Developing an Early Warning System for Crises

Introduction
The international community’s growing concern with security has generated a renewed and obvious interest in systems to provide warnings and forecasts of crises and conflicts. These can no longer be understood in terms of the relatively simple paradigm of the Cold War. These are jointly known as ‘early warning systems’, able to improve the action capabilities, in particular for preventative action, of both the international community and its member states.

In a world increasingly seen as a globalized, it has become more difficult to ignore the effects of wars or disasters even though in some cases they are unfolding thousands of kilometres away. The collapse of a state, or a civil war, can destroy past efforts in terms of economic development, can destabilize an entire region, reduce business markets and sources of supply and destroy their industrial investments. It can also significantly disturb raw material and energy markets. It can involve floods of refugees creating, in turn, immigration and energy markets. It can also motivate members of the international community.¹

These altruistic concerns led to a number of interventions, usually made once the crisis had begun, aimed at minimising its direct and indirect effects. Such actions, however, are not only inadequate but also extremely burdensome, whereas, in view of the risk, taking no action may not always be an option. Besides, Jack Straw, former British Foreign Secretary, stressed that the intervention in Bosnia-Herzegovina, although it was not able to prevent the civil war or the ethnic massacres, cost the British taxpayer at least £1.5 billion, whereas the cost of preventative action in Macedonia only amounted to £14 million.² The aid to Rwanda during the three years following the genocide amounted to over US $2 billion, whereas a preventative intervention would certainly have made it possible to avoid this human tragedy at a cost approximately a third of that amount.³

We should therefore make the shift from a reactive strategy to a preventative one, including identification of the signs of crises and, therefore, sufficiently early anticipation — i.e. an operational early warning system — to make it possible to set off an alarm, to provide a detailed diagnosis following the alert, a decision to intervene, planning, and implementation of the response.

However, there is another pitfall. Interventions, even preventative ones, are sometimes ineffective or, worse yet, counterproductive. For example, not only is the preventative nature of the war in Iraq conducted by the coalition subject to question, but so are its effects, particularly in terms of destruction of the machinery of the State contributing to the civil war. Prevention and early warning systems therefore need to be based on an understanding of the mechanisms giving rise to the situations that one is attempting to prevent.

I will first of all give an introduction to the prevention process as a whole, thus locating early warning systems within their

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¹ With regard to “mixed” motivations, both altruistic and otherwise, that give rise to certain actions, reference may be made, in the case of wars, to Michael Walzer, Guerres justes et injustes : argumentation morale avec exemples historiques, Paris, Gallimard, 2006.

² Speech by Jack Straw, British Foreign Secretary, at the Foreign Policy Centre, 26 March 2002.


context. I will then attempt to refute some of the major objections generally raised regarding conflict prevention in general and early warning systems in particular, using them as findings of difficulties that need to be resolved. Finally, taking into account the needs identified earlier, using the experience gained from several early warning systems such as those already existing in Germany, Switzerland, the United States, the United Kingdom and Sweden, I will deal with the various stages which, in our view, should be priorities in the development of an operational and effective early warning system should a country such as France wish to equip itself with such a system.

The prevention process: several actors, various operations

I will give a brief outline here of the context of which the early warning system forms a part, namely the prevention process as a whole, in the case of a conflict, highlighting the main actor types and the operations implemented. As we will see later, prevention and thus the warning system may also cover other subject matter, such as instability.

At the centre of the process, therefore, is the situation to be prevented: the conflict. This is depicted on an arc, showing escalation towards a conflict as a succession of continuous and contiguous stages. The definition I have selected for these stages, as some early

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### Table 1. Types of crisis and conflict in terms of intensity

<table>
<thead>
<tr>
<th>State of violence</th>
<th>Intensity group</th>
<th>Intensity level</th>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-violent</td>
<td>low</td>
<td>1</td>
<td>Latent conflict</td>
<td>A positional difference on definable values of national meaning is considered to be a latent conflict if respective demands are articulated by one of the parties and perceived by the other as such.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>Manifest conflict</td>
<td>A manifest conflict includes the use of measures that are located in the preliminary stage to violent force. This includes for example verbal pressure, explicitly threatening violence, or the imposition of economic sanctions.</td>
</tr>
<tr>
<td>Violent</td>
<td>medium</td>
<td>3</td>
<td>Crisis</td>
<td>A crisis is a tense situation in which at least one of the parties uses violent force in sporadic incidents.</td>
</tr>
<tr>
<td></td>
<td>high</td>
<td>4</td>
<td>Severe crisis</td>
<td>A conflict is considered to be a severe crisis if violent force is repeatedly used in an organised way.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>War</td>
<td>A war is a type of violent conflict in which violent force is used with a certain continuity in an organised and systematic way. The conflict parties exercise extensive measures, depending on the situation. The extent of destruction is massive and of long duration.</td>
</tr>
</tbody>
</table>

Source: HIIK, Conflict-Barometer 2005.

In addition to these stages of escalation there are also the stages corresponding to de-escalation or stabilisation, which coincide with a return to peace.

Various actions and actors are involved in these various stages of conflict. During non-violent stages, and this is a relatively new development, development actors are of fundamental importance. They carry out long-term action through development and cooperation aid programmes which, at the very least, attempt to have no detrimental or accelerating effect on the possibilities of conflict. This is the approach known as ‘do no harm’. During these stages, diplomatic and military personnel generally focus on their traditional roles, although they may also be involved in cooperation programmes. In addition, their function, in relation to stages of conflict, tends to be connected with observation, collecting information and analysis.

