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## Draft Field Report: Philippines Flooding/Typhoon Rapid Environmental Impact Assessment<sup>1</sup>

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*"Peace on earth depends on our ability to secure our living environment."*

-Ole Danbolt Mjoes, Norwegian Nobel Committee<sup>2</sup>.

### Summary

From mid-November to early December 2004 the Philippines experienced two typhoons and two tropical storms which resulted in at least 1,060 deaths and considerable damage. While the Philippines regularly experiences similar storms, the four storms resulted in an unusually high death toll as well as extraordinary damage, particularly in Quezon and Aurora Provinces of eastern Luzon Island. Major contributors to the loss of life and damage were the environmental events of flooding and landslides, reportedly the result of excessive logging and environmental degradation. Given the disaster's environment-disaster linkages, a Rapid Environmental Impact Assessment was conducted as a collaborative effort of Benfield Hazard Research Centre, CARE, the Gov. of the Philippines National Disaster Coordination Council, UNEP/OCHA and UN Agencies. The assessment involved consultations with assistance providers and affected communities. Key findings include:

- The location-specific reasons why the landslides and flooding occurred need to be understood to guide recovery and prevent similar disasters in the future.
- Affected slopes need to be stabilized to prevent further landslides and debris flows.
- The changes to the landscape caused by the floods and landslides need to be mapped and understood to prevent future flooding and landslide impacts.
- Employment needs to be increased in the near term to limit the survivors' need to extract additional resources from the environment to meet reconstruction and recovery needs.
- The waste being generated by the clean-up process needs to be disposed of safely.
- Farmers need support to rehabilitate fields, as well as alternate crops to cultivate until rice and normal vegetable production can be restored. Similar support is needed in the fishing sector.
- The trees and other biomass brought down by the floods and landslides need to be transformed into useable assets (e.g., lumber, compost) and be used to support the recovery process.
- Shelter is a priority. Efforts need to consider immediate needs as well as proactively reduce the current and expected threat of flooding, landslides and typhoons. Traditional and modern Filipino experience and lessons from outside the country need to be incorporated into reducing the likelihood of damage to shelter in the future.
- Community-based warning systems need to be established as a priority to reassure at-risk disaster affected populations and minimize similar disasters in the future.

Specific issues and actions related to relief operations and recovery plans are also identified. The assessment encountered a lack of information about facets of the relief operations. The gaps identified need to be filled to improve relief operations and the assessment of environmental impacts.

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<sup>2</sup> "Kenyan in surprise Nobel peace win", www.CNN.com, October 8, 2004 Posted: 11:42 AM EDT (1542 GMT)

## Introduction

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Between 14 November and 1 December 2004 the Philippines experienced two typhoons (Unding, Yoyong) and two tropical storms (Violeta, Winnie). The storms resulted in severe flooding and landslides which led to a considerable loss of life (1,060 persons as of 14 December 2004) and severe damage to property and the environment, predominantly in parts of eastern Luzon Island<sup>3</sup>.

While typhoons and tropical storms are not uncommon in the Philippines, these four events appeared to have resulted in an unusually high death toll and property damage. Environmental conditions, particularly logging and land use, were identified as key contributors to the impact and scale of the disaster.

The reported environmental linkages between the proximate causes (heavy rainfall and logging) and impact of the flooding and landslides suggested an assessment of environmental issues related to the disaster would be useful as input into relief operations and recovery planning. As a result, a Rapid Environmental Impact Assessment (REA) was undertaken as a collaborative effort of Benfield Hazard Research Centre, CARE International/Philippines and the Joint UNEP/OCHA office (Geneva), the Philippines National Disaster Coordinating Council (NDCC) and the UN Disaster Management team in Manila as well.

The assessment took place from 8 to 22 December 2004 and involved:

- Consultations in Manila with the NDCC, other Gov. of the Philippines offices, NGOs and the UN,
- Field visits to the communities of Dingalan (Aurora Province), Real, Infanta and General Nakar (Quezon Province), considered to be the most affected areas,
- An organizational level assessment,
- Community level assessments (covering communities noted above), and,
- Briefings for the NDCC and NGOs.

The assessment followed the procedure set out in the Guidelines for Rapid Environmental Impact Assessment in Disasters (see:

[http://www.benfieldhrc.org/SiteRoot/disaster\\_studies/rea/rea\\_index.htm](http://www.benfieldhrc.org/SiteRoot/disaster_studies/rea/rea_index.htm)).

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The assessment was conducted by C. Kelly. The views expressed are those of the author and do not reflect views of any other individual or organization.

## Organization of the Report

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The report is divided into two main sections:

- A summary of the assessment and key findings, and
- Annexes documenting the organizational and community level assessments.

Key assessment findings are presented in summary form so to be quickly reviewed and used in on-going relief and recovery operations. Information in the Annexes will be useful in planning recovery operations and tracking changes in the importance and evolution of environmental issues related to the disaster.

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<sup>3</sup> Additional information on the impact of the four storms and relief operations can be found at <http://www.reliefweb.int/w/rwb.nsf> under "Southeast Asia Typhoons and Tropical Storm".

