

## Policy Integration between EA and Disaster Management (paper ID 47)

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*This paper presents some of the results of a Japanese JSPS (Japan Society for the Promotion of Science)/UK ESRC (Economic and Social Research Council) financed UK-Japan workshop on the integration of environmental assessment (EA) and disaster management which was held in November/December 2012. The focus here is on the outcomes of some extensive group work with regards to three aspects; (1) accelerated EA in post disaster situations; (2) EA for pre-disaster response and recovery planning; and (3) consideration of disaster risk in EA. It is suggested that whilst EA can be beneficial in disaster management, there are a number of potential pitfalls, which need to be considered when applying the instrument.*

### 1 Introduction

Environmental degradation often has a part to play in the occurrence and severity of damaging or disaster events. For instance, deforestation can increase the risk of flash flooding or landslides and wetland depletion can increase the risk posed by storm surges and tsunamis to coastal communities. The recognition of the relationship between environmental degradation and disaster events has meant that environmental management is now seen as a key means of reducing disaster risk.

As a result, one instrument that has gained much attention in this context has been environmental assessment (EA). EA is an environmental management tool that acts in an ex-ante manner to promote the consideration of environmental issues in human development actions. It is often divided into EA of projects, generally referred to as environmental impact assessment (EIA; see Glasson et al, 1999), and EA of programmes, plans and policies, frequently termed strategic environmental assessment (SEA; see Fischer, 2007). EA can help reduce the negative impacts of development action on the environment and in doing so can help prevent the underlying causes of disaster risk. However, it is recognised that the role of EA in this regard can be potentially further strengthened. In this context, two main points have been made (Benson, 2009; Gore and Fischer, forthcoming):

1. EA has the potential to be a means through which disaster risk considerations can be embedded into development activity by expanding the tool methodologically to incorporate explicit disaster risk considerations. For instance, expanding the environmental impact assessment (EIA) process to explicitly consider how deforestation associated with a proposed development project could reconfigure the landslide or flood risk in a locality.
2. EAs should be fully integrated into activities in the post-disaster period in order to help prevent disaster recurrence and promote sustainability. This is often a time when EA considerations are sidelined officially or unofficially in order to hasten disaster response or recovery interventions.

To date, the concept of using EA to reduce disaster risk has not been something that has been widely researched, or indeed, been widely implemented in practice, despite its potential as a cost-effective means of reducing disaster risk. However, its benefits have been recognised by many organisations active in disaster management (see e.g. Randall and Jowett, 2010). For this reason, a UK-Japan workshop on the integration between EA and disaster management was held in Tokyo in November/December 2012. This was funded by the UK ESRC (Economic and Social Research Council) and the Japanese JSPS (Japan Society for the Promotion of Science) and brought together 24 UK and Japan based researchers and practitioners in the EA and disaster management fields<sup>1</sup>. Together, they explored the potential role that environmental assessment can play in disaster risk reduction. An important objective was to learn from the diverse experiences of the UK and Japan based participants.

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<sup>1</sup> for the workshop programme see [http://www.nishikiz.depe.titech.ac.jp/pdfs/2012JSPS\\_Final%20Program.pdf](http://www.nishikiz.depe.titech.ac.jp/pdfs/2012JSPS_Final%20Program.pdf)

## 2 Methodology of integration between EA and disaster management workshop

The workshop ran over four days and consisted of three main parts. The first part revolved around a total of 21 presentations on the subject<sup>2</sup>. Part 2 consisted of group work and was structured around three pre-determined areas of potential integration. Finally, part 3 involved a fieldtrip to one of the tsunami stricken areas about 350 kilometres north of Tokyo in the Miyagi prefecture.

This paper will focus on the results of part 2. The three pre-determined areas of potential integration between EA and disaster management are shown in Figure 1. They include (1) accelerated EA in post-disaster situations; (2) EA for pre-disaster response and recovery planning; and (3) consideration of disaster risk in EA. Each of these areas was discussed in smaller sub-groups with discussions structured loosely around a SWOC (strengths, weaknesses, opportunities and challenges) analysis framework. In line with this framework, for each area of potential integration, participants were asked to contemplate the *strengths* and *weaknesses* of the idea and the *opportunities* and *challenges* for progressing it. Figure 1 summarises the key discussion points. These will be further elaborated on in the remainder of the paper.

