III. GOVERNMENTS AND THEIR PUBLIC INFORMATION FUNCTIONS

Four areas of government are discussed in this chapter, and each involves some aspect of public information related to disasters.[26] This means both information for the general public and for specialised audiences. The first category might include printed material such as 'evacuation procedures' or 'survival check-lists' or preparedness talks on rural radio, and would certainly include a public alert system responsible for warning the general public as individuals. The second category, audiences (or organisational information), might include such activities as briefings for government officials, advice for administrators and advance warning for government departments, schools or hospitals.

1. Areas of government

The four areas include the following:

Advisory - This refers to the advisory services provided by governments in the form of warning dissemination based on monitoring, detection and prediction. These would include the meteorological, hydrological, geological and other physical science departments of government.

Broadcasting - Broadcasting services are provided by governments through state mass media for further dissemination of these warnings and other related information throughout the disaster period. They might be ministries of broadcasting, information or culture, or separate bodies under state control; in a few cases state control may be extended to other forms of mass or folk media.

Regulatory - There are regulatory services provided by governments to enforce law and order, and which are usually prime agencies in

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26/ These areas will be discussed in greater detail in chapters IV, V, VI and VII.

disasters. These might be police forces, security forces or the armed forces. They usually have a limited public information function, as do other public services, such as the fire department, water or power departments.

Co-ordinating - Some emergency organisations of government act as the co-ordinating point in disasters. The state body charged with this responsibility, more often than not, is the national civil defence organisation, though there may be some form of emergency measures organisation. Public information about disasters usually emanates from this source.

2. Levels of government

Some areas of government (like broadcasting) operate exclusively at the national level. Others (like advisory services) operate at both national and regional (state or provincial) levels. Still others (like law enforcement) operate at national, regional and local levels. It is difficult to generalise since each country is different. The term 'government' used in this chapter means the national level authority. (The next chapter deals with non-governmental organisations, including mass media in the private sector).

There is a public information function at the international level. There are various global and regional monitoring and warning systems in operation — FAO's early warning system for food shortages and WMO's world weather watch, for instance — but warnings of this nature usually come to the general public through national governments.

There are various international focal points for exchange of information, inter alia, on major disasters around the world : the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) in Geneva; and the US Agency for International Development (USAID). This kind of information is extremely useful for those immediately concerned with international relief operations, such as government civil defence organisations and, later, for disaster research centres.

3. The warning process

Warning as a process extends across many departmental boundaries and through various levels of government into the non-governmental area, and it is difficult to distinguish where public information aspects (such as the public alert) begin and end. The warning system may be divided into three sub-systems as follows:[27/]

Evaluation: the detection, measurement, collation and interpretation of available information concerning changes in the natural environment. Evaluation is accomplished by an advisory service, such as the weather office, and the major public information concern is whether the evaluation might lead to a public warning.

Dissemination: the decision to warn, the content of the message and the actual transmission of the statement. This includes decisions on who should be warned, about what danger and in what way. Dissemination begins with the advisory services and goes through communication services such as the mass media. Warning decisions are sometimes made jointly by several organisations, and could conceivably be a final decision taken by the national emergency measures organisation. Once the decision has been taken the dissemination process itself unfolds in a routine way in any well-regulated disaster plan. Public information concerns include whether dissemination is as widespread and timely as possible; and whether the message is as effective as possible.

Response: any behaviour which is the consequence of warnings received by individuals, small groups, organisations and the community itself. Public information concerns would be limited to using this response as feedback on the effectiveness of the message and the dissemination system. (Some aspects of this response were dealt with in chapter II:3)

27/ Mileti, Dennis; Drabek, T.E. and Haas, J. Eugene, op cit.

This three-part warning process changes somewhat as we move from a major national disaster to a localised outbreak. At the local level, evaluation might be carried out by a river warden watching rising floods, for instance; dissemination might include a local radio station or village wall-posters; at this level, the public alert and the provision of disaster-related information becomes a day-to-day function of a local emergency operation centre.

4. Government advisory services

Evaluation and dissemination of hazard warnings in the United States has achieved a high measure of technological effectiveness. A brief description of the public information and education aspects of the US hurricane warning system can be found in **Annex II, and of** the Chinese earthquake warning system in **Annex I.**

Clearly the amount of information required, the data network necessary for collecting the information, the technical expertise necessary for interpretation and the communication system needed to present the information in time to potential victims would preclude many developing countries from having adequate service.