As tensions increase, usually in stage 3, actions known as ‘preventative diplomacy’ begin. These cover a whole range of negotiations with the aim of resolving disputes, preventing the outbreak of war or reaching a peace agreement once war has broken out. Until recently, preventative diplomacy was the main means for preventing conflicts.

With the use of organised violent force, namely at stages 4 and 5, ‘peacekeeping’, ‘crisis management’ or even ‘crisis resolution’ operations begin. The military play a large role in these stages.
part in these actions, but they also incorporate, and increasingly so, a civil component. Their aim is to keep in check and monitor the escalation or de-escalation of tension.7

Once a peace agreement has been signed, the de-escalation or stabilisation stages commence. All actors participate in these stages and the actions are multi-dimensional. These operations are known as ‘peacebuilding’.

The actors involved are both states and international governmental organisations (IGOs) or non-governmental organisations (NGOs). With regard to crises, the latter now have an established role, although on some occasions this is controversial for some types of action8 and may therefore need to be reconsidered. In addition, the international community’s efforts to take action on the funding sources of the various parties involved in a war, such as in the case of conflict diamonds, suggest that private actors as well as commercial and industrial companies also have a role to play in terms of prevention.9

The relationship between the conflict on the ground and the actors wishing to prevent, manage or resolve the conflict or reconstruct peace is managed through information structured in a relevant manner, so as to enable an understanding of the situation. Since the action must be prepared, planned, and implemented, the information must be supplied as a forecast, as early as possible. These forecasting procedures, jointly known as ‘early warning systems’, therefore aim to identify as early as possible a risk or a situation that we desire to prevent, so that the necessary prevention means may be implemented. The specific act of giving a warning on the risks or situations identified – in other words the alert – is only one step in this process.

Originally, ‘classical’ early warning systems tended to start at stage 3, in an attempt to forecast stages 4 and 5. With the international community’s growing interest in preventing conflicts in the long term, this perspective has become inadequate. Early warning systems must now also make it possible to forecast stages 1 and 2.

Early warning systems must be operational not only during stages of escalation but also during stages of stabilisation, when it is more likely that conflict will break out again, since it is a fact that in the ten years following a war the risks of it restarting are especially high.10 I have, therefore, given a brief definition of early warning systems and set them in their context, thus describing, to a certain extent, the ideal type.

Questions about early warning systems: identifying constraints and difficulties

When speaking about early warning systems, several points of opposition, resistance and doubts/questions of three types arise.11 It is vital to respond to these criticisms, not only to convince those who voice them who, very often, will, to a greater or lesser extent, have to take part in the early warning system, but also because the obstacles mentioned often have a solid basis in fact and must therefore be overcome to ensure that forecasting can work properly.

The first type of perceptual constraint is not limited, in fact, to early warning systems but questions the justification for prevention itself; the second poses questions regarding the validity, usefulness, and significance of an early warning system for crises and conflicts; the third, finally, has to do with the

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11 These reservations were expressed by some participants in the seminar on early warning, but can also be found among the wider public.
Does the need for certain crises invalidate prevention?

The argument whereby a conflict may be positive poses the tricky question of the validity of preventative action. The need for these crises is, in fact, widely acknowledged. 12

With regard to prevention, however, it is not precisely a question of preventing any crisis or conflict from occurring but, on the contrary, of attempting to mitigate its most negative and destructive effects that are destabilising for the region and possible for the world. The issue is therefore not making a choice between saving lives, which would be put at risk during a violent conflict, while allowing an unsuccessful system to survive, or allowing human beings to die, which is in fact in breach of the current emphasis placed on human rights, on the grounds that once the crisis has been resolved the survivors would benefit from a better system. Instead, it is a question of having a good understanding of the dynamics underlying the crisis that is underway or about to take place to allow the advent of a better situation with as little violence and national and international disturbance as possible. 13

Is an early warning system and a reflection on its significance necessary?

Country risk analysis and the early warning system

The existence of ‘country risk’ analytical tools already in place may possibly constitute an obstacle to the introduction of a specific early warning system. The aim of the ‘country risk’ practice is to analyse the economic and financial risks faced by a country and thus potential investors, whether public or private. Examples of this type of measure are the Coface system or those of the US company World Markets Research Center (WMRC) or the British company The Economist Intelligence Unit. 14

Although they do not aim to forecast instability or conflicts, these methods nonetheless incorporate a certain measure of political risk, but this is given less weight, in terms of the calculations, than economic and financial risk. Nevertheless, politics is a crucial factor here since, in general, any situation of war or major political instability gives rise to a classification in a very high-risk category, linked in particular to default on payments.

Taking into account the disparity in aims and thus in results of these different forecasting tools ought to enable us, in an enriching and constructive manner, to seek the complementary aspects of these methods, including crisis early warning systems, with a view to optimising their usefulness.

Is an early warning system useful?