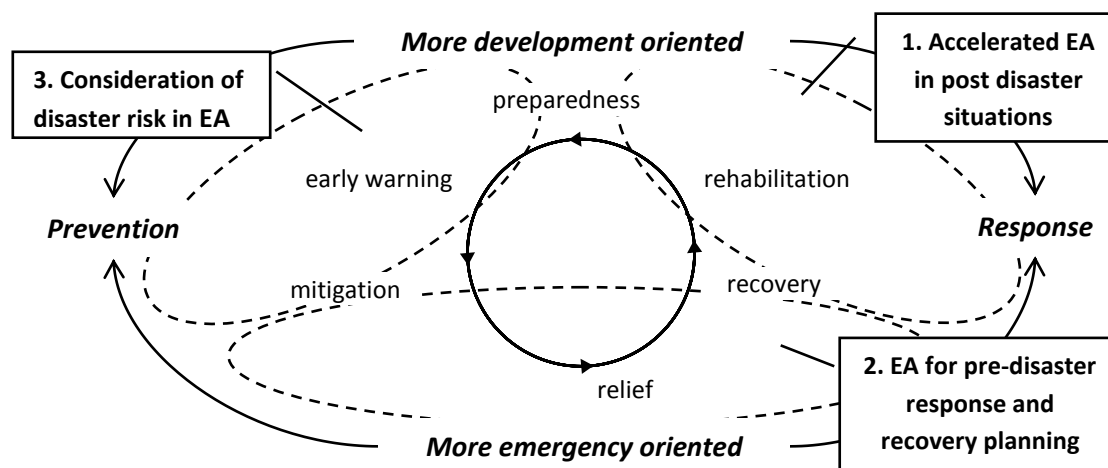


Figure 1: Potential role of EA in Disaster Management Cycle [original figure from Collins (2009), p.27, amendments made by authors]

## 3 Workshop results with regards to three potential integration areas

In this section, the main results of the group work are presented. These revolve around the three areas identified above; i.e. accelerated EA in post-disaster situations, EA for pre-disaster response and recovery planning and consideration of disaster risk in EA.

### 3.1 Developing accelerated EA procedures for application in post-disaster situations

Accelerated procedures for EA could facilitate faster decision making when this is considered vital in a post-disaster situation. The assumption is that EA would still be able to facilitate the consideration of environmental aspects. However, depending on the approach adopted, there is a danger that expedited procedures lead to significant impacts being overlooked. Furthermore, they could be detrimental to community engagement and also consensus building, which have been found to be of fundamental importance for the mental health and healing of affected communities (Karmani-Fard et al, 2013). Any measures taken to accelerate procedures which are detrimental to quality could be criticised for being myopic.

<sup>2</sup> All presentations from part 1 are accessible on the workshop's website: <http://www.nishikiz.depe.titech.ac.jp/JPUK2012/>

A number of points were raised about how procedures could be accelerated methodologically<sup>3</sup>. These included omitting certain procedural stages. A few Japanese participants suggested that the scoping stage could be omitted on the ground that it is largely a formality in the normal development context (Hayashi, 2008). Furthermore, a special EIA process for recovery projects had been formally introduced in Japan after the Great East Japan Earthquake which does not include the scoping stage (Shibata, 2012). However, overall, most participants thought that scoping was too important for the overall success of EA and thought that this practice would have an overall negative effect. In this context, the need to centre the assessment on only those issues perceived to be most critical was discussed. This would mean refining the scope and focus of the assessment, taking into account the disaster context and the level of urgency required, whilst reducing the time required for conducting the assessment. In this sense, the importance of the scoping stage was emphasised. Indeed, as Glasson *et al* (1999: 91) have noted, scoping is an important step because it allows limited resources to be ‘allocated to best effect’. Furthermore, scoping is a key stage, contributing ‘to the production of a concise and focused environmental report’ (Fischer and Philip-Jones, 2008: 142). Reducing the environmental survey period was seen by many workshop participants to be a particularly effective means of accelerating the EA process as well as orientating the assessment more towards expert judgement. Finally, EA could be accelerated by reducing the time dedicated to administration through supplementary resourcing (staff and finance) and this would potentially also hasten the process.

However, depending on the approach taken, the overall the appropriateness of the application of accelerated procedures was seen to depend on a number of factors. These included the nature of the proposed development action, recognising that accelerated EA may be less appropriate in some cases than in others. This relates to the extent and nature of the possible impacts, and also the importance and level of community engagement considered necessary. It was also noted to depend on the nature of the particular disaster or situation, particularly as this will condition the desire for urgency. The greater the degree of urgency, the wider the range of activities that could be considered eligible for expedited arrangements.

### **3.2 Integrating EA methods into pre-disaster response and recovery planning activities**

Applying EA in the pre-disaster planning of post-disaster actions could be beneficial as it would enable application of the instrument outside of the potentially unfavourable conditions of the post-disaster period. This could aid the justification of activities carried out in this difficult period from an environmental standpoint. Furthermore, applying EA as part of pre-disaster planning activities could have secondary merit by being a means of promoting disaster awareness amongst communities.

