thing they felt worked well in terms of existing response mechanisms. • Define Objectives of the workshop • Go through timetable • Brief intro to Oxfam and our Humanitarian Work in India • Oxfam International and Contingency Plan
10.30 a.m.	45 Minutes	**Opening Context & Overview**	**State(s) Disaster Profile** - Tamil Nadu / Kerala and Karnataka 45-minute presentation by Oxfam staff. • Demographic Information • Disaster Profile/ Vulnerability Mapping • What the National / State Government will do in the event of disaster
11.15 a.m.	15 Minutes	**Break**	
11.30 a.m.	60 minutes	**Reflective & Critical thinking**	**Brainstorm** Is the profile Oxfam presented accurate, or a fair assessment? We want your input. Can we collectively think of areas where there are gaps in the Government intervention? In what ways could we work to strengthen / support intervention?
12.30 p.m.	60 Minutes	**Vulnerability Mapping**	In State-by-State Groups, list all the vulnerabilities faced in your State. Prioritize these and each group reports back.
01.30 p.m.	60 Minutes	**Lunch**	
02.30 p.m.	60 minutes	**Scenario Analysis**	Vulnerability of States: Disaster Scenario. In groups we will analyze what we identified as the disaster we are most vulnerable to. We will look at two scenarios and collectively profile the resources 1. Moderate Disaster 2. Severe Disaster
3.30 p.m.	30 Minutes	**Break**	Tea
4.00 p.m.	60 Minutes	**Resource Assessment**	Civil Society Capacity / Resource Mapping (Human, Physical & Financial Mapping of each State) A Self-Assessment for your Organization.
5.00 p.m.	30 Minutes	**Concluding Session**	What can we conclude from the day? What do we agree on in terms of areas we could work on? What happens next? Questions and Reflections on the day?

DM-7.

Oxfam - India Contingency Plan for Disaster Preparedness

Saturday 27th March 2004 Workshop Timetable **Bangalore**

Time	Session Length	Session	Session Details
10.00 a.m.	30 Minutes	**Introductions**	**Icebreaker:** Personal experiences of a natural disaster. Each Person to introduce themselves, and say one thing they felt worked well in terms of existing response mechanisms. • Define Objectives of the workshop • Go through timetable • Brief intro to Oxfam and our Humanitarian Work in India • Oxfam International and Contingency Plan
10.30 a.m.	45 Minutes	**Opening Context & Overview**	**State(s) Disaster Profile -** Tamil Nadu / Kerala and Karnataka 45-minute presentation by Oxfam staff. • Demographic Information • Disaster Profile/ Vulnerability Mapping • What the National / State Government will do in the event of disaster
11.15 a.m.	15 Minutes	**Break**	
11.30 a.m.	60 minutes	**Reflective & Critical thinking**	**Brainstorm** Is the profile Oxfam presented accurate, or a fair assessment? We want your input. Can we collectively think of areas where there are gaps in the Government intervention? In what ways could we work to strengthen / support intervention?
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5.00 p.m.	30 Minutes	**Concluding Session**	What can we conclude from the day? What do we agree on in terms of areas we could work on? What happens next? Questions and Reflections on the day?

Tamil Nadu

Tamil Nadu is situated in the southern most extremity of India. More than 62,110,839 people live in just 1,30,058 sq km, making it one of the most densely populated States in the country, it also ranks in the 10 most populous States. The percentage of people living below the poverty line is much less than that of the Indian average. Natural hazards that impact Tamil Nadu include cyclones and the associated storm surges, floods and flash floods – including in the urban areas. The area also has a small vulnerability to earthquakes and it is prone to droughts.

State Profile	
Area:	1,30,058 sq km
Capital:	Chennai
Number of Districts:	28
Population Statistics	
Population:	62,110,839
Population Density:	478 people per sq km
Urban Population:	43.9%
Rural Population	56.1%
Scheduled Tribes	19.8%
Number of Villages:	16,317
Percentage Living Below Poverty:	21%

Demographic Information based on 2001 Census

Tamil Nadu - Disaster Vulnerability Profile

Disaster	Scenario	Other Information	Likelihood of Occurrence (5 Highest- 1- Lowest)
Cyclone & Wind Storm	Tamil Nadu has a coastal length of over 800km and as a result is vulnerable to Cyclones and Wind Storms. The maximum probable estimated wind speed is 203 km/ph. **Most Vulnerable Districts** Tanjavur, Pudukkatoi, Ramanathapurum, Chidamberanar, Tirunelveli and Kanyakumari, are particularly vulnerable. Also at risk are Tanjavur, Cuddalore, Chengai Anna, and Madras. **Potential Number of People at Risk:** 36,360,106 people **Impact** Tamil Nadu has a densely populated coastal line, this coupled with construction of housing in vulnerable areas, as well as poorly built dwellings have all combined to increase the losses over time. The height of storm tides can reach exceme heights above normal sea level. Particularly vulnerable are: Tuticorin (6.47m), Pamian Pass (11.4m), Nagappattinam (4.91m), Chennai (3.62m). The storm surges that follow do also come further inland.		
Flood	Floods in the State usually follow cyclones and heavy rains. **Impact:** 5,600 houses damaged annually		
Earthquake	There is a moderate risk of earthquakes in the State. **Most Vulnerable Districts:** Coimbatore, Niligiri and Tirunelveli Kat. **Impact:** Each of these areas has a high percentage of houses built from either clay & stonewalls or from burned brick walls – neither material is able to withstand even a moderate earthquake. **Potential Number of People at Risk:** 7,790,127 people		
Drought	**Most Vulnerable Districts** (Central Water Commission) Coinbature, Dharmapuri, Madurai, Salem, Tiruchirapalli, Tiruneveli, Kayakumari **Potential Number of People at Risk:** 19,472,180 people		

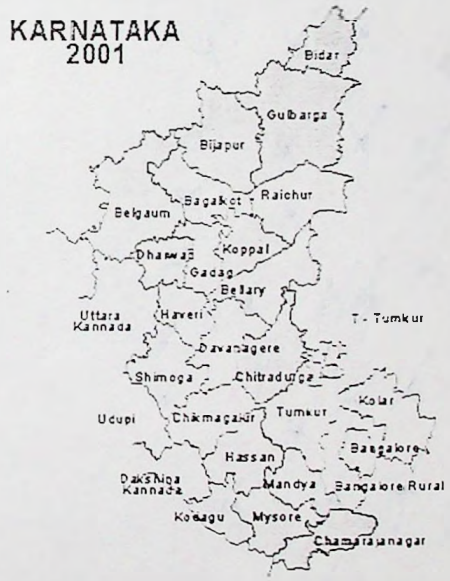
Kerala - Disaster Vulnerability Mapping

Disaster	Scenario	Other Information	Likelihood of Occurrence (5 Highest- 1- Lowest)
Cyclone & Wind Storm	Almost 96.9% of the State lies in high wind-speed areas. **Most Vulnerable Districts** Calicut, Cannore, Ernakulam, Mallapuram are particularly at risk. **Impact** In the event of a storm, weakly built houses would be at risk. Two ports have been identified as being particularly vulnerable to high tides in the event of a cyclone: Beynor: Tide height could reach 4.12m above sea level Cochin: Tide height could reach 3.45m above sea level **Potential Number of People at Risk:** 9,140,383 people		
Flood	The floods Kerala often faces follow on from the cyclones, rather than from an overflow of rivers. Although the heavy monsoons cause problems. 60% of the annual rainfall occurs in the monsoon, concentrated in just a couple of days. Coastal erosion and drainage congestion are problems in some areas too. Flood prone areas are particularly densely populated – Alleppy is one such district. **Potential Number of People at Risk:**	**Historically:** In 1992 933 villages were affected when heavy rains fell. 121% above the usual rainfall level. *Deaths:* 30 people	
Drought	The last few years have seen water levels fall considerably, impacting crops, drinking water and electric power. The water level this year is down by 27%. The number of rainfall days has gone down from 120 to 100 days annually. The average annual rainfall is 3018 mm but this year it has gone down to 2270 mm. **Most Vulnerable Districts:** Alappuzha, Kollam, Kozhikode, Palakkad, Thrissur, Wayanad and Thiruvananthapuram, Kannur, Kasargod, Kottayam and Malappuram have also suffered. **Impact:** Severe Scarcity of Drinking water, Crops Destroyed, Electric Power supply down **Potential Number of People at Risk:** 26,380,059 people		
Earthquake	Moderate hazard. Though experts have predicted an earthquake could reach 6.5 on the Richter scale. Though the whole State is in a hazard zone. **Most Vulnerable Districts:** All **Impact:** In the State (according to the 1991 Census) more than 8 million homes are made from either clay and stonewalls or burned brick walls. These dwellings would be vulnerable in the event of an earthquake with serious damage and potential loss of life. **Potential Number of People at Risk:** 31,838,619 people		

Karnataka

Karnataka lies North of Tamil Nadu and is India's eighth largest State. It is known as the Silicon Valley of the east with a growing urban population. However, agricultural still makes up a significant sector with 66% of its labour force engaged in this sector. 20% of its population lives below poverty – well below the national average. Karnataka is vulnerable to all four major natural disasters: earthquake, flood, cyclone and drought.