## General Findings and Recommendations

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- The flooding and landslides in the Quezon and Aurora Provinces were extraordinary events. While both types of events have occurred in these areas the past, the scale and resulting impact are greater than reported to have occurred in human memory.
- The immediate cause of the floods and landslides was high levels of rainfall due to the four storms, leading to soil saturation and slope failure. However, the disaster area regularly experiences high rainfall, tropical storms and typhoons. The location-specific reasons why the landslides and flooding occurred at this time need to be understood and should be the focus of specific research. This research should also establish the importance of logging and upland farming (including coconut cultivation) with respect to the floods and landslides.
- Slope stability appears to have been compromised in many areas due to landslides. Areas adjacent to slope failure sites need to be stabilized to prevent further landslides and debris flows.
- The flooding and landslides in Quezon (Real, Infanta, General Nakar) and Aurora (Dingalan) Provinces led to significant local changes to the physical landscape. These changes, which include a raising of the surface of the land on the order of centimeters to meters, need to be taken into account in reconstruction efforts. The increase in land surface level will contribute to future flooding and debris flow damage if mitigation measures are not incorporated into reconstruction projects.
- Many inhabitants of the affected areas normally depend on a diverse set of livelihood options to survive. Damage to farming and fishing capacities, including damage to fields and the loss of boats, and debris in the ocean, seriously limit survivors' current livelihood options. While clean-up work, lumber production and charcoal making using salvaged timber provide some income, survivor reconstruction needs are significant. Unless employment can be increased in the near term, livelihood options may turn increasingly to logging and charcoal production from local forests, with consequent damage to the environment.
- The clearing and reconstruction of buildings, fields and other physical infrastructure will involve a considerable effort in the Dingalan and the Real-Infanta-General Nakar areas. The clean-up and clearing process is generating a considerable amount of waste for which safe disposal is needed. Improper disposal will likely exacerbate the risk of flooding and damage from landslides.
- Flooding, and to a lesser extent landslides, have damaged rice and vegetable production areas. Considerable work is needed to reestablish these fields, including removal of timber and soil deposited by flood waters or landslides. Farmers need financial or in-kind support to rehabilitate fields, as well as alternate crops to cultivate until rice or normal vegetable production can be restored.
- A considerable amount of biomass (e.g., trees, branches, root systems) was transported in flood waters and deposited in the ocean and on land. A significant part of this biomass can be recovered and converted to lumber, poles and charcoal (a process which is already underway). The salvage process needs to be managed in a way which:
  - Maximizes local employment, income opportunities and benefits.
  - Converts as much as the biomass as possible into productive assets, including lumber, charcoal, posts, fencing and composting to increase soil quality and productivity, and
  - Limits follow-on exploitation of standing forests once the salvage operations are complete.
- Shelter is a significant expressed need. Shelter plans need to consider immediate needs as well as the medium to long term risks and vulnerabilities from flooding and landslides.

Consideration should be given to constructing safe housing sites using flood-deposited soil to build-up platforms above recent flood levels and/or building core houses on wooden stilts (a traditional method to limit flood damage). Geological research is necessary to assess whether dikes and other structures, as well as slope stabilization, are feasible ways address the risk of landslides and floods.

## **Operational Findings and Recommendations**

The following table summarizes critical issues identified in the assessment (see **Annexes - Consolidated Assessment Results** below). Specific initial actions are identified based on the four types of actions set out in the REA Guidelines.

The actions identified are, for the most part, general in nature and do not specify who should take the action. Establishing responsibility for specific actions, and elaborating the details of these actions, are tasks best accomplished through consultations between the NDCC (representing Gov. of the Philippines' disaster response efforts), and NGOs and IOs (e.g., the UN system) with involvement of key donors. Note that similar actions are identified for different issues, making it possible to address several issues with one intervention.

<b>Issues</b>	<b>Actions</b>
<b>Issues of Immediate (life threatening) Importance</b>	
<b>Personal safety</b> , particularly with respect to the threat of future floods and landslides, but also the threat of violence against indigenous populations.	<b><i>Establish flood/landslide warning systems with participation of local populations in near term</i></b> (presumably as a prelude for expanded community disaster preparedness efforts). <b><i>Advocate for a resolution of disputes over forest resources between indigenous populations and loggers.</i></b>
<b>Land Mass Movement/Landslides and Flooding</b> , both of which may occur if additional rainfall takes place.	<b><i>Immediately establish flood/landslide warning systems with participation of local populations.</i></b> (see previous above.)
<b>Large number of persons affected and Concentration of survivors</b> relative to total population in disaster area.	<b><i>Increase the level of assistance</i></b> to reduce the number of disaster affected populations.
<b>Environmental Conditions</b> , in particular waste management; <b>Sanitation</b> , including latrines, waste treatment and transport infrastructure, and solid waste management, and <b>Limited capacity to absorb waste</b> , particularly resulting from the collection and removal of mud and other waste.	<b><i>Develop and implement a sustainable plan for the disposal of waste and soil</i></b> deposited by floods and landslides. <b><i>Incorporate recycling and reuse into waste management plans.</i></b>
<b>Lack of sufficient shelter</b> for short and long term needs.	<b><i>Construct core shelter taking into account disaster reduction methods</i></b> (e.g., placing houses in stilts and/or raised soil platforms, minimizing seismic and typhoon damage potential). <b><i>Use lumber salvaged from flood debris for shelter construction.</i></b>
<b>Lack of assessments</b> , or information	<b><i>Advocate for an improved flow of information</i></b>