The situation of these societies was illustrated by the situation in Bangladesh (then East Pakistan) following the tropical cyclones in 1970. To a lesser degree, the same can be said of poor or neglected areas of more developed countries. However, the more elaborate and dependable such services are, the more there is a tendency to rely on these costly procedures and to ignore or reject less costly but effective measures.

A research finding of importance to public information practitioners is that advisory officials are sometiems reluctant to issue specific warnings until they are reasonably certain that the danger will actually materialise. This reluctance stems from fear of negative reactions from the public if the warning turns out to be false, and possibly from

fear of how the public will react to the warning. Such reluctance is entirely understandable, for warning of a disaster which does not materialise and absence of a warning for a disaster which does materialise can both produce serious consequences.

An excellent historical example of this was the hesitation of a meteorologist and a forecaster at the Boston Weather Bureau (USA).[28/] Despite obvious, early indications the first clear warning of danger from tornadoes was finally issued five minutes after the storm had struck, killing 90 persons, injuring a thousand more and causing millions of dollars worth of property damage.

But all this does not tell us much about how the general public actually receives warning of disaster. Three instances, in northern Australia, midwestern United States and in India are worth examination:

(1) Cyclone Tracy hit the isolated city of Darwin, Australia on Christmas morning 1974, killing 65 people, injuring over a thousand others and causing damage estimated at US$1,000 million. Almost every house in the city was destroyed or damaged.

The first cyclone alert was issued by the meteorological bureau four days before Tracy arrived and was broadcast over local Darwin radio stations. For eleven hours prior to its arrival, the bureau was accurately reporting the cyclone as being on course for an impact with Darwin. There appears to be little evidence to show that any of the precautions which should have been taken were, in fact, taken: manning the emergency headquarters; enlisting extra personnel; calling a meeting of the emergency services committee; deploying emergency communications; and warning the population to move out of unsafe houses. As the cyclone hit, responsible officials were celebrating at Christmas parties and many people were attending service at the cathedral.

28/ Williams, Harry B., op.cit.

The cyclone resulted in a breakdown of all local communication systems,including the radio stations. By the next day external communications from Darwin were extremely limited and occasionally there were none. Several thousand transistor radios were flown in to restore communication with the population and, eventually, 35,000 out of the 45,000 population were evacuated to other parts of the country.

(2) Several isolated tornadoes touched ground in central Kansas, USA on Wednesday, June 8, 1966. During the early evening one of two tornadoes in the area near the city of Topeka ground a diagonal path, eight miles long and four to eight blocks wide, straight across the city. There were only 17 deaths, although 550 persons were injured and property damage was estimated at US $100 million.

Residents were alerted through two warning systems: a local stations of the US Weather Bureau and the local civil defence organisation. The weather bureau teletype is monitored by the local radio and television stations, the city police department, the county sheriff's office and the local post of the state highway patrol. The local weather bureau supplements this organisational network with a telephone calling list : those alerted this way were nine radio stations outside Topeka without monitors, the superintendent of schools, a local citizen's band radio organisation and a local ham radio operators' club.

A 'hot-line' (direct telephone lines) links the city police and fire departments, the county sheriff's office, the highway patrol post and the nearby Air Force base to the civil defence organisation. The city police department was responsible for sending out a public alert warning using 19 sirens (with additional sirens in the railroad shops and at the Air Force base) as an immediate danger signal when the tornadoes were actually sighted in the area. The all-clear signal was given by local radio stations (which are private, commercial stations).

After the sirens sounded, a back-up telephone fan-out system was used to ensure that various organisations had heard and understood the sirens. The police department activated this back-up telephone system. Many organisations had facilities for receiving warnings other than this : for example, the fire department routinely monitored the police radio system. Some organisations had further back-up telephone warning systems of their own.