State Profile	
Area:	191, 791 sq km
Capital:	Bangalore
Number of Districts:	27
Population Statistics	
Population:	52,733,958 people
Population Density:	275 people per sq km
Urban Population:	33.98 %
Rural Population:	66.02%
Number of Villages:	29,483
Percentage Living Below Poverty:	20%

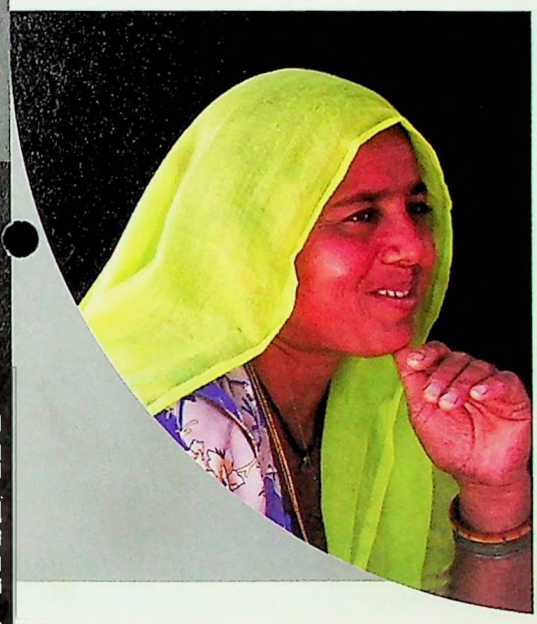


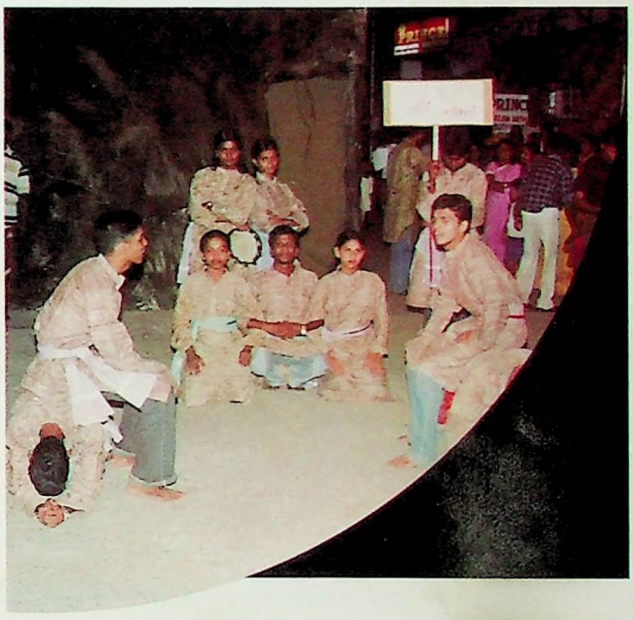
Demographic Information based on 2001 Census

Karnataka - Disaster Vulnerability Mapping

Disaster	Scenario	Other Information	Likelihood of Occurrence (5 Highest- 1- Lowest)
Earthquakes	Moderate risk of earthquakes **Districts:** Dakshina, Kannada, Uttara, and Bellary are most vulnerable. In the incident of a moderate hazard the mainly clay and stonewall and burned brick housing will not withstand even a moderate quake. **Potential Number of People at Risk:** 7,083,807 people	danger zones map available - Building regulation - Present and future	
Drought	Occurs on average once in every four years in North Karnataka. **Most Drought Prone Districts (Central Water Commission):** Bangalore, Belgaum, Bellary, Bijapur, Chikmangalur, Chitradurga, Dharwar, Gulbarga, Hasan, Kolar, Mandya, Mysore, Raichur, Tumkur **Potential Number of People at Risk:** 34,801,544 people	Impact: Suicides: in 2003 in the space of 6 months 200 farmers committed suicide, as a result of the drought. Often this was related to loans that could not be paid back due to the destruction of crops resulting from the drought.	- change agri policy - water accessibility and availability
Cyclones and Wind Storms	There is only a moderate risk of severe cyclone and windstorms occurring. Wind speed can reach 33 m/s - 39 m/s. However the weak roofs on houses in the vulnerable areas will not survive such wind speeds. Localized risk rather than a state disaster. The Maximum probable surge height above the concurrent mean sea level is 3.7 m. In the event of a cyclone the coastal belt may experience a disaster. **Potential Number of People at Risk:**	Soil subsidence Coastal zone should be managed efficiently	
Floods	There is no major flood problem in Karnataka. However in the coastal districts of Uttar Kannada and Dakshina Kannada floods of damaging proportions do take place due to Riverbanks spilling. **Potential Number of People at Risk:**		

OXFAM GB IN INDIA





Oxfam's Mission

Oxfam works with others to find lasting solutions to overcome poverty and suffering.

Oxfam's Focus

- Secure a right to livelihoods
- Promote education and health
- Reduce vulnerability to natural disasters and conflict
- Ensure the right to be heard
- Ensure gender equality and freedom from discrimination

Oxfam's Culture

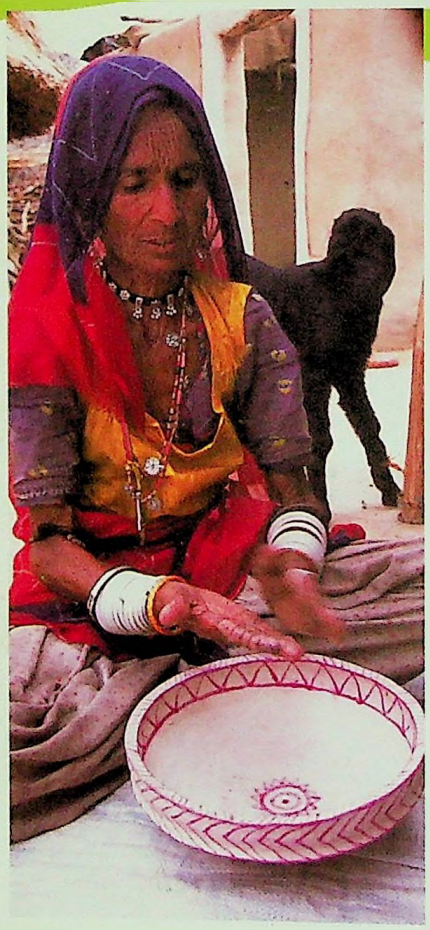
- Make a difference
- Be collaborative
- Be accountable
- Be cost-effective
- Be innovative

Half-a-Century's Partnership and Involvement

Oxfam GB believes in the dignity of people and their capacity to overcome their problems. Oxfam and its partners work with the poorest and the most vulnerable in their struggle against poverty, suffering and injustice. In India for more than 50 years, Oxfam GB has supported and nurtured several innovations and new initiatives by small and upcoming social organisations and social activists. Many of these organisations and individuals have since become role models in the field of development practice. Today, Oxfam's dual mandate of humanitarian response and development work has broadened. As a campaign organisation, Oxfam speaks out globally on behalf of the poor people on issues such as trade and violence, advocating changes in policies and practices that keep poor people poor. The campaigns are inspired by Oxfam GB's grassroots experience in over 80 countries.

Oxfam

Priority Programmes



Livelihoods

A majority of poor people, especially women and marginalised groups like adivasis and dalits, have insecure livelihoods. The situation is worse for people who live in disaster prone areas.