With regard to the very relevance of a forecasting system, critics point firstly to the intuition of practitioners and specialists from the countries and regions under analysis, who need no additional tool to know exactly what is happening in their country in crisis, which might be of interest for the various stakeholders. For example, there are the difficulties in the peacebuilding operations such as those currently taking place in Afghanistan. With regard to the political dimension, the ‘country risk’ approach is therefore inadequate. Some companies, such as the Eurasia group, have positioned themselves on the specific market of political risk forecasting. Thus, together with Deutsche Bank, Eurasia has created the DESIX index of political stability. 15 However, the aim of this approach, namely to evaluate the ‘impact of politics on the markets’, is again different from that of an early warning system. 16

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13 It should be noted here that some commentators, such as Edward Luttwak, emphasise that only a full victory can resolve a crisis, “Give War a Chance”, Foreign Affairs, July-August 1999.
14 For Coface, see <www.trading-safely.com/sitecwp/cefr.nsf>; WMRC is part of the Global Insight Inc. group <www.wmrc.com/>; for The Economist Intelligence Unit, see <www.eiu.com/>.
15 www.eurasiagroup.net/si/
field of expertise. While not wishing to cast doubt upon the value of this knowledge, the representatives of some institutions with an operational early warning system stress, in response, that on occasion it can be seen that even the best specialists or practitioners, precisely because they are used to the country on which they are working, and in which they live, are sometimes incapable of perceiving an escalation towards a conflict sufficiently early. Being able to put events and changes in them into perspective and summarising them in order to compare them to other situations is often vital for forecasting work, but it is not always easy or possible when one is immersed in the day-to-day life of a country.

Very often, escalation towards conflict and its varying causes are only clear once the conflict has broken out. A famous example, although it has to do with response, is the appeasement policy adopted by Chamberlain and Daladier towards Hitler, which demonstrates how far the situation was misjudged at the time. More recently, it is useful to consider the crisis in the Ivory Coast and to enquire who forecast it and when. According to the testimony of an expert in early warning systems, it does happen that a country expert, confronted with an alert produced by an operational system, at first denies that a conflict is imminent, and then, having re-examined the various indicators, ends up recognising their relevance, shortly before the outbreak of the conflict. In this sense, intuition, knowledge of a country and experience are necessary but insufficient to enable the symptoms of escalation to be identified precisely enough to ensure that forecasting and warning occur in good time.

It is, in fact, also necessary to know the mechanisms governing the outbreak of conflicts and crises or instability. Some may argue that each conflict or crisis is specific and unique, which is a view emphasised by institutions such as the UNDP or the Department for International Development (DFID) which, as a result, are abandoning warning systems and prioritising analytical methods. It should, firstly, be noted that the use of a single analytical method actually stresses the similarities between conflicts. Secondly, while the manifestations of crises and conflicts do in fact differ, this does not negate either the existence of similar dynamics underlying conflicts or the identification of causes that may give rise to the same effects everywhere, even though they have different outward appearances. Therefore, a scientific approach is needed, which must be sufficiently abstract to enable it to be applied in varying times and cultural and geographic spaces. For example, we know that a change of regime is a source of instability for a country and that such a period is therefore fragile. If we remained at a lower level of abstraction we would only identify a series of changes, from democracy to more autocratic systems or vice versa, and would see an increase in the probability of conflicts, but we would be unable to draw any conclusion other than one based on the specificity of the crises.

The examples quoted above also cast doubt upon the argument that it is easy to forecast conflicts and that early warning systems already exist. As for the first point, a survey of the research carried out on conflicts and their dynamics reveals how complex the subject is, and that it is not at all obvious, how knowledge can be ‘forgotten’ and how some results can be counter-intuitive. With regard to the loss of knowledge, it is worth asking how it was possible for the importance of the proper operation of the State, with its monopoly on legitimate means of violence, the theory of which was set out by writers such as Hobbes in the 17th century and Weber in the early 20th century and which has been long practised, to be forgotten to such an extent. While not wishing to cast doubt upon the value of this knowledge, the representatives of some institutions with an operational early warning system stress, in response, that on occasion it can be seen that even the best specialists or practitioners, precisely because they are used to the country on which they are working, and in which they live, are sometimes incapable of perceiving an escalation towards a conflict sufficiently early. Being able to put events and changes in them into perspective and summarising them in order to compare them to other situations is often vital for forecasting work, but it is not always easy or possible when one is immersed in the day-to-day life of a country.

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an extent, whether we think of the current situation in Iraq, the negative political consequences of the macro-economic reforms of the 1980s or, again, the current emphasis placed on fragile states, all of which is evidence of the rediscovery of the importance of the state. 22

With regard to the danger of false intuition, we might remember, for example, that poverty, usually measured in GDP per capita, is often considered to be a condition that makes conflicts more likely. Now, theoretical work as well as empirical data, such as the case of the former Yugoslavia as compared with many much poorer countries where war has not broken out, show that this supposition is false, and that it is in fact feelings of injustice and relative deprivation which increase the likelihood of conflict. 23 This last example emphasises, additionally, the importance of early warning systems for crises and conflicts that can be applied universally, including to wealthy countries, because it is no longer elsewhere that crises can break out, affecting them in a knock-on manner, but they can also break out directly in wealthy countries, since ‘development’ and ‘wealth’ are no longer guarantees of peace.

With regard to the second point, while it is certain that such early warning systems ought already to exist and to form an integral part of the various institutions of the State focusing on foreign or domestic affairs since one of the State’s duties is to ensure external security and domestic peace, the first task will be to verify the effectiveness and relevance of these systems, the extent to which they are geared to the modern world, and how far new knowledge acquired through research and experience has been incorporated. The second task will be to produce an amalgamation of the warnings produced in this way, especially if they come from different departments, agencies or ministries, in order to make them consistent with each other. This confirms the importance of an actively managed early warning system and once again suggests that a federating structure is needed.