from assessments. (Information gaps are noted elsewhere in the report.)	to relevant parties and increase assessments as appropriate.
<b>Issues Affecting Welfare</b>	
<b>Movement of people</b> to/from disaster areas.	<b>Increase assistance levels</b> to encourage people to remain in the disaster affected area (on the presumption that their presence will contribute to the recovery effort and that the affected area has been deemed safe to live in by experts).
<b>Lack of NFI/Household resources</b> (although not clothes for the immediate future).	<b>Increase in-kind assistance, and wage or in-kind<sup>4</sup> payments for work</b> to reduce need for survivors to extract additional resources from the environment.
<b>Adequacy of Health Care</b> (noted several times). Concern is that health care will be reduced once medical teams leave the disaster affected area.	<b>Advocate for a health care strategy which includes the provision of increased medical care for disaster affected areas</b> for at least the next 6 months.
<b>Lack of adequate food supplies</b> , noted as less of an immediate problem in the Community Level Assessments, but a concern for the future due to the delay in reviving food production.	<b>Monitor food supplies</b> and consumption, and increase food availability or access if food security decreases.
<b>Wild food collection:</b> Possible unsustainable extraction.	<b>Advocacy with wild food collectors to ensure sustainable harvesting.</b> <b>Increase access to other food sources</b> if wild food harvesting is driven by food insecurity.
<b>Relief Supplies:</b> The equality of relief distribution, creation of new consumption habits and additional waste generation and disposal requirements.	<b>Advocate for a well structured and equitable relief assistance system.</b> <b>Develop a plan to minimize or recycle any waste</b> generated by relief assistance.
<b>Manner of disaster response:</b> good and bad practices	<b>Advocate for an improvement in the quality of relief assistance.</b>
<b>Limited Self-Sufficiency</b> and possible recourse to direct extraction from the environment or need for additional external assistance.	<b>Increase access to food, shelter, NFI and other basic needs.</b>
<b>Limited Livelihood Options.</b> Community Level Assessments indicated survivors have several livelihood options, but use of these options is limited due to damage to fields, loss of productive assets and lack of seasonal or occasional employment opportunities.	<b>Expand opportunities for wage and in-kind payment labor.</b> <b>Increase assistance to rehabilitate or replace productive assets</b> (e.g., fields, boats).
<b>Charcoal and lumber production</b> from timber washed down by floods/landslides. Possible unsustainable extraction of timber if level and scale of transformation	<b>Establish a comprehensive program for lumber and charcoal production</b> using salvaged timber, including community management where possible.

<sup>4</sup> Exchanging goods for work, for instance providing soap, utensils and tools in return for labor in clearing fields.

is not limited once timber washed down by the floods has been used.	
<b>High Expectations</b> of external assistance.	<b>Provide information to survivors</b> on the availability, nature and conditions attached to disaster assistance.
<b>Issues Linked to the Environment</b>	
<b>Roads, paved or other, new and existing:</b> Whether road rehabilitation or construction will consider environmental factors, particularly mitigation of future damage from landslides and flooding.	<b>Incorporate environmental screening</b> into all road rehabilitation activities based on a principal on low impact construction. (Guidance on screening is available.)
<b>Flooding,</b> damage to damage to housing, fields, roads and other public use infrastructure. (Not an impact in all locations.)	<b>Assess the location-specific impact of flooding and identify measures which will limit similar impacts in the future.</b>
<b>Flooding:</b> Possible transport of contaminated sediment, as information on composition of sediment is lacking.	<b>Determine if sediment is contaminated</b> and take appropriate action.
<b>Wind:</b> Damage/loss of crops, land cover and infrastructure. (Not specifically noted as a problem in Community Level Assessments, although typhoons did pass through communities.)	<b>Include assessment of wind damage in planning</b> for disaster recovery. (Wind damage may have affected areas other than those most affected by flooding/landslides.)
<b>Expansion of Area or Type of Cultivation:</b> potential problem with post-disaster agricultural sector assistance.	<b>Assess any change in farming practices or areas cultivated in terms of environmental impacts.</b> Minimize or avoid negative impacts.
<b>Fishing:</b> potential for post-disaster assistance to lead to an overexploitation of aquatic resources.	<b>Assess environmental impacts from the provision of assistance to fishing sector.</b> Minimize or avoid negative impacts.
<b>Land Rights,</b> particularly for indigenous populations, but also for people who benefited from land reform and need to make payments for fields which have been damaged by flooding.	<b>Advocate for a fair and equitable resolution of land rights issues.</b> <b>Advocate for a fair solution to the question of whether disaster survivors need to continue to pay for land</b> acquired during land redistribution programs.
<b>Unique Environmental Areas</b> <sup>5</sup>	<b>Identify unique environmental areas,</b> using community input and other means, and <b>incorporate protection of these areas into recovery plans.</b>
<b>Deforestation and Poor and inadequate implementation of laws on logging/natural resources.</b>	<b>Advocate for correct implementation of exiting laws and regulations.</b> <b>Consider reforestation</b> as a component of the overall recovery effort.
<b>Limited environmental resilience and Inadequacy of resources in the future</b>	<b>Incorporate activities to increase environmental resilience and natural</b>

<sup>5</sup> Unique environmental areas are locations which are significantly different from the surrounding area (e.g., a chemical factory in the middle of a residential area) or locations which are considered special (e.g., a nature reserve) or are considered special by the local population (e.g., a sacred site).

	<b>resource availability</b> in relief and recovery activities.
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## Annexes

### **Consolidated Assessment Results**

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The following tables present a consolidation of the Organizational and Community Level Assessment results. The table immediately below provides a consolidation of the issues presented in second table following, which records the priority issues identified in each assessment.

In the case of the Organizational Level Assessment, all issues identified as priority for action were included in the second table below. In the case of the Community Level Assessment, all issues with a score (frequency) of 4 (i.e., mentioned in all four communities assessed) were listed. The exception is landslides, which are included in the table because of the significance of these events in terms of loss of life.