Oxfam's work on livelihoods in India is its **oldest and largest programme,** focussing on three main areas:

- Improving economic security of small producers and farmers, especially women and those vulnerable to natural disasters.
- Expanding access to better and fairer markets.
- Safeguarding rights of the urban poor.

This programme

- Builds community organisations, assets and infrastructure.
- Establishes rights, particularly of women, over natural productive resources, namely, land, water and forests.
- Improves the quality of natural and productive resources by promoting appropriate sustainable management practices.
- Ensures greater access to markets for poor producer groups, particularly women's groups, on fair terms.
- Improves working conditions and secures labour rights, particularly for women, in the unorganised sector.
- Integrates community-based disaster mitigation and disaster preparedness initiatives.
- Promotes access to basic services like health and education.
- Influences policy and practice so that these are pro-poor and gender-just.

Gender Equality

Different forms of discrimination, oppression and violence against women cut across class, caste, religion and ethnic groups.

Oxfam's work on gender aims to **secure gender equality at all levels and strives to create a fundamental shift in the perceptions, attitudes and behaviours of women and men to end violence against women.**

This programme

- Views through a gender perspective all work undertaken by the organisation and its partners.
- Generates public awareness and debate on violence against women at home and at the workplace.
- Provides shelter, legal aid, medical aid and counselling to victims of violence.
- Supports training and gender sensitisation of authorities dealing directly with violence against women.
- Advocates for legislation to safeguard women from domestic violence.

Disaster Preparedness & Response

India is prone to recurring natural disasters like droughts, cyclones, floods and earthquakes. Poor people, especially women and children, are more vulnerable to these disasters.

Oxfam's humanitarian programme **responds to disaster and builds a culture of disaster preparedness** through a two-pronged approach:

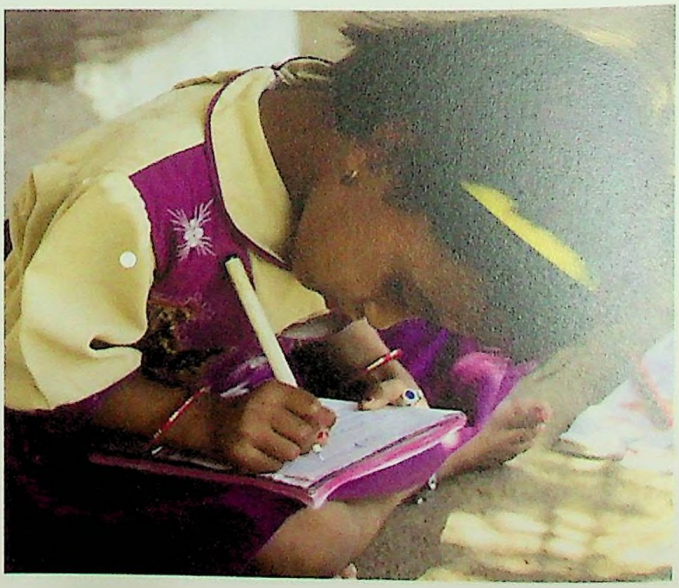
- Integrating community-based disaster preparedness and mitigation with security of livelihoods for vulnerable communities.
- Strengthening skills and capacities for disaster preparedness and response at various levels by working with communities, local NGOs, local administration, state and national government as well as with international NGOs and donors.

This programme

- Maps disasters on an ongoing basis.
- Provides immediate relief to people affected by natural and man-made disasters.
- Networks with organisations with similar mandates to respond to emergencies in a coordinated manner.
- Supports community-based disaster preparedness work.
- Ensures gender is mainstreamed in all aspects of disaster preparedness and response.
- Builds capacities of civil society organisations and the government for disaster preparedness and response.
- Influences policies and practices on disaster preparedness and disaster response.
- Advocates international standards of quality for humanitarian aid.

Girls' Education

Though more girls are going to school today their literacy levels continue to lag behind those of boys. Girls from dalit, adivasi and other marginalised sections of society as well as those living in difficult circumstances face more barriers.



Oxfam's programme on education **promotes rights of vulnerable girls to quality education.**

This programme

- Supports grassroots initiatives that can serve as best practice models.
- Encourages adult education with a focus on women.
- Advocates for a conducive policy environment for universal primary education.

Oxfam

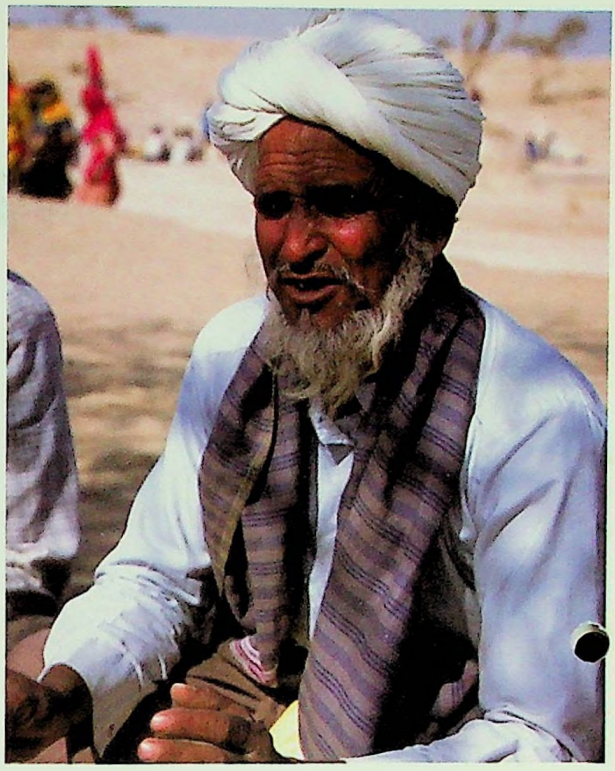
Response to Conflict & Peace Building

In India's pluralistic society people from different religious, ethnic backgrounds, classes and castes live and work together. Yet, there are conflicts and women are often the worst victims.

Oxfam's work on peace building focuses on **reduction of societal conflict, building of communal harmony and strengthening of peace processes.**

This programme

- Responds to the immediate needs of affected communities.
- Supports initiatives to understand and analyse conflict situations.
- Promotes alternate, peaceful ways of resolving conflicts.
- Aids peace processes, especially involving the youth.
- Documents women's experiences of suffering and coping with societal conflicts.



HIV/AIDS

HIV/AIDS, despite interventions by the government and NGOs, remains a major challenge. Lack of awareness and access to public health services make the situation critical.

Oxfam's work on HIV/AIDS focuses on **prevention strategies and access to care, support services and treatment.**

This programme

- Generates awareness about HIV/AIDS.
- Encourages innovative care structures for those affected by HIV/AIDS.
- Supports behavioural change processes to prevent and contain HIV/AIDS.
- Builds capacities of diverse groups, like traditional birth attendants, drug users, women's groups, networks of *dalit* people, commercial sex workers and *panchayat* members, to deal with HIV/AIDS.

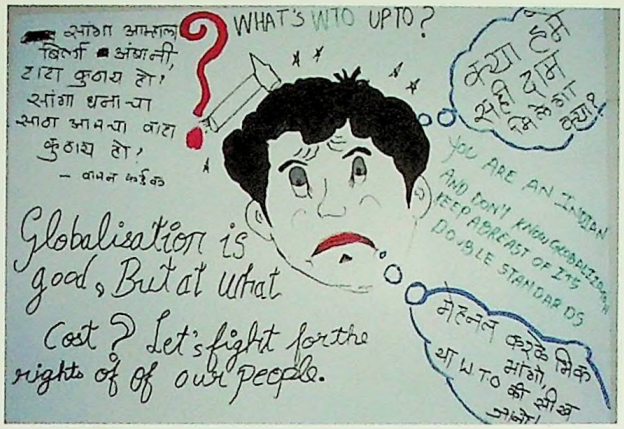
- Campaigns to integrate HIV/AIDS into health care provisions.
- Advocates for increased access to medicine and care programmes to prevent the spread of HIV/AIDS.
- Fosters networks for policy advocacy.
- Promotes integration of HIV/AIDS into all development initiatives.

Priority Campaigns

Make Trade Fair Campaign

The Make Trade Fair (MTF) campaign is the cornerstone of our livelihoods programme. We believe that trade can be a powerful engine for economic growth in developing countries if the rules are not rigged in favour of rich nations.