The private citizen's band radio club had evolved a unique strategy. Five members in cars equipped with mobile radio units were sent to pre-arranged positions along one of nine storm-watch lines. They were thus strung along a line out from the city five miles apart (due to the limited range of their equipment) but reaching out to 25 miles. A base unit in contact with central control was positioned adjacent to the radar screen at the airport weather station so that a club member could monitor the relative position of the tornadoes. A local commercial radio station had a similar storm-watch procedure using mobile units. The sheriff's office had enlisted the services of a number of weather watchmen who all lived outside the city limits, and who notified the office of the progress of the storm. The city police department also despatched mobile police units to the outskirts of the city to watch for tornadoes.

Various radio and television stations routinely passed along information on weather conditions to their audiences as part of their regular programmes. One of them had instituted a "beep" system in which beeping was superimposed over regular programmes every two minutes during the active phase of the storm.

This very elaborate complex of warning systems was undoubtedly the reason for the low death rate during the 1966 disasters. 29/

In 1971 floods reached Bastura Narang village on the Ganga flood-plains 8 kilometres south of Hastinapur which is, itself, 120 kms northeast of New Delhi, India.

The Ganga floodplains are adjacent low-lying areas of the River Ganges, subject to heavy rain and flooding. It is only in the last century that permanent agriculture has become a feature of this area. The floods of 1954-55 were particularly catastrophic in India and they led to the formation of the Central Flood Control Board, floods being considered as an inter-state problem. The Central Water and Power Commission was strengthened by the addition of a Flood Wing to assist with flood-control projects.

A study states that the Bastura Narang village had a population of about 1,200 in 1971. 30/ There was a telephone connection but no electricity in the village. The majority of people lived in dilapidated houses made of mud walls and thatched roofs. The village itself is on slightly elevated ground, while most houses have a raised platform and a tall evergreen 'neem' tree used for climbing to escape the flood-waters. The streets are narrow and deep, like drains, to allow the easy flow of flood waters. The village is connected by a recently paved road (6 kilometres) to Hastinapur, and this was considered an important evacuation route. Villagers regard flooding as an annual event and they regularly suffer from flood damage to crops, animals and houses.

29/ Stallings, Robert, Description and Analysis of the Warning Systems in Topeka, Kan., Tornado of June 8, 1966, Research Report no. 20, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA.

30/ Ramachandran, R., and Thakur, S.C., "India and the Ganga Floodplains", in Natural Hazards : Local, National, Global, Oxford University Press, United Kingdom, 1974.

Flood warning is seen as a way of reducing flood damage and the government makes every effort to convey warnings of impending danger to the villagers. In the 1971 flood the flood message originated at the gauging station at Hardwar. A telegraph warning was sent to the Collector (District Flood Control Agency) at Meerut. He passed the message on to the flood officer who, in turn, conveyed it to the tehsildar who issued special flood-warning orders by word-of-mouth and requested those likely to be affected by the flood to evacuate immediately. In this particular flood, waters reached up to and encompassed the village area but did not affect houses which had raised floors.

In conclusion, we can see from Darwin that even the best advisory service, with excellent dissemination, can come to naught if there is no organisational or public response. Topeka, Kansas (USA) is a good example of a complicated, inter-linked warning system operating at many levels to good effect. Hastinapur tells us that less complicated advisory and warning systems can work quite effectively, even with low expectations and a minimum level of preparedness.

5. Government broadcasting services

Mass communications play a key role in informing and interpreting disasters for affected communities. They are, in effect, the channel between information-holders and information-seekers in times of disasters.

Mass media under state control form part of the evaluation-dissemination chain described earlier. 'Broadcasting' in this context generally refers to radio, though it might include television in some countries and wall-posters, leaflets or newspapers in others. Mass media which are not government-controlled but which also play a part in this dissemination process are described in chapter IV:2.

A breakdown of 'government' as against 'commercial' broadcasting systems in the countries of the world, grouped into areas, was prepared in 1969. The breakdown shows that state broadcasting is the predominant ownership pattern in Africa, Asia, Oceania and Europe, while commercial (private) ownership predominates in Central, North and South America.

Radio is undoubtedly the most important mass medium for information in times of crisis. Radio is available away from home. It is easy to use while carrying on other work, and it can be used in a car or carried on the person.