### **Consolidated Issues – Organizational and Community Level Assessments**

(Issues have not been prioritized)

<b>Lack of assessments</b> , or information from assessments. (Information gaps are noted elsewhere in the Organizational Level Assessment.)
<b>Large number of persons affected</b> and <b>Concentration of survivors</b> relative to total population in disaster area.
<b>Movement of people</b> to/from disaster areas.
<b>Limited Self-Sufficiency</b> and possible recourse to direct extraction from the environment or need for additional external assistance.
<b>Land Mass Movement/Landslides</b> (not an impact in all locations).
<b>Personal safety</b> , particularly with respect to the threat of future floods and landslides, but also the threat of violence against indigenous populations.
<b>Lack of adequate food supplies</b> , noted as less of an immediate problem in the Community Level Assessments, but a concern for the future due to the delay in reviving food production.
<b>Lack of sufficient shelter</b> for short and long term needs.
<b>Adequacy of Health Care</b> (noted several times). Concern is that health care will be reduced once medical teams leave the disaster affected area.
<b>Relief Supplies:</b> The equality of relief distribution, the creation of new consumption habits and additional waste generation and disposal requirements.
<b>Lack of NFI/Household resources</b> (although not clothes for the immediate future).
<b>Manner of disaster response:</b> good and bad practices
<b>Limited Livelihood Options.</b> The Community Level Assessments indicated that survivors have several livelihood options, but that the use of these options is limited due to damage to fields, loss of productive assets and lack of seasonal or occasional employment opportunities.
<b>High Expectations</b> of external assistance.
<b>Flooding</b> , particularly damage to damage to housing, fields, roads and other public use infrastructure. (Not an impact in all locations.)
<b>Flooding:</b> Possible transport of contaminated sediment, as information on composition of sediment is lacking.
<b>Wind:</b> Damage/loss of crops, land cover and infrastructure. (Not specifically noted as a problem during the Community Level Assessments, although typhoons did pass through communities.)
<b>Environmental Conditions</b> , in particular waste management; <b>Sanitation</b> , including latrines, waste treatment and transport infrastructure, and solid waste management, and <b>Limited capacity to absorb waste</b> , particularly resulting from the collection and removal of mud and other waste.

<b>Expansion of Area or Type of Cultivation:</b> potential problem with post-disaster agricultural sector assistance.
<b>Fishing:</b> potential for post-disaster assistance to lead to an overexploitation of aquatic resources.
<b>Roads, paved or other, new and existing:</b> whether road rehabilitation or construction will consider environmental factors, particularly the reduction/mitigation of future damage from landslides and flooding.
<b>Land Rights,</b> particularly an issue for indigenous populations, but also for people who benefited from land reform and need to make payments to the government for field which have been damaged by flooding.
<b>Unique Environmental Areas</b>
<b>Deforestation and Poor and inadequate implementation of laws on logging/natural resources.</b>
<b>Limited environmental resilience and Inadequacy of resources in the future</b>
<b>Charcoal and lumber production</b> from timber washed down by floods/landslides. Possible unsustainable extraction of timber if level and scale of transformation is not limited once timber washed down by the floods has been used.
<b>Wild food collection:</b> Possible unsustainable extraction

## Priority Issues Identified in Organizational and Community Level Assessments

(Not ranked or matched.)

Organizational Assessment	Community Assessment
<b>Number of persons affected</b> relative to total population in disaster area.	<b>Large number affected by the disaster</b>
<b>Self-Sufficiency:</b> After the start of the disaster, the ability of survivors to meet needs without recourse to additional direct extraction from the environment or external assistance.	<b>Concentrated survivors</b>
<b>Land Mass Movement,</b> including land slides, slumps, and other down slope movement.	<b>High expectations</b>
<b>Food:</b> Lack of adequate food supplies	<b>Inadequacy of resources in the future.</b>
<b>Shelter:</b> Short and long term needs	<b>Limited capacity to absorb waste</b>
<b>Health Care:</b> Noted twice. Issue of concern is that health care will be reduced once medical teams leave the disaster affected area.	<b>Limited environmental resilience</b>
<b>Relief Supplies:</b> Issues noted related to the equality of relief distribution, the creation of new consumption habits and waste generation and disposal.	<b>Human disease (potential problem for the future)</b>
<b>Rubble removal:</b> Issue relates to the safe disposal of mud, trees and garbage resulting from the floods and landslides.	<b>Landslides</b>
<b>Lack of assessments</b> (or information from assessments)	<b>Flooding</b>
<b>Manner of disaster response:</b> good and bad practices	<b>Shelter</b>

<b>Movement of people to/from disaster areas</b>	<b>Personal safety</b>
<b>Implementation of laws on logging/natural resources.</b>	<b>Waste management</b>
<b>Livelihood options:</b> The number of options that disaster survivors have to assure their livelihoods after the start of the disaster.	<b>Charcoal production</b>
<b>Expectations:</b> The level of assistance (local/external) which the disaster survivors expect to need to survive.	<b>Lumber production from salvaged timber</b>
<b>Flooding:</b> Damage to Infrastructure (from erosion or force of flood waters). Flood waters damage or destroy built environment, limiting operation of critical functions (e.g. safe water delivery), or increasing risk of pollution (e.g. damage to sewage treatment plant)	<b>Wild food collection</b>
<b>Wind,</b> including tornados. Damage/loss of crops, land cover and infrastructure.	<b>Low self-sufficiency</b>
<b>Environmental Conditions,</b> in particular waste management; and <b>Sanitation,</b> including latrines, waste treatment and transport infrastructure, and solid waste management.	<b>NFI/Household resources</b>
<b>Expansion of Area or Type of Cultivation.</b>	
<b>Fishing</b>	
<b>Roads, paved or other, new and existing.</b>	
<b>Flooding:</b> Erosion (water). Flood waters remove usable soil and cover usable land with sediment.	
<b>Flooding:</b> Transport of contaminated sediment. Sediment contains hazardous organic or inorganic chemicals (including high levels of salt). Secondary risk from sediment when dried after a flood. (lack of information)	
<b>Land Rights</b>	
<b>Unique Environmental Areas</b>	
<b>Deforestation</b>	

## Organization Level Assessment

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### Background

The organizational assessment summarized below was conducted at the NDCC on 16 December 2004. The assessment was facilitated by C. Kelly and included participants from the NDCC, Office of Civil Defense, Dugsong Buhay, Gawad Kalinga, CARE Philippines, Church World Service and the Department of Social Welfare and Development. The assessment took approximately 4.5 hours.