Oxfam's global research report, 'Rigged Rules and Double Standards' argues for new forms of international cooperation and a new architecture of the WTO to enable poor producers in developing countries to avail opportunities that trade creates. Oxfam's 'Cut the Cost' campaign, within the larger MTF campaign, lobbies for greater access to medicines for the poor in developing countries.



MAKE TRADE FAIR

www.maketradefair.com

The MTF campaign is against

- Agriculture export subsidies given by rich nations. This depresses international prices and deprives poor farmers in developing countries from getting fair returns through exports.
- Practices of Transnational Corporations (TNCs) that prevent poor producers from getting a fair price for their products and exploit labour down the value chain.
- Patents on drugs which hinder access to affordable medicines. This has pernicious effects on public health in the poorest nations of the world.

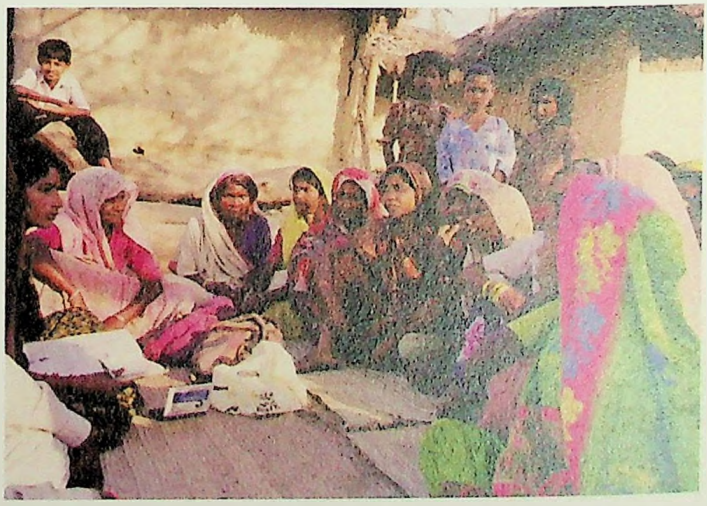
The campaign creates space for civil society to engage with global trade issues through awareness generation and public debate. Popular events help carry voices of the poor farmers and producers to national and international trade negotiation fora. The campaign lobbies governments to change the rigged rules.

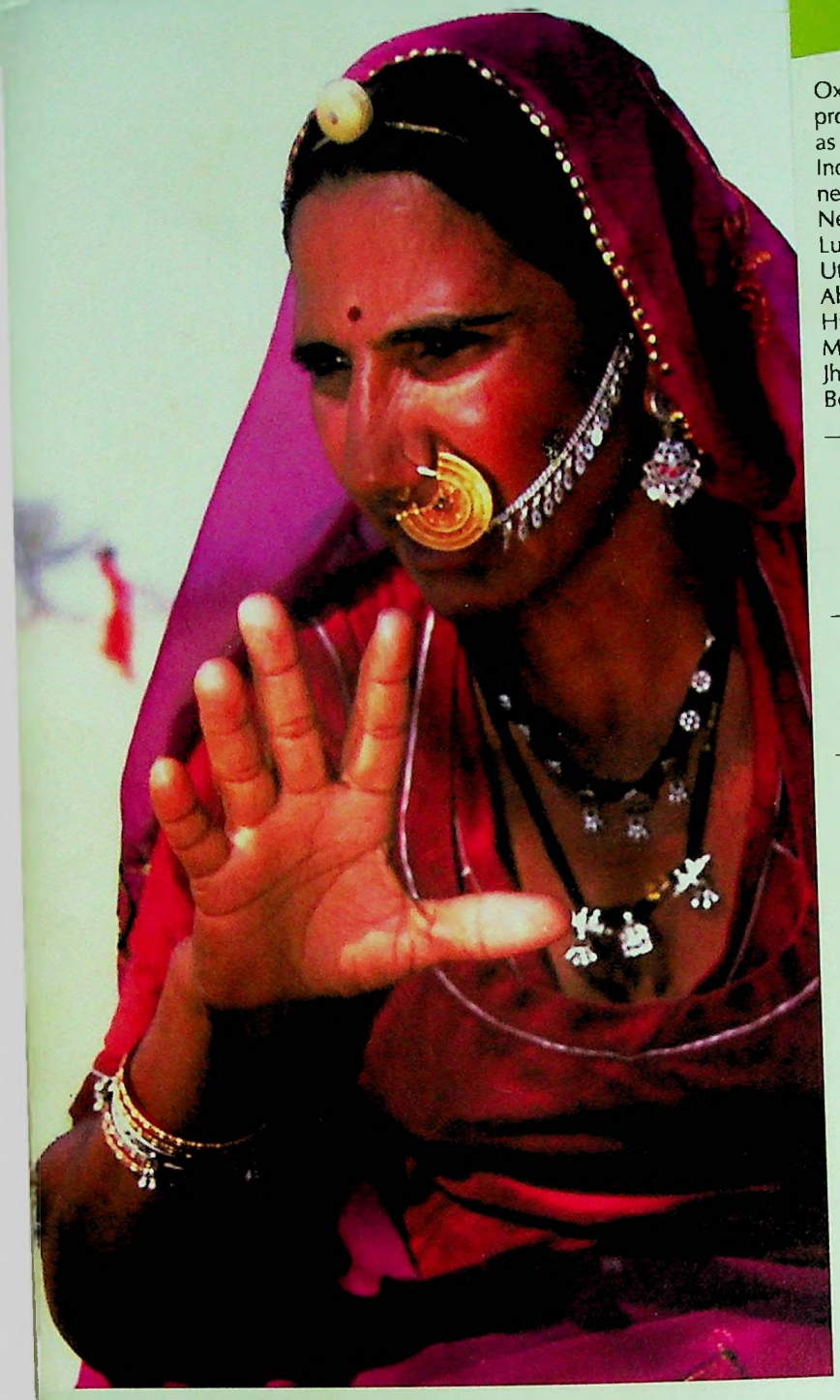
In India, the campaign focuses on food security and livelihoods concerns in agricultural commodities, TRIPS and public health; and nature of employment in the unorganised sector.

Campaign to End Violence Against Women

The Campaign to End Violence Against Women (CEVAW) is pivotal to our Gender Equality programme.

CEVAW, to be launched soon, will strengthen ongoing efforts of Oxfam and its partners to end violence against women in India. It will focus on changing attitudes, behaviours and practices of men and women that justify and perpetuate violence. Oxfam will work with civil society groups and build on its grassroots work and experiences across the country. CEVAW is poised to unfold in the five countries of South Asia to highlight different manifestations of violence. In India, CEVAW will focus on domestic violence.





Oxfam GB's first overseas programme was in India. Registered as Oxfam (India) Trust to work in India, we operate through a network of six offices located in New Delhi, (National Office) Lucknow (for Uttar Pradesh, Uttaranchal, Madhya Pradesh) Ahmedabad (Gujarat, Rajasthan), Hyderabad (Andhra Pradesh, Maharashtra), Bhubaneswar (Orissa, Jharkhand), and Kolkata (West Bengal, Bihar, Assam).