One real advantage of electronic media over other forms of mass media is the speed of transmission. The Niigata earthquake in Japan, for instance, coincided with a daily nation-wide news telecast and the fact of the earthquake and its general location were announced before the end of the news programme. Similar news was broadcast over the NHK (state) radio network a few seconds later. Ten minutes later, both radio and television started to give and repeat tidal wave warnings for specific locations along the Japanese coast and, less than an hour after that, NHK radio was adding such details as which railroad lines were blocked, where oil fires had broken out and that the earthquake was of 7.7 magnitude.

According to one study, almost all national organisations obtained most of their initial information from these NHK reports, despite direct lines to the meteorological bureau. 31/ The widespread dissemination of general news about the earthquake within thirty minutes after its occurrence was not the result of any pre-disaster plan, but rather the quickness of response of the electronic

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31/ R. Dynes, J. Eugene Haas and E.L. Quarantelli, op.cit.

mass media, especially the NHK network. This occurred for two reasons: NHK in Tokyo had three connections with Niigata which continued to work for nearly 20 minutes after the earthquake, and the local radio station in Niigata managed to keep broadcasting and the transmissions were intercepted, monitored and relayed by other NHK stations.

In some countries the government apparatus available for this kind of dissemination is quite massive. All India Radio for instance, is a government monopoly (forming part of the India Ministry of Information and Broadcasting) which includes 45 radio stations, 25 auxiliary stations and five auxiliary studio centers. The present installed capacity can cover just over two-thirds of India's territory and over 80 per cent of its population. Indian television is still in its early stages, covering some 3 per cent of the national territory and nearly 5 per cent of the population. Government mass media also include many periodicals and wall newspapers in various languages, but these are not important in disasters, although they may have long-term public education benefits. India's rural population has always been a special target of All India Radio through Rural Radio Forum and Rural Tele-Clubs, and this has meant widespread distribution even in isolated areas of the country, including those most likely to suffer periodic disasters.

One special problem raised by large-scale disasters is the influx of foreign radio and television reporters. Their coverage is very often limited to dramatic human interest stories and tends to reinforce the western stereotypes about disasters in developing countries. The results are two-fold: a surfeit of unsolicited material aids and assistance; and a prolongation of the same set of stereotypes about helpless masses, bungling bureaucracy and the need for western efficiency which then brings about the same kind of reaction when the next disaster strikes.

A set of guidelines on disaster coverage would be useful. Honest briefing of visiting journalists might mean some diminution of dried milk powder but might lead to a more objective view of developing countries in transition in the west. However, objective reporting of disaster information is required to ensure the continued supply of accurate information for disaster-prone countries.

Mass media in the private sector is dealt with in IV:2. Much of this material is also directly relevant to state broadcasting. A list of 23 social science findings of interest to broadcasters, together with a series of what to do and what not to do, recommendations for broadcasters is included as **Annex III.**

6. Government regulatory services

These services are carried out by organisations in a society charged with maintaining law and order, mainly the police and the military. These organisations usually operate at the national level but may be answerable to other levels of government down to the municipality.

Public authorities can be divided into three broad groups: 32/

(1) Public officials : mayors, governors, city aldermen and the like whose skills are largely executive, administrative and managerial;
(2) Police and similar organisations : those trained to act with direct initiative in various emergency situations (and whose responsibilities are the enforcement of the law and the maintenance of public order, safety and protection); and
(3) Specialised service agencies concerned with public safety (fire departments, coast guards, civil defence), public welfare (welfare departments, Red Cross) and other technical services (hospitals, public works departments) whose skills are all highly specific.

32/ Rosow, Irving., op.cit.

All three groups merge in the community, with the first providing leadership, the second providing social control and the third providing social and technical services.

The police take a leading role in many disasters : they are experienced in handling a variety of day-to-day emergencies; they know the community; they are usually one of the first groups to learn of any impending threat; they are accustomed to placing priorities on the tasks ahead; they usually have an efficient communications system and an adequate supply of experienced personnel.

At least four categories of tasks are performed by the police in disasters : search and rescue; traffic and crowd control; protection of life and property; and warning and evacuation. 33/

Of these, the second suggests a minor public information role, usually word-of-mouth. The last obviously involves dissemination of warning information and advice. During the Niigata earthquake in Japan (1964) the police used transistorised loudspeakers to tell people to move from areas where flooding was expected. In some cases the police department becomes responsible for issuing disaster information in the form of press releases to the mass media, and sometimes holds press briefings and performs other public information functions.