This need to bring together and compare existing different warning systems, in order to synthesise their results, emphasises a difficulty which confronts those interested in forecasting, namely the over-abundance of information and reports usually emanating from the experts and practitioners mentioned above, and information, in the form of open or secret sources. This over-abundance of information can overload the information systems and can be more harmful than a lack of information because it gives the illusion of knowledge. It is vital, in fact, that the data available is verified, classified, identified and organised so that it can lead to an understanding. This approach, once again, is that proposed by science and therefore needs to be based on a system which makes it possible to select relevant information, so that through analysis and incorporation into the warning system it is possible for the best forecast to be made, which may possibly lead to additional data being sought out, if it is not available in the current large mass of data.

Do response difficulties invalidate early warning systems?

With regard to an inability to translate a warning into a response, 24 there are three arguments put forward.

1. The warning would not make it possible to define a programme for action.

2. When the warning is submitted to politicians, it only receives, at best, a limited attention if not ignored. The lack of interest by politicians is said to be, on the one hand, the mismatch in time frames between election dates and preventative

22 See the joint work to be published on this subject by the Ministry of Foreign Affairs and the French Development Agency.


24 Moore, op. cit.

25 Cf. In general the majority of works dealing with forecasting and prevention of conflicts; for example, for a good summary, Hugh Miill, Oliver Ramsbotham and Tom Woodhouse, Contemporary Conflict Resolution, Cambridge, Polity Press, 1999; or Ackermann, op. cit., on the problem of knowledge and action. In the specific case of genocides, problems connected with forecasting and response are set out by Jacques Sémelin, Purifier et détruire : usages politiques des massacres et génocides, Paris, Seuil, 2005.
actions and, on the other hand, to the absence of a suggestion for action accompanying the warning. These two first criticisms are therefore partially connected.

3. In some cases, the difficult situation is said to be well known, and forecast for a long time, but no response is really given.

At each stage in prevention, namely:
1. Forecasting;
2. Warning and dissemination of the warning;
3. Diagnosis;
4. Planning of the response, and finally
5. Response implementation.

Decisions will be necessary and will, on each occasion, give rise to specific difficulties.

The fact that a stage, whatever it may be, may present an obstacle does not mean that the whole process should be abandoned. On the contrary, efforts need to be made to resolve each problem.

The first stumbling block, which is the need to define a programme for action, may only be a stumbling block at first view. We have seen that the early warning system should be based on an understanding of the instability or conflicts and their dynamics, of a scientific nature. Thus, if such a system makes it possible to forecast a situation and to set off a warning, it can only do so because the measures arising from some of the indicators or mechanisms that form it have been identified as increasing the likelihood of conflict or instability. It follows that the ‘crisis-generating’ areas are known.

Although, as a precautionary measure, practitioners of early warning emphasize the fact that they can only reveal problems and not propose solutions, it seems that we actually have here, at the least, a preliminary identification of factors in crises. If an additional more detailed diagnostic stage, possibly having recourse to country experts, is incorporated as a final stage in the warning system, then the broad outlines of action programmes can be presented to the politicians or to those taking decisions when the warning is made public. Thus, two of the objections raised above have been dealt with.

The second criticism is more serious and more difficult. It stresses the difficulties encountered by contemporary democracies, which are often prisoner to the media, and by complex machinery of State, in adapting to the modern world. In the long term, it seems unlikely that political systems will be able to last if they cannot take decisions and act on the basis of political-historical time, which is a long period. We are therefore faced with an obstacle that goes beyond the subject of early warning and is an integral part of a major challenge confronting many countries. Overcoming it will probably require numerous adjustments and some time. However, the fact that we need to resolve this problem, which is broader than the one concerning us here, is no reason to do nothing, since any attempt to improve even a very small part of a system contributes to the collective efforts required to improve the whole.

Finally, with regard to the lack of response despite a well-known diagnosis, as in the case of Darfur, such a verdict would firstly require a detailed analysis including knowing when the exact situation became known — in other words, at what stage in the conflict was a warning given? In addition, developing an early warning system does not imply intervention in all situations. It is a question of obtaining as clear a picture as possible of possible developments in the current situation, so that informed choices can be made based on the objectives and available resources. Thus, in view of the specific goals of an actor and its resources, or those of the international community, if the warning is given at too late a stage in escalation, it may become impossible to provide an appropriate response.

So, having examined several major objections to prevention in general, and to early warning systems in particular, we have seen that they may be dealt with if the difficulties that they emphasise are taken into account. An early warning system must thus make it possible to select and organise a large variety of information derived from various sources, while being based on an understanding of instability or the dynamics of conflicts and crises, and of a scientific nature and regularly verified and updated. It may use the results of other warning or risk analysis systems.
and present, as a minimum, outlines for action proposals when communicated to politicians. These first results must be included in the introduction of an early warning system for which we are now going to see in more detail how and in what stages it may be developed.

Implementing an early warning system

The structure responsible for the warning

We saw in the introduction that by positioning them at state level, for early warning systems and for prevention more generally, three main areas of intervention were involved: development and cooperation aid — the actors being, in addition, involved earlier and for longer in the prevention of the crisis — foreign affairs and defence. An early warning system should be able to meet the expectations of the three actors involved and facilitate joint action by them. In view of these imperatives and those concerned with coordination, joint work is required.