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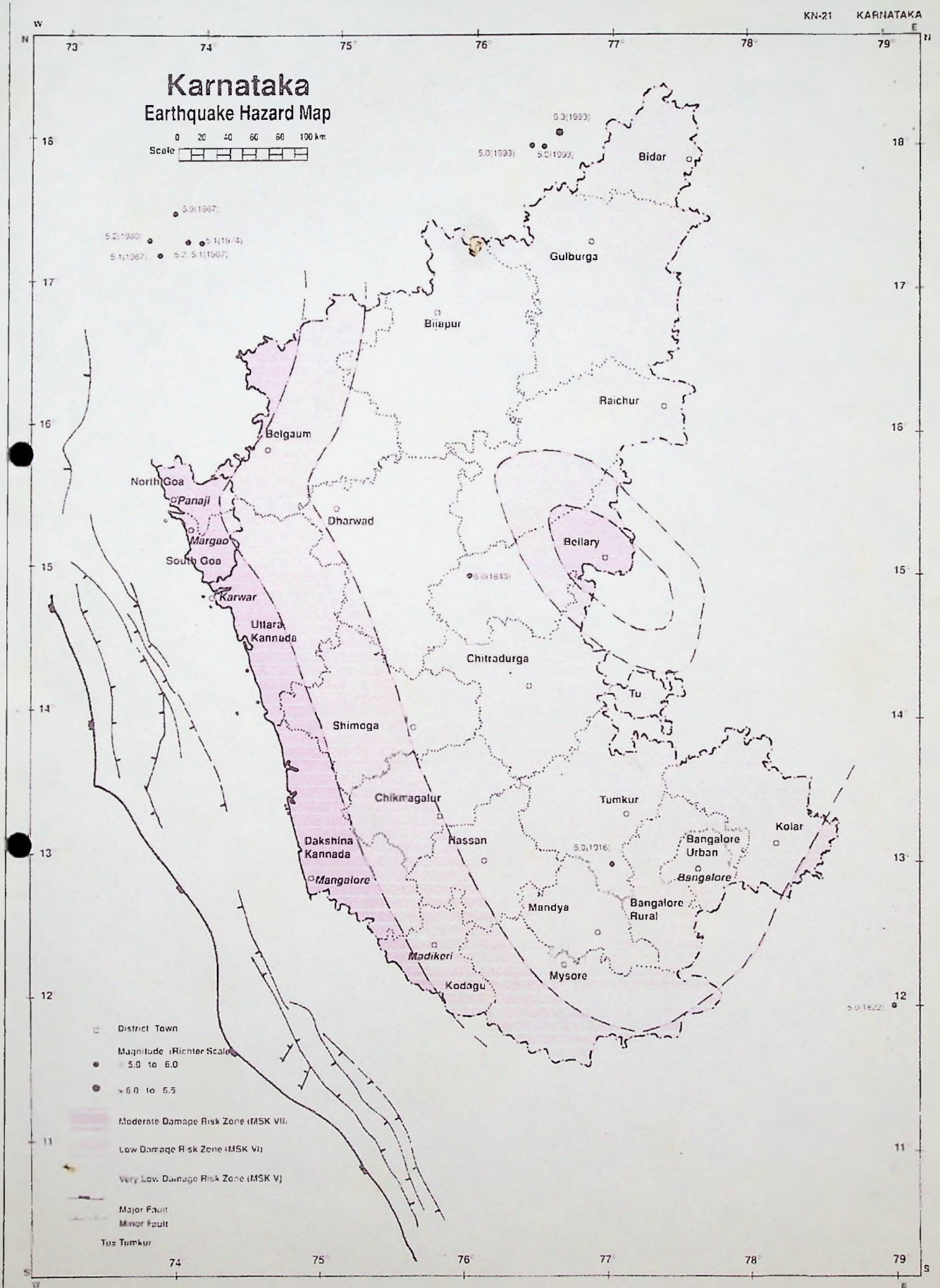
Oxfam GB was set up in 1942 at Oxford, UK, as the Oxford Committee for Famine Relief in response to hunger and famine in Greece. Today, Oxfam GB is a member of Oxfam International, a growing worldwide movement of 12 non-governmental organisations that share the same goal and together work in more than 100 countries. Other Oxfam International members are Oxfam America, Oxfam Solidarite (Belgium), Oxfam Canada, Oxford Community Aid Abroad (Australia), Oxfam Hong Kong, Intermon Oxfam (Spain), Oxfam Ireland, Novib-Oxfam Netherlands, Oxfam New Zealand and Oxfam Quebec.

Oxfam GB in India
Since 1951

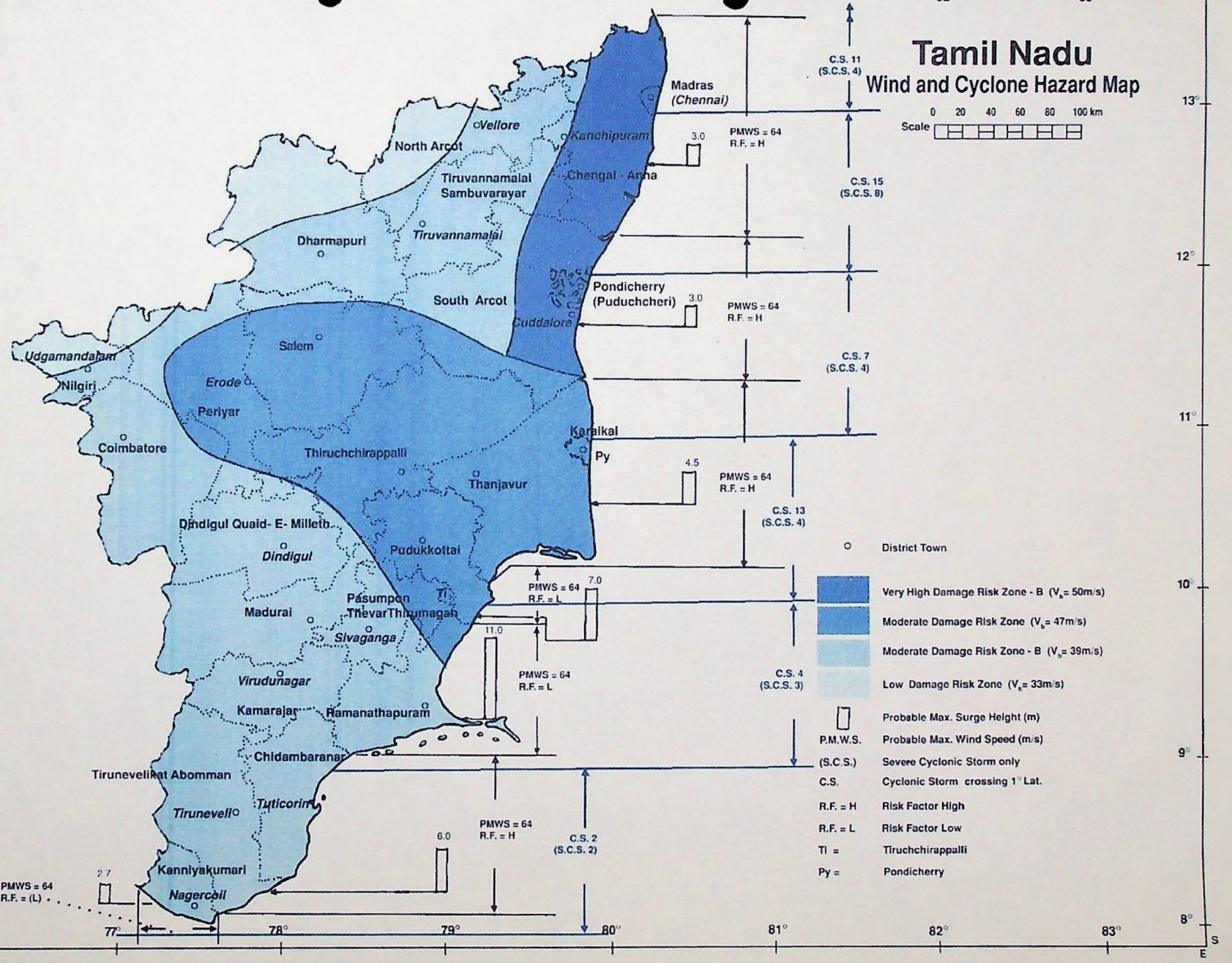
Photos: Shailan Parker/Oxfam R.K. Yadav/Oxfam Asha Handicrafts/Oxfam Oxfam


Karnataka
Earthquake Hazard Map
0 20 40 60 80 100 km
Scale
Bidar
Gulburga
Bijapur
Raichur
Belgaum
North Goa
Panaji
Margao
South Goa
Karwar
Uttara Kannada
Dharwad
Bellary
Chitradurga
Shimoga
Tu
Chikmagalur
Tumkur
Kolar
Dakshina Kannada
Mangalore
Hassan
Bangalore Urban
Bangalore
Mandya
Bangalore Rural
Madikeri
Mysore
Kodagu
5.0(1993)
5.0(1993)
5.0(1967)
5.2(1980)
5.1(1967)
5.2, 5.1(1967)
6.0(1843)
5.0(1916)
5.0(1522)
District Town
Magnitude (Richter Scale)
5.0 to 6.0
> 6.0 to 6.5
Moderate Damage Risk Zone (MSK VII)
Low Damage Risk Zone (MSK VI)
Very Low Damage Risk Zone (MSK V)
Major Fault
Minor Fault
Tus Tumkur
73
74
75
76
77
78
79
18
17
16
15
14
13
12
11
N
S
W
E