The relationship between the military (regular or reserve forces) and the civilian authority varies considerably from country to country. In some countries the armed forces are not at all anxious to become the lead agency in day-to-day contact with civilian organisations and the general public, and stipulate that they should be attached to some other agency, such as the police or the civilian authority. In the Toowoomba hailstorm in Australia in 1976, army officers were attached to some other agency, such as the police or the civilian authority. In the Toowoomba hailstorm in Australia in 1976, army officers were attached

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33/ Kennedy, Will, The Police Department in Natural Disaster Operations, Research Report No. 6, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA.

to the emergency organisation staff. In the southern Ontario (Canada) blizzard in the same year, militia were attached to the Niagara regional police force.

In these cases the military, like the police, are carrying out a regulatory function with a limited public information role. In other countries, particularly many disaster-prone developing countries, it is understood from the beginning that the armed forces will be the co-ordinating agency (described in the next section) and will also have the responsibility for carrying out a full range of public information procedures.

7. Government co-ordinating services

In many countries, the organisation charged with responsibility for disasters is a branch of national defence, or national security, although it may depend on other levels of government to carry out this task. Some countries are dependent on a single national authority, such as the army. Others have a number of local or regional organisations with a degree of autonomy, although there may also be a national governmental body, i.e., Emergency Planning Canada or the Australian Natural Disasters Organisation, which becomes the co-ordinating point if the disaster is on a national rather than a local or regional scale.

A useful cross-cultural study discusses the military and the military-civilian relationship during disasters in four countries: Italy, Japan, Chile and El Salvador. 34/ All four disasters demonstrated a centralised national response, with the military playing a key role in combatting the disaster.

34/ Anderson, William A., Military-Civilian Relations in Disaster Operations, Research Report No. 5, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA, 1968.

In the Vaiont dam collapse in northeastern Italy in October 1963, the army assumed control throughout the entire emergency period. In fact, one of the assigned duties of the carabinieri is to provide assistance in civil emergencies. In the Niigata earthquake in Japan (June 1964), large-scale assistance was given by the Japanese military (Japan Self-Defence Forces) but always under civilian authority. When an earthquake struck the central part of Chile in March 1965, the commander of the armed forces appointed a number of military officers as district area supervisors, with authority over local and regional civilian officials. The army was the most active authority during the emergency. When an earthquake struck San Salvador, the capital of El Salvador in May 1965, the Chief of Staff of the armed forces assumed legal control over groups and organisations in the disaster area.

The distinction between regulatory services and co-ordinating services is the difference between leadership and authority. Leadership is the ability to plan, organise and direct the activities of others in order to achieve certain goals. In the initial stages of disasters (particularly spontaneous disasters in communities not normally subject to such perils), leadership is usually taken by the police. Authority is the acknowledged right, power or obligation to exercise that leadership and to have directives obeyed. Thus, in many situations the leadership of the police, or military, may become the only authority, but in others the authority of the municipal or regional government or of the national emergency service becomes established.

Usually these two roles are closely related. They can lead to overt or covert conflicts and the resolution of this problem is one of the aims of a disaster plan which clearly allocates duties and responsibilities. Similar potential conflicts may stem from the arrival of an outside authority in a community where emergency action is already well under way. This is particularly true where specialised expertise is confused with authority, as in the case of national or international non-governmental organisations.

This has an impact on public information policies and procedures and, ultimately, upon the general public itself. Conflicting information or advice, unnecessary press releases or media broadcasts, uncertainty in the minds of the public about which organisation to turn to, public squabbles about responsibilities, or lack of them — all these actions merely increase confusion and may cause despair.

There are 51 countries on the combined United Nations lists of 'least-developed countries' and most seriously affected countries. Of these, more than half have no national disaster plan. Almost as many do not have a national disaster organisation, although it would be likely that the armed forces or the civil defence organisation would so act if the occasion arose.

In these countries, the advisory and co-ordinating services are non-existent, or at minimal level. People then have to obtain their own public information from family and friends, from public gathering places, from groups and affiliations. This usually leads to conflicting information, misinformation and rumour.

Three main functions of organisations responding to a disaster should be borne in mind:

(1) Co-ordinating — the passing of instructions through a decision-making chain of command;
(2) Facilitating — the supplying of needs, from material goods to personnel or information; and
(3) Mediating — the channeling links between organisations which allow the one-way or two-way flow of the above.