Besides, in view of the diverse interests, actions and perceptions of the various actors, the experience of some officials in charge of early warning systems appears to indicate that it is necessary to make use of a federating body, or even to create one. These three types of actor and the information services would participate in the body. This structure could go beyond individual needs and merge them together. It could also arrange for action by other actors, depending on circumstances, such as justice, commerce, customs, etc. As forcefully confirmed by an official with experience in early warning systems and forecasting systems within state institutions, it is therefore vital for the body to be given sufficient authority, within the framework of its duties, and the requisite staff and resources.

Objectives and priorities

The aim of an early warning system, defined by a high-ranking official in charge of such a system, is to obtain sufficient details on the world situation sufficiently early to enable the authority in place to establish a policy, whether this is in terms of total prevention or mitigation of potential adverse consequences, and this is to be achieved in line with overall political objectives.

It is not a case of depriving traditional bodies of their various early warning capacities, nor of interfering with their tasks, but, on the contrary, of structuring in the best way possible these different areas of expertise within a coherent whole.

In cases linked to an emergency, in particular, and thus to traditional type early warning systems, an overarching structure could also promote inter-ministry or inter-institutional dialogue, to discuss the results of the warning and the diagnoses and to contribute to the planning of a coordinated response. Although having benefits in terms of cost, the most flexible solution, consisting solely of inter-ministry or interdepartmental meetings, even if these are regular, seems in fact unable to function, precisely because of the lack of an authority responsible for synthesising and acting as a referee, as well as monitoring and forecasting system management issues, in the event of a change in personnel. However, there is a risk that the federating structure could turn into an ‘extra’ institution, and thus that its authority would be diluted and its effectiveness diminished. Thus, the positioning of this body in the general establishment plan of the state concerned will be a crucial decision, as will the readiness to cooperate of the participating ministries or agencies and the investment and motivation of the staff leading it.

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The structure responsible for the warning

We saw in the introduction that by positioning them at state level, for early warning systems and for prevention more generally, three main areas of intervention were involved: development and cooperation aid — the actors being, in addition, involved earlier and for longer in the prevention of the crisis — foreign affairs and defence. An early warning system should be able to meet the expectations of the three actors involved and facilitate joint action by them. In view of these imperatives and those concerned with coordination, joint work is required.

Besides, in view of the diverse interests, actions and perceptions of the various actors, the experience of some officials in charge of early warning systems appears to indicate that it is necessary to make use of a federating body, or even to create one. These three types of actor and the information services would participate in the body. This structure could go beyond individual needs and merge them together. It could also arrange for action by other actors, depending on circumstances, such as justice, commerce, customs, etc. As forcefully confirmed by an official with experience in early warning systems and forecasting systems within state institutions, it is therefore vital for the body to be given sufficient authority, within the framework of its duties, and the requisite staff and resources.

Objectives and priorities

The aim of an early warning system, defined by a high-ranking official in charge of such a system, is to obtain sufficient details on the world situation sufficiently early to enable the authority in place to establish a policy, whether this is in terms of total prevention or mitigation of potential adverse consequences, and this is to be achieved in line with overall political objectives.

The smooth operation of an early warning system thus requires some effort with regard to the definition of the general objectives of the actor involved. For example, the main security objective could be to protect a country from terrorist threats or from any kind of threat. This may be combined with an energy supply objective, with purely geopolitical considerations, with a wish to increase political influence or strengthen historical links, a wish to protect its nationals, etc. Since it will lead to the definition of priorities, this prior highlighting exercise will also be crucial once the stage of planning a response is reached.26

26 For an outline of the importance of priorities, Général Bonningues, op. cit.
What phenomenon should the warning relate to?

Depending on the objectives defined, the early warning system will attempt to identify the main elements and dynamics leading to the risk or situation to be prevented.

Thus, the warning may relate to instability, if it has been judged to be the main cause of the threats that need to be forecast. It may also relate to conflicts, if identifying and preventing them makes it possible to achieve the objectives already defined.

Creating the warning system
Understanding, consistency and modelling

Once the objectives and the object of the warning have been defined, as the experience of those in charge of operational early warning systems teaches us, we need to create a system that can successfully identify and forecast the phenomenon to which the warning relates. This, as we have seen, requires a scientific approach. It will therefore be necessary to attempt, initially using the results of existing research, as some state bodies have done when they decided to equip themselves with an early warning system, to understand the mechanisms and dynamics underlying the problem in question. A synthesis of the various theoretical approaches will be required, together with transformation of social science research that is not always designed to be applied.

The main types of method used for forecasting can be placed along an axis ranging from purely qualitative, where there is a detailed analysis by one or more experts, including a varying number of cases, to quantitative, usually based on a statistical approach seeking to correlate various variables and the result sought, such as the ACTOR system of the US Center for Army Analysis, or some work done by the University of Maryland. The quantitative perspective also includes the collection of varying sizes of indicators, measurable and measured, such as those of the Country Indicators for Foreign Policy (CIFP) in Canada, which offer its users an exceptional database. However, if no link between these indicators is provided, it is then imperative that the whole be contextualised by analysts. In addition, aggregating measures together, while remaining difficult, only makes it possible to give an index at the macro level.

While the quantitative approach permits the necessary comparison and systematisation, its main problem is an inability to highlight chains of causation and dynamics. The traditional qualitative approach, for its part, requires the use of many experts, which makes systematisation and comparison difficult, although they are vital for forecasting and warning. However, the qualitative method may be systematised by the use of indicators of the ‘key questions’ type, measured in a binary or logical manner (yes/no). Similarly, the automatic approach of the quantitative method can incorporate measures of qualitative analysis and consideration of causation chains (if these have previously been identified), for example through event data analysis.