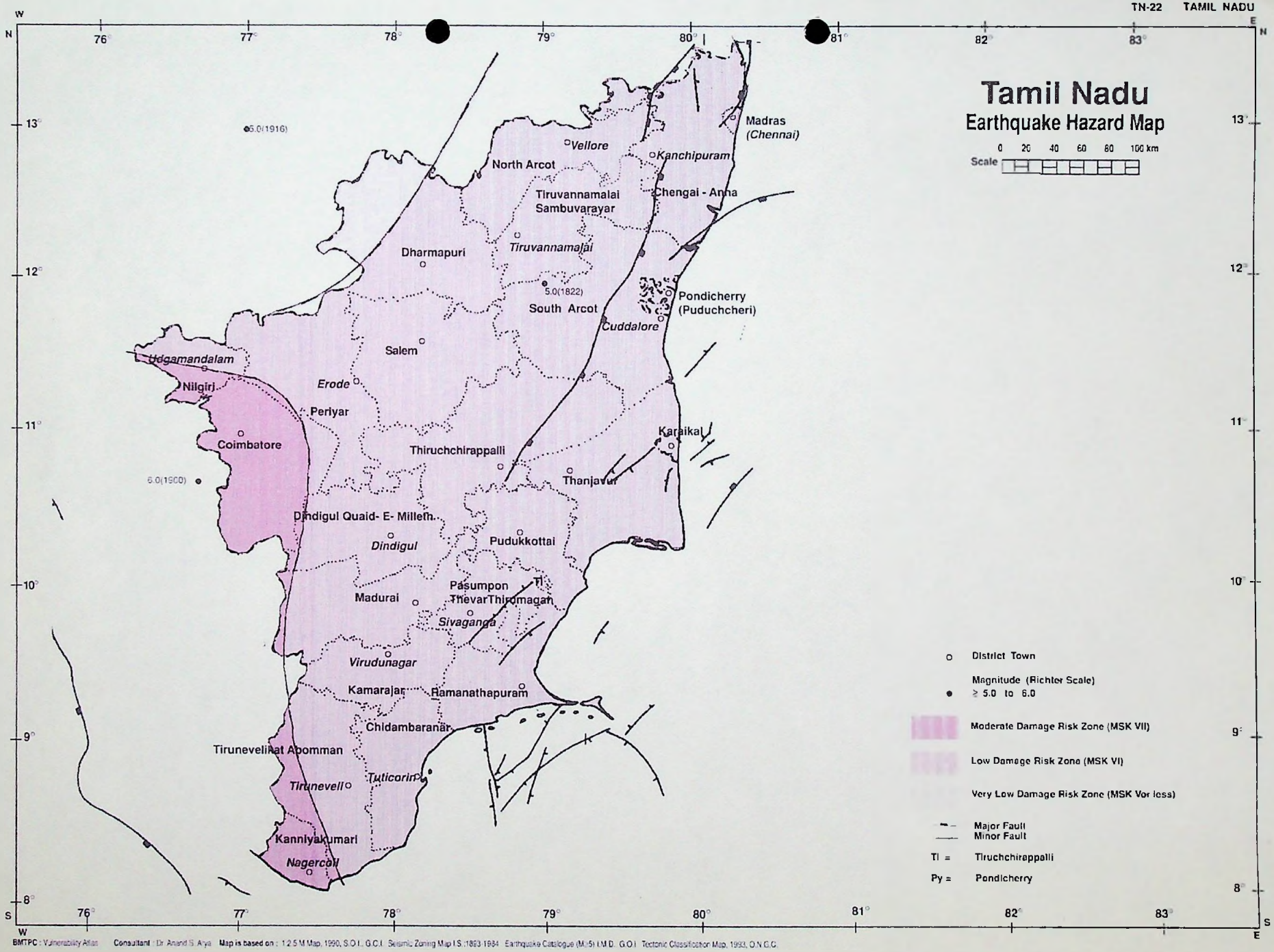
Tamil Nadu

Wind and Cyclone Hazard Map

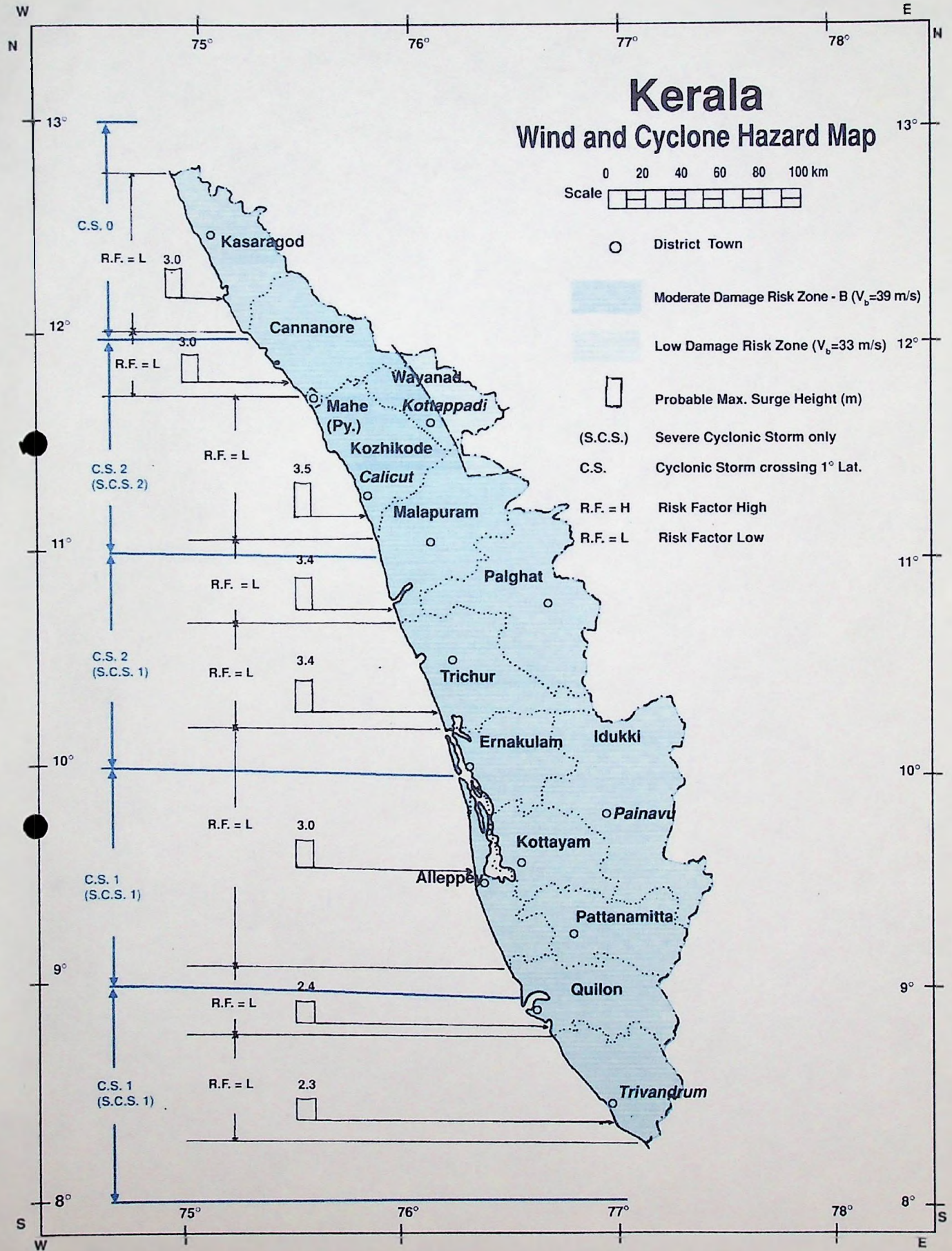
Scale 0 20 40 60 80 100 km



BMTPC: Vulnerability Atlas Consultant: Dr. Anand S. Arya Maps is based on: 1:2.5 M Map, 1990, SOI, GOI Basic Wind Speed Map IS: 875(3): 1987 Cyclone Data, 1891-1994, IMD, GOI



BMTPC : Vulnerability Atlas Consultant : Dr. Anand S. Arya Map is based on : 1:2.5 M Map, 1990, S.O.I., G.C.I. Seismic Zoning Map I.S.:1893-1984 Earthquake Catalogue (M≥5) I.M.D. G.O.I. Tectonic Classification Map, 1993, O.N.G.C.