### Assessment Results

The key issues identified in the organizational level assessment are presented in the following table. The priority ratings were based on “1” indicating issues which immediately affect life, “2” indicating issues which affect survivor welfare and “3” issues which largely affect the environment but are not as high a priority for attention as the two higher categories. Also included is a recover issue, the improvement of the disaster response system in the Philippines, which was identified during the assessment.

The assessment encountered a lack of information on a number of aspects of the relief and recovery effort. This lack of information, indicated by “?” in **Rating Form 4: Negative Environmental Consequences of Relief Activities**, posed a constraint to completing the assessment. These “question” issues are listed following the **Priority Issues** table. Information to answer the questions should be secured as part of the follow-up to the assessment.

### Priority Issues – Organizational Assessment

Issue	Action
<b>Issues immediately affecting life (rated “1” during the assessment)</b>	
<b>Number of persons affected</b> relative to total population in disaster area.	Increase or adjust assistance to reduce the number of persons affected.
<b>Self-Sufficiency:</b> After the start of the disaster, the ability of survivors to meet needs without recourse to additional direct extraction from the environment or external assistance.	Improve or adjust assistance to improve survivor self-sufficiency.
<b>Land Mass Movement</b> , including land slides, slumps, and other down slope movement.	Advocacy on ways to prevent mass movement. Collect additional information on how to avoid or mitigate impacts.
<b>Food:</b> Lack of adequate food supplies	Improve food supply.
<b>Shelter:</b> Short and long term needs	Provide shelter which is safe and meets local needs.
<b>Health Care:</b> Noted twice. Issue of concern is that health care will be reduced once medical teams leave the disaster affected area.	Assure adequate health care into recovery phase.
<b>Relief Supplies:</b> Issues noted related to the equality of relief distribution, the creation of new consumption habits and waste generation and disposal.	Improve the accuracy and coverage of relief assistance. Match relief to needs and expectations.
<b>Rubble removal:</b> Issue relates to the safe disposal of mud, trees and garbage resulting from the floods and landslides.	Develop an environmentally positive rubble removal program.

<b>Lack of assessments</b> (or information from assessments)	Increase number of assessment and/or availability of information from existing assessments
<b>Manner of disaster response:</b> good and bad practices	Advocacy for promotion of good practices.
<b>Issues immediately affecting survivor welfare (rated “2” during the assessment)</b>	
<b>Movement of people to/from disaster areas</b>	Adjust assistance to increase aid and reduce movement of people from the disaster area.
<b>Implementation of laws on logging/natural resources.</b>	Advocacy for enforcement of existing laws and regulations.
<b>Livelihood options:</b> The number of options that disaster survivors have to assure their livelihoods after the start of the disaster.	Improve or expand livelihood options.
<b>Expectations:</b> The level of assistance (local/external) which the disaster survivors expect to need to survive.	Advocacy to make expectations realistic.
<b>Flooding:</b> Damage to Infrastructure (from erosion or force of flood waters). Flood waters damage or destroy built environment, limiting operation of critical functions (e.g. safe water delivery), or increasing risk of pollution (e.g. damage to sewage treatment plant)	New project and reconstruction activities.
<b>Wind,</b> including tornados. Damage/loss of crops, land cover and infrastructure.	Advocacy for disaster preparedness to avoid wind damage in the future.
<b>Environmental Conditions,</b> in particular waste management; and <b>Sanitation,</b> including latrines, waste treatment and transport infrastructure, and solid waste management.	Advocacy and actions to ensure that waste management is environmentally friendly.
<b>Expansion of Area or Type of Cultivation.</b>	Advocacy that expanded cultivation does not have a negative impact on the environment.
<b>Fishing</b>	Advocacy that aid to fishing sector does not have a negative impact on the environment.
<b>Roads, paved or other, new and existing.</b>	Advocacy that road reconstruction does not have a negative impact on the environment.
<b>Issues affecting the environment (rated “3” during the assessment)</b>	
<b>Flooding:</b> Erosion (water). Flood waters remove usable soil and cover usable land with sediment.	Project to revitalize flood-impacted productive lands.
<b>Flooding:</b> Transport of contaminated sediment. Sediment contains hazardous organic or inorganic chemicals (including high levels of salt). Secondary risk from sediment when dried after a flood. (lack of information)	Collect additional information on nature of sediment transported.
<b>Land Rights</b>	Advocacy for implementation of existing laws and reasonable solution to fee payment requirement.

<b>Unique Environmental Areas</b>	Information needed in the use, impact of storms and limitations on use during normal times to maintain unique nature.
<b>Deforestation</b>	Advocacy (for enforcement of existing laws)
<b>Recovery Issues</b>	
Improvement in disaster response systems is needed.	

## Information Gaps – Negative Environmental Consequences of Relief Activities

(Only issues for which information was insufficient during the assessment are noted. Specific issues which had been identified as not being addressed, i.e., “no” to the activity-specific question, have been removed and are covered in the preceding table.)