In public information we are concerned with all three: someone must make decisions about the kinds and amount of information needed by the general public and how best to get it to them (answering the how, why, what, where and when questions); someone must supply that information in the most useful form; and someone must make certain that it gets to where it will do the most good.

The communication problems during the 'Black Tuesday' of the 1967 Hobart bushfire in Australia are an example of what can happen through lack of co-ordination between organisations. The police had great difficulty in discharging their public information responsibility, firt because the telephone lines were jammed with incoming calls, and secondly, because the few messages that were finally sent over commerical radio stations were interspersed with other messages which were largely inaccurate and which further inflamed the problems.

The breakdown of communication in disasters is one of the main causes of the chaotic conditions that sometimes occur. Without adequate communication there can be no exchange of information, and co-operative efforts become extremely difficult. The inevitable result is disorganisation and confusion as individuals and groups act without reference to what others are doing, or without knowledge of the over-all situation and its priorities. The two main support systems in any disaster situation — co-ordination and control — are both largely dependent upon adequate communication.

Public information is often dependent upon the flow of other kinds of information into co-ordination and control centres. Those making the decisions to warn or advise the public must themselves be fully aware of the situation. For this reason it is essential to have an information facility at field headquarters to gather, sort, store and exchange relevant information.

These information or communication facilities already exist in many communities, at police headquarters for example, but they are usually located away from each other and are fully occupied with the enormous increase in their normal duties in times of disasters. In North America, and elsewhere, the practice has been to use emergency operating centres (EOC's) which provide a focus for co-ordination. These EOC's are, at the same time, information or communication centres, tied into other agencies with radio, telephone or telex metworks, or messenger services.

Some municipalities have ECC's (emergency communication centres) as well as operating centres. In Lunenburg, on the Canadian east coast, such a communications centre has been established by the local emergency measures organisation. There is just one telephone number to call for any type of emergency. The centre is staffed 24 hours a day. All community services are linked with the centre by both telephone and radio.

Public information messages are usually prepared at the communication centre, and then disseminated through the mass media or whatever other appropriate system has been devised. Following the Niigata earthquake in Japan, for example, the public information officer of the disaster relief headquarters borrowed two automobiles from the local fire department. These cars drove daily through the city and made loud-speaker announcements about where water could be obtained, where housing was available, what tax relief the government had decided upon, and where refugee centres were located. Two additional cars were sent from Tokyo and used during the busiest period.

Civil defence or emergency measures organisations at the local or regional level are usually quite small. However, when disaster strikes there is a considerable increase in the size of the organisation as the co-ordinating service draws personnel from the police, fire, health, welfare and public works departments, and possibly also from private business and non-governmental agencies like the telephone company, the Red Cross, the local militia or volunteer groups.

This expansion takes place as the enlarged body takes on various mediating tasks amongst existing organisations. Usually it takes on new tasks which are a function of the disaster itself, although these new tasks will probably be carried out by the people and organisations closest to the problem under normal conditions.

This includes public information, which might be handled by an information officer from the national civil defence organisation, or by information officers normally on the staff of the police or the municipality, or perhaps by a local journalist recruited into the bureaucracy by the disaster plan.

Large municipalities often have a permanent information-public relations service, or a press agent responsible for informing the public about municipal affairs. If not, there should be an auxiliary information service (which may be composed of local journalists) as part of the disaster plan. These information people, whether permanent or temporary, should be a part of any meetings, courses or exercises carried out during normal times. They should be acquainted with journalistic techniques and with local media.

Whatever the form of the organisation, it is important that information going to the public does not vary from one person to another. Ideally, all public information would be disseminated through one person, or one office. That information should be as timely as possible. The information officer must keep abreast of the situation and try to alert the public to whatever dangers are at hand: i.e., where the reception centres are; what places should be avoided; what streets or houses have been damaged.

The information officer's first responsibility is to the community under impact. He can provide a useful function, however, by channelling many outside requests away from officials who are trying to do their own specialised jobs. He should try to deal with journalists from outside the area, for their reports will be picked up by local people and it is important that outside reports should, as far as practicable, coincide with what is actually going on.