A number of factors were identified in the group work that could condition or constrain the utility of this approach. Firstly, the potential offered is obviously limited by the extent of pre-disaster planning which is actually undertaken. For example, pre-disaster planning for disaster *recovery* is still a rare activity globally (Le Duc, 2007). The extent of this planning differs between countries and even regions sub-nationally. Secondly, it will also be constrained by the nature of this planning. That is, in terms of whether actions are planned in sufficient detail so as to make the application of EA worthwhile, recognising that there are often large uncertainties around anticipating hazards and disasters and thus in the response to and the recovery from them. Here, Japanese participants found the various UK presentations on civil emergency plans (Swain and Therivel, 2012) and the consideration and of e.g. flood risk in spatial plan related strategic environmental assessments (SEAs) helpful (Hayes, 2013). The potential role of scenario analysis in dealing with uncertainties was noted. As too was the potential role of a ‘generic’ EA approach. This approach has been employed when there has been an absence of site or location specific information<sup>4</sup>. Finally, the fact that the post-disaster environment may

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<sup>3</sup> Here, it is important to remember that EA should focus on significant environmental impacts only; i.e. if very few significant impacts are likely to arise, the process may not necessarily need much time.

<sup>4</sup> There is currently no commonly agreed upon definition of generic EA. However, there are examples, such as The New York Codes, Rules and Regulations (NYCRR; (State Environmental Quality Review). These define generic EA as follows: ‘Generic EISs may be broader, and more general than site or project specific EISs and should discuss the logic and rationale for the choices advanced. They may also include an assessment of specific impacts if such details are available. They may be based on conceptual information in some cases. They may identify the important elements of the natural resource base as

differ considerably to that at the time of planning the response and recovery interventions, may also result in difficulties for this approach. This could be altered by the disaster agent itself, e.g. a tropical cyclone or tsunami leading to the loss of a large area of wetland habitat, or simply through the time that could elapse between planning the action and the occurrence of a disaster warranting its implementation, given that this could be extensive and uncertain. Under many legislative regimes authorisations based on EAs can in fact become invalid after a set period of inaction for this reason (examples include e.g. Canada and the US).

### **3.3 Integrating explicit disaster risk considerations into current EA tools**

As an already firmly established technique, integrating explicit disaster risk considerations into EA processes could offer a potential means of reducing disaster risk by further promoting a consideration of these risks in development decision making. Furthermore, it could also provide a means of raising public awareness of these risks.

There were, however, a number of issues raised with this approach. Firstly, it was noted that other tools and mechanisms are already in place in many countries for considering disaster risk (e.g. flood risk assessments; see Hayes, 2012). As a consequence, it will be important to avoid overlap with these existing mechanisms and the duplication of effort. The situation in this regard will differ between countries and thus the benefits of such integration will vary. Secondly, whilst there are clear benefits in promoting disaster risk reduction through an already established process like EA, it was also noted that subsuming disaster risk considerations within EA could mean that efforts to reduce disaster risk would be constrained by the same factors that constrain EA in particular contexts (see e.g. Arts et al, 2012). For example, some Japanese participants pointed out that in Japan, the assessment outcome has a limited impact on decision making due to sectionalism, resulting in minor changes to proposals only, and the 'no action' alternative is not considered which could limit the extent to which risk avoidance is a viable option.

From a methodological perspective, if such an approach was taken forward, the role of scoping was identified as being particularly important in determining the relevance of disaster risk considerations in a particular assessment, thus giving further strong support for the suggestion made under point 3.1 that omitting the scoping stage would be undesirable. It would also be important to fully engage with disaster management professionals in the consultation process, such as emergency planning bodies.

## **4 Conclusions**

There is apparent merit in each of the three approaches of integrating EA with disaster management discussed in this paper. Developing accelerated EA procedures and integrating EA techniques into the pre-disaster planning of post-disaster actions could both help further assimilate EA into post-disaster decision making, and integrating explicit disaster risk considerations into EA tools could further promote a consideration of disaster risk in the development process. However, a number of issues were also identified that could condition the success and the desirability of each of the concepts. Some of these issues are fundamental to the particular approach (e.g. dealing with high levels of uncertainty), and some relate to the context in which they would be applied (e.g. the nature of existing practices in a particular country or region). Further work is needed to determine whether and how these could be overcome.

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well as the existing and projected cultural features, patterns and character. They may discuss in general terms the constraints and consequences of any narrowing of future options. They may present and analyze in general terms a few hypothetical scenarios that could and are likely to occur.'(6 NYCRR Part 617.10; Department of Environmental Conservation, 1995)

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