Briefly, by coding each element of a phrase (who, what, to whom, where, when), this method makes it possible to calculate

27 The data on ACTOR, FORECITE and FOREWARN come from MORS Workshop: “The Global War on Terrorism: Analytic Support, Tools and Metrics of Assessment” 30 November–2 December 2004, Naval War College, Newport, Rhode Island, and the databases of the CIDCM programme of the University of Maryland. The quantitative perspective also includes the collection of varying sizes of indicators, measurable and measured, such as those of the Country Indicators for Foreign Policy (CIFP) in Canada, which offer its users an exceptional database. However, if no link between these indicators is provided, it is then imperative that the whole be contextualised by analysts. In addition, aggregating measures together, while remaining difficult, only makes it possible to give an index at the macro level.

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the occurrence of events such as those specifically defined by the user. In the sphere of prevention of an ethnic war, for example, one could thus know how many times, in a country X, a group of actors (to be defined) has threatened another group (also to be defined). A marked increase in such an indicator could suggest that the transition towards violence is underway. This method is used by the Virtual Research Associate company (VRA) created by Harvard researchers; by SwissPeace Foundation’s early warning system, FAST, in combination with pure qualitative analysis focused on networks of actors; and by the FORECITE (using open sources) and FOREWARN (using restricted sources) systems of the US Center for Army Analysis.\(^3\)

Before adopting any method and being able to assess its relevance, it therefore seems necessary to understand the object of the warning as well as possible. If the warning relates to conflicts, then first of all we must define what a conflict is. An effort will be made to understand its dynamics by including, for example, the Kosimo stages of escalation, as shown in Table 1 above. In view of developments in the understanding of the object of the warning, secondary objectives may also be added, seeking, for instance, to identify increasing fragility of states, this being considered to be a cause of conflict, as has seemed to be the case since early 2005.\(^3\)

If the objective is to prevent instability, then after having defined the concept, efforts will be made to find the processes that underlie instability. One could, for instance, use the following as analytical categories connected to instability: the collapse of states, humanitarian emergencies, large-scale conflicts, violent regime changes, or the existence of areas outside the law within the country. It will then be possible to make use of statistical quantitative methods. However, with these tools it is not possible to take processes into account. It would thus be necessary, for each of these categories, to understand their dynamics, as well as the interactions between various categories that may increase the risks. For example, a humanitarian emergency is not destabilising in itself, but needs to be understood within its context and development. The famine linked to the desertification of the Sahel or the tragic living conditions in certain parts of Bangladesh during the floods are humanitarian emergencies. However, the consequences in terms of instability may be neither direct nor immediate. It would probably be necessary to introduce a special approach for these kinds of risk which, along the lines of early warning systems linked to natural risks, might be categorised as ‘slow and erosive’.\(^\)\(^3\)

The approach chosen may consist of a narrower and more specific definition of risks, which therefore attempts to create as many early warning systems as there are risks. At this stage in creating the system, it may turn out that these risks are all generated by the same types of cause or are governed by the same dynamics, such as instability or civil wars, and therefore that an early warning system that takes a broader approach to the principal cause may be more successful and less onerous. It will then be necessary to carry out the process again for the new subject of the warning.

Once these theoretical foundations have been defined, a synthesis or selection of the methods that seem to be the most successful with regard to the object must be carried out. Next, the task will be to translate these theories into an operational system that make forecasting and warning possible.

With regard to conflicts, specific ‘indicators/questions’ can be created, based on the precise assumptions connected with the understanding that has been developed, making it possible to take into account the history and values of the countries involved with the aim of collecting and ordering information.\(^3\) The questions may be grouped by subject, with each category being then given a different weight for final

\(^3\) Ibid. For VRA see <vranet.com/>; for FAST, <www.swisspeace.org/fast/>, for FOREWARN and FORECITE, see note 16.

\(^3\) See note [15].


\(^3\) As an example, we have the BMZ system of indicators, created by Angelika Spelten, art. cit. and op. cit.
aggregation, in line with its significance with regard to the outbreak of a conflict. For instance, structural factors may be assessed as having less weight than those measuring escalation towards violence. This method can be described as belonging to the systematic qualitative type.

Faced with a great diversity of explanations and tools and attempting to retain the best of them, a synthesis appears impossible and the choice may be to select some quantitative methods, and then to try to identify the countries with the same ‘profiles’. These countries will then be grouped according to their similarities. The first disadvantage of this method is that it is not based on an understanding of the dynamics and therefore it seems that it will not allow a warning focusing on a small period of time, whereas this is one of its main objectives. In addition, it would tend to aggregate variables without seeking the links between them. The risk is therefore that of being left with an inoperative warning system or of generating unjustified warnings as far as it mixes issues together without placing them in order.

Another way of tackling the diversity of methods, and this choice has been made by some of institutions, is to add expert analysis to the statistical quantitative approaches and event data analysis based on an identification of the dynamics of conflicts or instability. More than just an early warning system, such as system then becomes a process.

The time period under consideration for forecasting and warning may range from six months to five years, as we will see in the section dealing with results. It is vital for this to be linked in a consistent way with the system developed.

What entities will the warning deal with?

When the system is being created, and as a logical connection to the model developed, the ‘population’ which will be the subject of a potential warning must be defined. In view of the objectives of the warning, this population is usually made up of the member states of the international community. The basis may thus be the 192 member states of the United Nations, an approach chosen by some States.