Kerala
Wind and Cyclone Hazard Map
0 20 40 60 80 100 km
Scale
District Town
Moderate Damage Risk Zone - B (V_b=39 m/s)
Low Damage Risk Zone (V_b=33 m/s)
Probable Max. Surge Height (m)
(S.C.S.) Severe Cyclonic Storm only
C.S. Cyclonic Storm crossing 1° Lat.
R.F. = H Risk Factor High
R.F. = L Risk Factor Low
Kasaragod
Cannanore
Wayanad
Mahe (Py.)
Kottappadi
Kozhikode
Calicut
Malapuram
Palghat
Trichur
Ernakulam
Idukki
Painavu
Kottayam
Alleppey
Pattanamitta
Quilon
Trivandrum
C.S. 0
C.S. 2 (S.C.S. 2)
C.S. 2 (S.C.S. 1)
C.S. 1 (S.C.S. 1)
C.S. 1 (S.C.S. 1)
R.F. = L
3.0
3.5
3.4
2.4
2.3
75°
76°
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78°
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12°
11°
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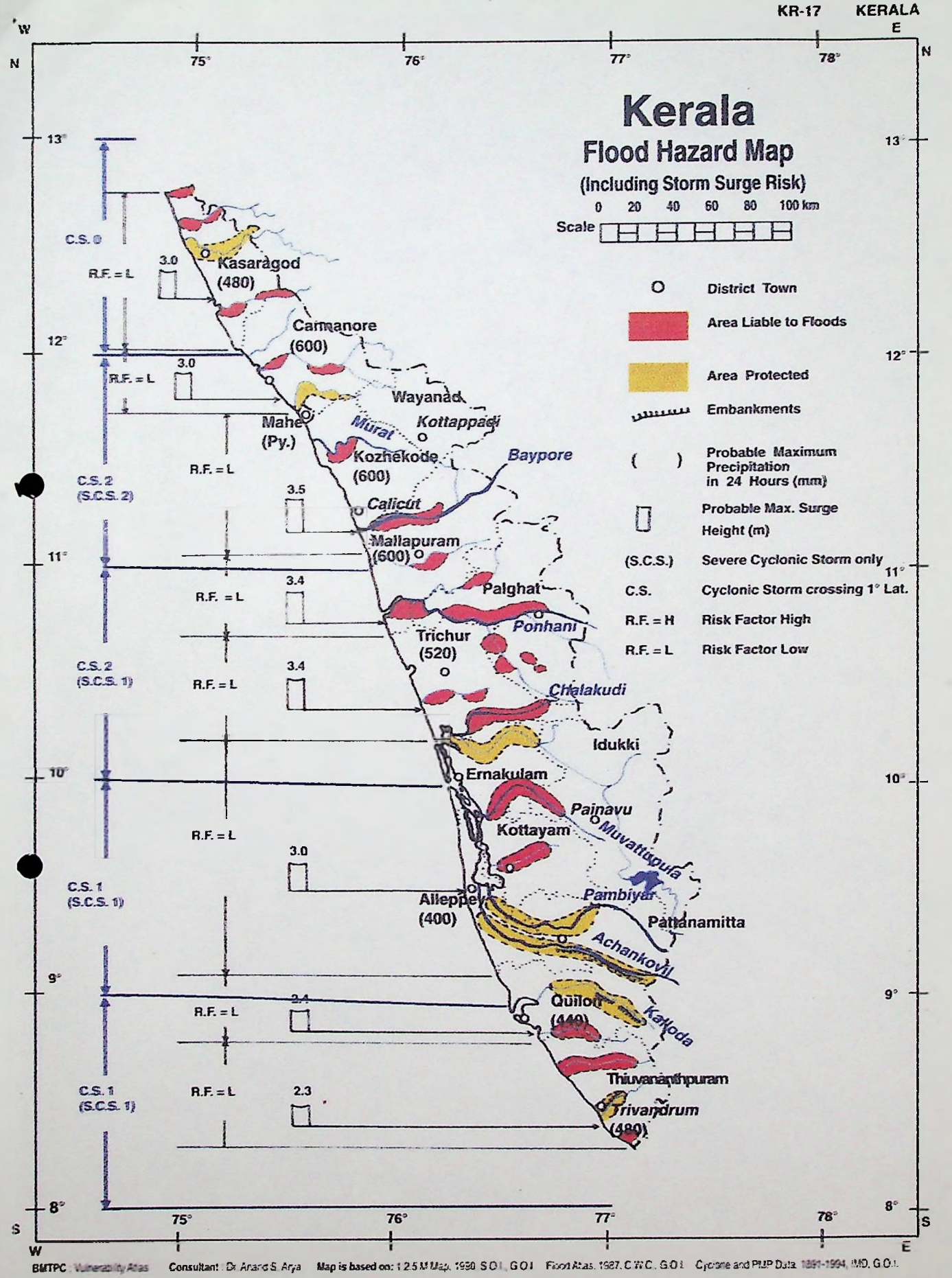
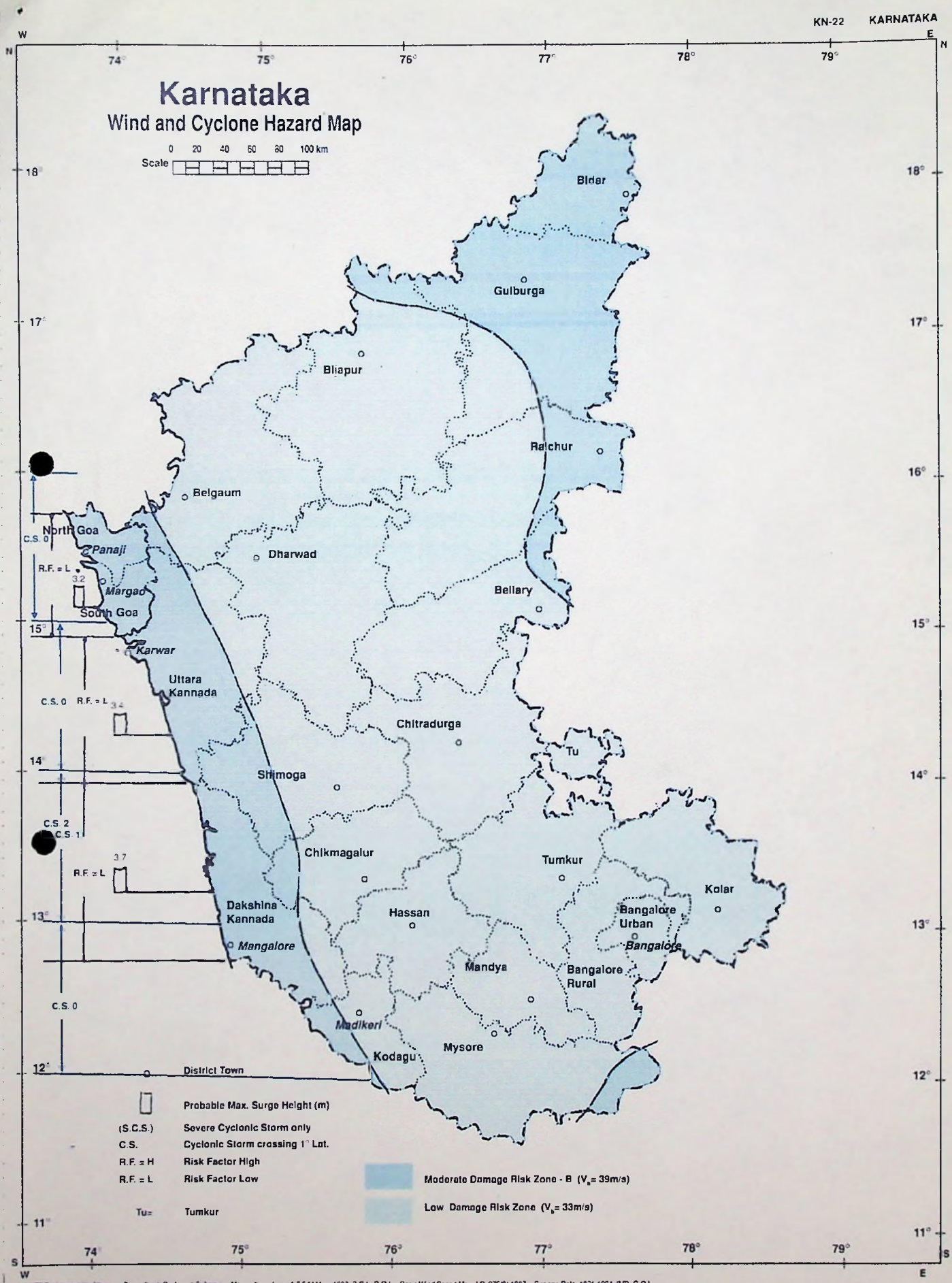


BMTPC : Vulnerability Atlas Consultant : Dr. Anand S. Arya Map is based on: 1:2.5 M Map, 1990 S.O.I., G.O.I. Flood Atlas, 1987, C.W.C., G.O.I. Cyclone and PMP Data 1891-1994, IMD, G.O.I.