Activity	Questions on whether potential negative environmental consequences of activity have been addressed.
<b>Seeds<sup>6</sup>, tools and fertilizer</b>	Is the loss of agro-bio-diversity prevented?
	Is the introduction of species and varieties which are invasive or cannot be used without locally unavailable inputs avoided?
	Is damage to traditional seed management systems avoided?
	Is the potential for increased resource extraction due to availability of more effective means of farming addressed?
<b>Expansion of Area or Type of Cultivation.</b>	Is the potential for the loss of habitats and reduced bio-diversity addressed?
	Is the possibility of deforestation addressed?
<b>Fishing</b>	Is the potential for damage or destruction of habitats from fishing methods addressed?
<b>Roads, paved or other, new and existing.</b>	Are there plans and procedures designed to avoid the exploitation of new lands or increased exploitation of existing lands due to the road?
	Are procedures and plans developed to prevent flooding and drainage problems due to the road work?
	Are there plans and procedures to avoid landslides and soil erosion due to the road work?
<b>Water Supply</b>	Are there plans and procedures to avoid an increase in population density having a negative environmental impact?
<b>Sanitation, including latrines, waste treatment and transport infrastructure, and solid waste management.</b>	Is an increase in disease transmission and presence of disease vectors avoided?
<b>Health Care</b>	Is pollution from disposal of medical and other waste avoided?
<b>Creation of Small or Medium Enterprises</b>	Is unsustainable resource extraction avoided?
	Is the waste produced disposed of properly?
	Are steps taken to avoid siting enterprises in hazardous locations.
<b>Rubble removal</b>	Is the handling and disposal of rubble done in a way to avoid the creation of disease vector breeding sites, leading to increased disease levels?
	Are rubble removal efforts also clearing obstructions to existing drainage/water flow systems so that flooding and sanitation problems can be avoided?
<b>(Re)Settlement</b>	Do resettlement plans address possible negative environmental impacts due to changes in land use and bio-diversity?

<sup>6</sup> Note that food aid, if provided as whole grain, may be used as seed, and should be screened according to this section.

### **A.1.1 Assessment Forms**

The following forms were completed during the assessment.

#### **Context Statement**

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**A Provide three short paragraphs which summarize the (1) cause/s and most evident impacts of the disaster, (2) whether the weather or other conditions at the disaster site will change and if these changes will affect environmental conditions and relief needs, and (3) priority disaster relief efforts and specific programmatic areas of interest to the party completing the REA.**

The Philippines island of Luzon was hit by four severe weather events (Typhoons Unding and Yoyong and Tropical Storms Violeta and Winnie) during November and early December. The storms have resulted in an estimated 1,060 deaths and more than 400 remain missing. A total of 3.5 million individuals in 8 regions and 35 provinces were affected by the storms. The most significant damage from the storms was due to high winds, landslides and flooding, the latter two commonly associated with consequences of logging. Damage was particularly severe to housing, government and private sector buildings, roads and basic service infrastructure (water, sanitation, power and communications) and agriculture (fields and infrastructure). The three provinces are reported to be most severely affected are Aurora, Quezon and Camarines Norte. The municipalities of Real, Infanta and General Nakar considered to be the worse off locations within the disaster zone.

The weather for eastern Luzon will remain rainy for the next three to four months. There is a chance that locally significant rainfall may contribute to additional landslides and local flooding.

The Government of the Republic of the Philippines priorities for responding to the typhoons and floods over the next three months are to continue to provide basic relief assistance as needed, continue recovery activities and develop long term plans to minimize similar disasters in the future.

**B What sources are likely to be able to provide information on the environment in the area affected by the disaster?**

Local government, National Disaster Coordinating Council, Department of Environment and Natural Resources, Department of Social Welfare (check title), Social Action Centers (in affected communities). Also note that the NDCC has established a virtual coordination center (<http://www.iacoord.ndcc.gov.ph>) intended to provide a single point of information on disaster impacts and response operations.

**C Have there been, or are there currently, concerns about the release of potentially toxic substances affecting humans or the environment?**

No.

**D Are there environmentally unique sites in the disaster area and have any been (or may be) affected directly or indirectly by the disaster?**

The coastline and islands off the coast (e.g., Polillo Islands) of the affected area is considered a potentially important environmental area. The affected area includes the main water sources for Metro Manila (a tunnel providing water into the Manila system was blocked by a landslide). The affected area also is the home to indigenous populations, which have ancestral living and burial sites throughout the area.

**E Were there concerns about environmental conditions before the disaster?**

Logging and deforestation. Damage to aquatic resources and depletion of fish stocks.

**F Are there any concerns about the environmental impact of the disaster on the part of the survivors or neighboring communities?**

Concern was expressed about the impact of people migrating from the disaster affected areas to Manila and the resulting pressure on urban centers.

**G Are there any local or national laws, or donor or organizational policies and procedures which impact how environmental issues will be assessed or managed**

The Philippines was said to have a large number of laws and regulations related to the environment. However, a representative from the Department of Environment and Natural Resources was not present at the assessment meeting and additional information on these laws was not available.

It was also noted that land rights was a significant issue in the affected areas. This issue affected the indigenous populations as well as immigrants who had been allocated land under agricultural reform programs. An issue was whether those allocated land under land reform programs would have to continue to pay for the land even though it had been damaged by the floods or landslides.

### Rating Form 1: Factors Influencing Environmental Impacts

Note that priority items have been moved to the top of the table. A column on the implications of each fact has been removed to save space.