However, as confirmed by some creators of early warning systems, depending on the original objectives of the actor implementing the warning system, this may be reduced, for instance, by only taking into account certain countries that fall within a traditional area of influence. It will be necessary, however, to check that such an a priori selection is consistent with the original objectives previously defined.

It might also be imagined that, for various reasons connected with the subject of the warning, a classification using member states is not the most relevant. Thus, geographical regions that combine several states might in some cases be chosen, such as the Great Lakes region in Africa, or parts of states, as in the CEWARN early warning system of the Intergovernmental Authority on Development (IGAD), provided that they are then subdivided into states again, these being the main actors on the international stage.

Similarly, a warning system that seeks to forecast specific threats from non-state actors defined in terms of their ideological affiliations, for instance, could validly choose these groups of actors as its population. They might later be combined with other criteria with a view to monitoring the emergence of new groups. For this forecasting method, it might then be useful to include analysis of networks of actors. The states could combine such a system with a more traditional approach, and a synthesis would then again be required to obtain a coherent whole.

38 The member states of IGAD are: the Republic of Djibouti, Erétra, the Federal Democratic Republic of Ethiopia, the Republic of Kenya, the Republic of Somalia, the Republic of Sudan and the Republic of Uganda. CEWARN site: <www.cewarn.org/>. For a brief introduction, see Lavoix, op. cit., 2005b, and p. 133-134.

39 For an example of an early warning system that incorporates an analysis of actors’ networks, see the FAST system, August Hämmerli, Regula Gattiker, Reto Weyermann, “Conflict and Cooperation in an Actors’ Network of Chechnya Based on Event Data”, Journal of Conflict Resolution, Vol. 50 No 2, April 2006, p. 159-175.
At all levels of designing the system, it is therefore crucial to develop a dynamic understanding of the subject and to abide by the logical links between the various stages, which will ensure that the system created actually does direct the forecasting and the warning towards the situation to be prevented.

**Using the early warning system: organisation, information and results**

Once the modelling of the warning system has been developed, it needs to be activated and managed, which requires an organisation and an input of data, in order to obtain the results to which the warning will, in the end, relate.

**Organisation**

The experience of users of early warning systems shows that the whole warning process is conducted in general about once or twice a year. At the same time, units that are the subject of an extremely urgent warning may be monitored regularly.

When the warning system is made up of a single mode, composed for instance of key questions, use can be made of an external centre of experts, or personnel working on the ground may be asked, after receiving brief training, if necessary, to complete the questionnaire. It is vital that the questionnaire be made up of simple questions and that it can be completed in one or two hours per country.

One person or a team, working cooperatively and in such a way that the members can compare the results obtained, will then be responsible for collecting the information, analysing the responses and carrying out the calculation. If the results are very different from those obtained previously, the analyst must verify with the person who filled in the form the reasons for this change in order to reduce the likelihood of disparities that might be the result of bias in perception. For each country, the initial questionnaire may be summarised in one or two pages, stressing developments as compared with the previous analysis and giving a graphic depiction of the curves for the various indicators.

When the warning system is made up of a mixture of various tools, the first stage will be to obtain the results derived from the different methods. With regard to the use of analysts at the beginning of the process, it seems sensible to make use of as broad a range of experts as possible, combining knowledge that is external and internal to the actor for whom the warning is being carried out. The results will then be compared. Where they converge, the countries involved will be placed in the corresponding category. Where they diverge, the structure with responsibility for the early warning will contact the various experts involved and try to analyse the reasons for this divergence. A decision to place a country in a particular warning category will, in the end, be the responsibility of the structure in charge of the warning system.

After this first classification, which is particularly useful in removing from the ‘population’ to be analysed those countries with only a very slight degree of risk, those remaining on the list may be grouped by geographical regions. A second stage of classification may then begin, using, for instance, detailed interviews with specialists, as well as a specific questionnaire connected with the subject of the warning. A particular concern at this stage will be to emphasise the dynamics of conflict or instability that exist for each of the countries examined. This diagnosis will then make it possible to prepare possible response options.

Then, analysts from the early warning unit may meet and examine, one by one, the results obtained for each country. They will thus locate each country within its category, either on the curve of conflicts or in relation to the risks of instability.

Whatever form of organisation is chosen, it is important to combine two ingredients: the use of human analysis and one or more of the most systematic, comparative, and objective methods that exist. As well as meeting the criteria seen above, a quantitative approach makes it possible to correct or minimise any bias linked to human perception or, in the case of meetings, to group dynamics; a qualitative approach adds back in, within a designed framework, intuition, analytical and synthetic capacities, emotional elements and complexity of thought.
Finally, the organisation must include knowledge management and self-assessment, which will enable it to include the results of new research and also to learn from any errors that may be made. Each error detected must be the subject of a diagnosis to identify its origin and correct the system appropriately. This process must be planned over the long term so that very remote warnings can be taken into account.

Information

Information may come from open or restricted access sources. As we saw previously, it is not so much the availability of information as its relevance that poses a problem. With regard to a state, in fact, a lot of data is put forward, without reference to any particular situation, because of the existence of information services and networks of diplomatic bodies and other agencies covering the various political, military, economic, and social milieus. Comprehensive access to the media and the use of networks of external experts may be added to this arrangement.