BMTPC: Vulnerability Atlas Consultant: Dr Anand S. Arya Map is based on: 1:25 M Map 1993, SOI, GOI Basic Wind Speed Map, IS:875(3):1987 Cyclone Data: 1891-1994, IMD, GOI

DM-7.

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Subject: Work Shop on - Minimum Standards in Humanitarian Respose

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TIMES FOUNDATION & SCHUMACHER CENTRE DELHI, Invite you to the:

Workshop on , "The Sphere Project , Understanding Sphere Project – The Humanitarian Charter and Minimum Standards in Humanitarian Response" (Disaster Management Standards)

16th & 17th September 2005

Objective

To introduce the participants to the Humanitarian Charter & Minimum Standards in Humanitarian Response and understand the key concepts and guidelines in promoting quality and accountability in humanitarian sector

Content

- Introduction to Sphere Project – The Humanitarian Charter & Minimum Standards in Humanitarian Response
- Key suggestions of the Sphere Projects and understanding the Sphere Handbook
- Application of Sphere guidelines in humanitarian response measures in the sectors of Food, Shelter, WATSAN and Health Services
- Introduction to SPHERE, HPN, ALNAP, some of the international initiatives to improve quality and accountability in humanitarian sector

Methodology

The course will be facilitated through a combination of lecture and participant led interactive discussions, giving practical insight into application of Sphere Project. Some of the real life cases will be presented leading to meaningful discussions.

Registered participants will have to undertake a home assignment prior to attending the course and will receive the pre-course study material in advance

The discussions and orientation will be based on the Sphere Handbook 2004 edition.

Outcome

At the end of the two day course, the participants would have gained insight into Sphere Project and how to apply Sphere to enhance quality and efficiency in humanitarian response

CHC lib – Disaster Resource file

9/9/05

They have already participated in TN programs? → Should SDR / or Ameer future ws
we can write and ask them about options
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measures at the grassroots and organizational level. The participants will have an insight into the design of Sphere Handbook and how to use the handbook in planning and implementation of humanitarian projects.

Target Audience

The participants to the two day course will be field practitioners, managers, humanitarian workers, academicians and students who are engaged in humanitarian sector or are interested in pursuing meaningful career in humanitarian sector.

Training Organization

Schumacher Centre Delhi (SCD)
New Delhi

Schumacher Centre Delhi (SCD) is one of the newest among a number of organisations in the UK, US and elsewhere that make up the Schumacher Family. SCD was established with the initial aim of propagating Schumacher's name, ideas and thinking at the national level to government, diplomatic, corporate and development circles. For the past three years SCD has worked as a forum for interchange of relevant ideas and thinking in rural development and disseminate knowledge through trainings and other means.

Trainer

The course will be facilitated by Mr. P. V. Krishnan, former coordinator of Sphere India multi-agency coalition initiatives in India and one of the leading resource persons in sphere institutionalization.

He has more than 15 years of experience in development field and worked as independent consultant to Oxfam GB, SIMAVI (Netherlands), MPDL (Spain), Lutheran World Service India, UNICEF, American Red Cross, Christian Aid Bangladesh, Lutheran world Federation Cambodia, Lutheran World Service India and Dan Church Aid, India

He has facilitated a number of training workshops in development sector on a wide range of disciplines, particularly in management and organizational development. Some of the key workshops facilitated are:

- Facilitated AZEECON Regional workshop in Puri, India (Dec 2004)
- Facilitator of the national consultations on *Future of Sphere Project* (April/May 2004)
- Facilitated three day management workshop for Oxfam Partners in J&K (Jan 2003)
- Three-day workshop on *Modern Management Techniques for NGO leaders* for diocesan leaders of West Bengal, April 2002
- Five-day workshop on *Disaster Preparedness Planning*, DIPECHO MPDL project, Andhra Pradesh, June 2002
- Three-day workshop on *Disaster Management* for field officers of LWS, Eastern Region, conducted at Gopalpur, April 2000
- Six-days workshop on *Project Planning and Formulation Methods* for SAP partners, Hamdard University, New Delhi – May 1997
- Visiting Faculty in Vishwa Bharati University, Dept. of Social work, Sriniketan in 1996-97

Venue

The programme will be conducted at 'The Oneness Centre' 4 Tilak Marg, Opposite to Tilak Marg Police Station, New Delhi – 110002

Duration

The programme will be conducted on 16th & 17th September, 05.

Timing

1000 hrs to 1700 hrs

Registration Fee

Rs. 2,000/-

Registration fee includes workshop participation, course material, refreshments and is non-refundable. However, in case you are unable to attend, you could replace your name by nominating another participant. Payment to be made in cash or by demand draft favouring "Times Foundation" at the below given address:

'The Oneness Centre' 4 Tilak Marg, New Delhi-110002

How to Participate

The participants are requested to fill up the 'Registration Form" and send it to Times Foundation, 4, Tilak Marg, New Delhi - 110002. For registration, please contact Mr. Anil Chopra/Thomas at: 011-23782396/19

For queries regarding the workshop, the participants may contact Ms. Angela Devi/Ms. Sandhya Sriram at: 011-23302864,23302856,23302103.

Email:timesfoundation@timesgroup.com/angela.devi@timesgroup.com/sandhya.sriram@time

Registration closes 14th September, 2005

Note: To facilitate greater interaction and participation, the workshop is limited to a maximum of 20 participants on first come first served basis.

This is part of an initiative of Times Foundation who has evolved a comprehensive capacity enhancement programme to offer opportunities to non-governmental organisations and other people organizations for collective learning. The programme aims to support organisations to strengthen their role in society and improve the outreach of their activity by building up their capacity.

Information for Non Delhi participants

We would not organize the lodging and boarding logistics. The Program is Non - residential and Outstation Participants are requested to directly make their own arrangements.

An option is to contact Asian Guesthouse, Delhi for accommodation at the below given Address which has provided support for past trainings:

Mr. Abhijeet Gopal

Asian Guest House
14 Scindia House, Kasturba Gandhi Marg
Cannaught Palace, New Delhi
Telephone: - 23314658,23313663,23310229,23313393,9313975013
E-mail: abhijeetgopal@yahoo.co.in

For queries regarding payments contact K.Angela Devi or Sandhya Sriram at 011 23302864/2103, angela.devi@timesgroup.com / sandhya.sriram@timesgroup.com

Times Foundation, 7, Bahadurshah Zafar Marg, New Delhi - 110 002, Tel: 23782031, 23302864 E-mail: timesfoundation@timesgroup.com, Website: http://www.timesfoundation.org

Looking forward for your participation.

Thanks & Regards
K.Angela Devi
Programme Coordinator
Times Foundation

REGISTRATION FORM

Programme Title:
Name:
Organization/Institution:
Qualification:
Brief on current responsibilities:

Other significant Training's attended (if any):
Particular area of interest in training (mention your major expectations):
Contact Address :
Telephone:
Fax:
Email:
Date:
Signature:

For queries regarding payments contact Angela Devi or Sandhya Sriram at 011-23302864/2103, angela.devi@timesgroup.com / sandhya.sriram@timesgroup.com

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