FACTOR	RATING
<b>Bolded items are considered to have a high likelihood of negative environmental impact.</b>	
<b>Number of persons affected (relative to total population in disaster area).</b>	<b>Many</b>
<b>Concentration of the affected population.</b>	<b>High</b>
<b>Self-Sufficiency: After the start of the disaster, the ability of survivors to meet needs without recourse to additional direct extraction from the environment or external assistance.</b>	<b>Low</b>
<b>Asset distribution: The distribution of economic and other assets within disaster affected population after the start of the disaster.</b>	<b>Not Equitable</b>
<b>Livelihood options: The number of options that disaster survivors have to assure their livelihoods after the start of the disaster.</b>	<b>Few</b>
<b>Expectations: The level of assistance (local/external) which the disaster survivors expect to need to survive.</b>	<b>High</b>
<b>Availability of natural resources, or whether the available natural resources meet the needs of the disaster survivors in a way which can continue without degradation to the environment or future availability of the resources.</b>	<b>Low</b>
<b>Capacity to absorb waste: The environmental, social and physical structures available to handle waste produced by the survivors.</b>	<b>Low</b>
<b>Environmental Resilience: Ability of eco-system to rebound from the disaster itself and from relief and recovery activities which cause environmental damage.</b>	<b>Low</b>
Cultural homogeneity: The similarity of cultural beliefs and practices between disaster survivors and non-affected populations.	Not high or low.
Social solidarity: Solidarity between disaster survivors and non-affected populations.	Strong
Distance disaster survivors have moved since the beginning of the disaster.	Not close or far
Duration: Time since onset of disaster.	Weeks to months

## Rating Form 2: Environmental Threats of Disasters

Note that priority items (those affecting a large area) have been moved to the top of the table.

HAZARD - Hazards as having a significant potential for negative environmental impact are in bold. Hazards not judged as present in the disaster area have been eliminated from the form.	PHYSICAL AREA AFFECTED:	INITIAL RESPONSE OPTIONS
<b>Flooding: Erosion (water). Flood waters remove usable soil and cover usable land with sediment.</b>	Large	<ul style="list-style-type: none"> <li>• Remove or protect infrastructure under threat.</li> <li>• Remove plants and other productive assets from flooded land before loss or coverage with sediment.</li> <li>• Remove sediment after flooding.</li> <li>• Specialized assistance likely needed.</li> </ul>
<b>Flooding: Damage to Infrastructure (from erosion or force of flood waters). Flood waters damage or destroy built environment, limiting operation of critical functions (e.g. safe water delivery), or increasing risk of pollution (e.g. damage to sewage treatment plant)</b>	Large	<ul style="list-style-type: none"> <li>• Replace or remove infrastructure under threat.</li> <li>• Flood-proof and decommission sites at risk.</li> <li>• Identify nature of potential or actual pollution due to flooding/flood damage and develop response plans (see above).</li> <li>• Specialized assistance likely needed for any significant response.</li> </ul>
<b>Wind, including tornados. Damage/loss of crops, land cover and infrastructure.</b>	Large	<ul style="list-style-type: none"> <li>• Short-term food and economic assistance to assist survivors until vegetation/crops recover or are replanted.</li> <li>• Assistance to replace/repair damaged infrastructure.</li> <li>• Dispose of debris in manner that does not increase air, land or water pollution.</li> </ul>
<b>Land Mass Movement, including land slides, slumps, and other down slope movement.</b> <ul style="list-style-type: none"> <li>• Direct damage to infrastructure and natural resources.</li> <li>• Direct or indirect pollution of water sources.</li> </ul>	Large	<ul style="list-style-type: none"> <li>• Remove infrastructure at risk.</li> <li>• Install containment structures and filtration systems for contaminated water.</li> <li>• Specialist assistance is likely to be required to plan response.</li> </ul>
<b>Flooding: Transport of contaminated sediment. Sediment contains hazardous organic or inorganic chemicals (including high levels of salt). Secondary risk from sediment when dried after a flood.</b>	No information	<ul style="list-style-type: none"> <li>• Identify and assess level of chemicals present.</li> <li>• Limit use of water sources with contaminated sediment and plants and animals collected from these sites.</li> <li>• Specialized technical assistance likely needed for assessment and planning.</li> </ul>

HAZARD - Hazards as having a significant potential for negative environmental impact are in bold. Hazards not judged as present in the disaster area have been eliminated from the form.	PHYSICAL AREA AFFECTED:	INITIAL RESPONSE OPTIONS
<b>Flooding:</b> Polluted Water. Water contains hazardous pathogens, or chemicals.	Small	<ul style="list-style-type: none"> <li>• Identify and assess level of pathogens or chemicals present.</li> <li>• Limit use of contaminated water and plants and animals collected from contaminated water.</li> <li>• Consider water purification to meet immediate needs.</li> <li>• Specialized technical assistance likely needed for assessment and planning.</li> </ul>
<b>Flooding:</b> Transport of contaminated solids other than sediment. Flood waters contain physical items which pose a threat, including but not limited to, animal carcasses and hazardous materials containers.	Medium	<ul style="list-style-type: none"> <li>• Quantify number and volume of solids by three threat types (animals, hazardous chemical containers, other debris).</li> <li>• Develop and publicize ways to deal with solids. Consider special collection and safety activities, and ensure safe disposal procedures and locations.</li> <li>• Specialized technical assistance likely needed for assessment and planning and in handling disposal.</li> </ul>
<b>Disease.</b> Human Mortality and morbidity reducing social and economic activity and increasing personal hardship.	Small	Disease control-related measures focusing on environmental factors such as water supply and quality, sanitation, pollution reduction and living condition (e. g., other hazards like flooding or crowded conditions). Many responses are likely to be common sense and relate to other threats to disaster survivors.
<b>Armed Conflict:</b> Unconventional warfare (including terrorism and ethnic cleansing). Disruption of normal social and economic support systems (i.e., threat to ability of populations to meet basic needs). Damage to and disruption of infrastructure systems.	Small	Development of protected systems for delivery of minimum supplies of critical items (water, food, sanitation services, health care).