The problem of selecting relevant information is directly related to the design of the warning system and should therefore be resolved during the design process. In particular, the model created must make it possible to combat involuntary cognitive closures (obedience to methods, unconscious choices, selective screening caused by emotion, prejudice, etc.). It must also ensure that information from sub-national sources, depending on the circumstances, can be passed on. Whatever the warning system, the main concern when it is being used will be to assess the validity of the raw information, then to restrict any bias linked to the perceptions of the analyst.

With regard to raw information, the double assessment system using the source, on the one hand, and vectored information, on the other hand, has proven itself in particular within the information services or more recently in the system introduced by FAST. It should, however, be noted that rumours, partially true news and narration may be useful, in that they reveal the beliefs and aims, concerns and anxieties of the actors under consideration.

In addition to reducing them through the use of a systematic model, the perceptual bias of the analyst will be easier to correct by comparing analyses over time and with other countries, as well as through a check on the internal consistency and logic of the argument set out.

The results

The final result will display a distribution of the units covered by the warning system, which are usually countries, classified with regard to the subject of the warning.

As existing early warning systems show, if the subject is conflict, then the countries may be classified depending on their position on the curve of stages of conflict. If the subject is instability, then the countries may be grouped in line with various time horizons of instability, such as six months, two years, and five years. This second form of classification, although more traditional and easier to manage in terms of planning a response, is also less certain. In fact, it imposes a measuring scale, namely time, as an extrinsic absolute, whereas historical time is really variable in terms of the actors’ interactions. To overcome this difficulty, it would be necessary to explain the mechanisms and dynamics connected with instability, as has been done for conflicts.

On the other hand, the locating of a result on the curve of conflicts, which is more faithful to reality and therefore gives more reliable results, will possibly be difficult to translate into a response, especially due to the habitual practices of planning. Additional ‘translation’ work will therefore need to be carried out to convert from time measured in

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41 See, for example, the work of the philosophers Wittgenstein and Quine or the neurobiologists Maturana and Varela. For an example of application to specific cases, Lavoix, op. cit., 2005a.

Next, with the involvement of the various relevant ministries, departments or agencies, these scenarios would be transformed into potential short intervention programmes or response planning, setting out the broad strategic approach for an action that would be as effective as possible, and then all the responses would be reviewed and assessed in terms of the objectives and available resources, thus defining some priorities.

This process would make it possible not only to examine the multi-dimensional effects of an action, but also to select the best time to act. Only a correlation of the potential actions and the dynamic dimension of the processes to which the warning relates can produce such a picture in the long term.

It is this list of countries, categorised and accompanied by possible responses, which can finally be used to launch the warning, and thus be submitted to the final decision-makers. At the same time, a decision may be taken to systematically monitor the countries with the highest level of risk, as is currently the case, so that developments in the situation can be monitored continuously. An internal warning may also be issued within various institutions, including diplomatic bodies, offices and agencies on
the ground, so that all the actions taken in respect of these countries are redefined and coordinated to take into account the forecast situation.

The early warning system and the international system: alignment

At this stage, relying on its knowledge of the international situation generated by the early warning system and with a clear vision of its objectives and the resources to be implemented to achieve them, the actor will be able to meet other states and multilateral bodies so that a coordinated international response, which is satisfactory to it, can be put in place. As this process lies outside the field of this study, I will restrict myself here to examining the difficulties and benefits that may result from the use of various early warning systems by the various international actors. This diversity is a result of the anarchic nature of the international system, albeit one governed by rules. In contrast to the case within a country, it is impossible for a single warning system to be selected as the authoritative one.

However, as the diversity of warnings may give rise to doubts and prolong the time taken for consideration and decision-making, some may suggest that one country and therefore one warning system be adopted as a reference point. Such an approach would run counter to the principle of the independence and sovereignty of states and might have dangerous consequences in terms of hegemony. In a world where responses must be coordinated for reasons of effectiveness, cost, and legitimacy, how is diversity to be managed without it resulting in inaction? A managed diversity may represent one form of response.

Within the early warning process, an additional stage of communication with the other actors in the international community can be inserted. Thus, the results of warning systems, before being correlated with the resources and objectives of each state, could be exchanged, according to the wish of the actors. The differences between the results would then be compared, using a technical approach, and without forgetting that the initial objectives of the actors will have governed the creation of the early warning systems. This would require efforts in terms of transparency, but would also make it possible perhaps to improve forecasting tools and to disseminate knowledge, while reducing reasons for a lack of understanding.

At this stage, the consequences of too wide a communication of the results of the early warning systems should be taken into account, particularly for the countries or groups affected. These potential effects will have to be assessed and incorporated into the general strategy.

Lastly, there will still be negotiations connected with the diverging objectives of the international actors, which also guarantee a certain degree of freedom.

Conclusion

First of all, I defined what an early warning system should be, while setting out the overall prevention process of which it forms a part.

Next, based on the resistance and opposition generated by the use of early warning systems, I pointed out several difficulties and constraints that should be taken into account when the procedure is being designed.

Lastly, I suggested that a federating structure within a state body would be best able to successfully manage this warning system, because of the needs for synthesis and management of differing time horizons required. I then analysed seven major stages in the implementation of an early warning system, from the definition of the state’s objectives and overall strategies to the system’s design, use and finally the difficulties relating to the need for a coordinated response prepared within the inescapable diversity of the international world.

Challenging the inevitability in the preventative approach, that would say that only failure can be detected, early warning systems, by helping to incorporate responses into an overall strategy and helping to measure their effects regularly, contribute to creating the confidence upon which, in the end, the reduction of uncertainty and insecurity is based.
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