### Rating Form 3: Unmet Basic Needs

Note that the priority items have been moved to the top of the table and the column of indicators deleted to reduce space.

<b>BASIC NEEDS</b>	<b>Are needs being met at present?</b> <b>ANSWER:</b> * Not met at all. * Lesser part of needs met than not met. * Greater part of needs met than not met. * Largely met. * Totally met.	<b>Will the quality or quantity of the resources used to meet this need deteriorate significantly in the next 120 days?</b>  <b>(Yes/no)</b>
<b>Food</b>	<b>Lesser</b>	<b>Yes</b>
<b>Shelter</b>	<b>Lesser</b>	<b>No</b>
<b>Waste management (liquid and solid)</b>	<b>Lesser</b>	No
<b>Environmental Conditions</b>	<b>Lesser</b>	<b>Unknown</b>
<b>Fuel</b>	<b>Lesser</b>	<b>No</b>
<b>Lighting</b>	<b>Lesser</b>	<b>No</b>
<b>Domestic Resources</b>	<b>Lesser</b>	<b>No</b>
<b>Health Care</b>	Greater	<b>Yes</b>
<b>Clothing</b>	Greater	No
<b>Transport, including road and sea access</b>	Greater	No
Personal Safety	Largely	No
Water	Greater	No

## Rating Form 4: Negative Environmental Consequences of Relief Activities

Note that activities which were not planned or underway have been removed from the form.

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
<b>Seeds<sup>7</sup>, tools and fertilizer</b>	Yes	Is the loss of agro-bio-diversity prevented?	?	<ul style="list-style-type: none"> <li>• Use local seeds where possible, procured and distributed through existing channels.</li> <li>• Limit introduction of non-local seeds to varieties tested locally and known to local users.</li> <li>• Avoid introduction of genetically modified seed varieties not already in use in the country<sup>8</sup>.</li> <li>• Provide environmental education on use of tools and develop resource extraction plan which avoids negative environmental impacts where appropriate.</li> <li>• Provide education and extension advice on use of fertilizers. Limit quantities available to actual agricultural needs.</li> </ul>
		Is the introduction of species and varieties which are invasive or cannot be used without locally unavailable inputs avoided?	?	
		Is damage to traditional seed management systems avoided?	?	
		Is the potential for increased resource extraction due to availability of more effective means of farming addressed?	?	
		Is the potential for damage to soil and water from overuse of fertilizers addressed?	No	
<b>Harvesting wild plants/fruits</b>	Yes	Are steps taken to avoid harvesting rates which exceed production capacity or reduces future production capacity?	No	Establish harvest system based on a balance between rates of extraction and regeneration.
<b>Expansion of Area or Type of Cultivation.</b>	Yes	Is the potential for the loss of habitats and reduced bio-diversity addressed?	?	<ul style="list-style-type: none"> <li>• Establish and use land use plans which take into account habitat diversity and sustainability of land use systems.</li> <li>• Re- and a- forestation programs.</li> <li>• Soil conservation activities.</li> </ul>
		Is the possibility of deforestation addressed?	?	
		Is the potential for soil erosion addressed?	No	

<sup>7</sup> Note that food aid, if provided as whole grain, may be used as seed, and should be screened according to this section.

<sup>8</sup> This option applies to food aid grain provided as whole grain.

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
<b>Fishing</b>	Yes	Is harvesting which exceeds production capacity or reduces future production capacity prevented?	No	<ul style="list-style-type: none"> <li>• Develop and follow a resource harvesting plan which assures adequate supplies for current and future needs.</li> <li>• Monitor aquatic resource use and undertake education program for resource users.</li> <li>• Limit or avoid introduction of new fish varieties and fish production methods.</li> </ul>
		Is the potential for damage or destruction of habitats from fishing methods addressed?	?	
		Is the introduction of exotic species of fish, parasites and diseases prevented?	Yes	
<b>Construction, including shelter, public buildings and infrastructure excluding roads.</b>	Yes	Are plans and procedures established to prevent scarce natural resources from being over exploited for construction activities?	Yes	<ul style="list-style-type: none"> <li>• Develop and follow resource management and land use management plans.</li> <li>• Assess hazards in area where construction will take place and change siting or methods accordingly.</li> <li>• Ensure construction methods reflect known hazards and risks and are used to reduce vulnerability.</li> </ul>
		Are plans and procedures established to ensure that the construction site is not in an area of increased hazard compared to location or conditions before disaster?	Yes	
		Are plans and procedures in place to avoid increases risk of flooding, erosion or other hazards due to the construction?	Yes	
		Do construction methods and procedures take into account the risk of disaster?	Yes	
<b>Roads, paved or other, new and existing.</b>	Yes	Are there plans and procedures designed to avoid the exploitation of new lands or increased exploitation of existing lands due to the road?	?	<ul style="list-style-type: none"> <li>• Develop and follow land use plans.</li> <li>• Limit access to roads.</li> <li>• Verify road design against flooding/drainage risk assessment.</li> <li>• Incorporate erosion mitigation measures in road construction activities.</li> </ul>
		Are procedures and plans developed to prevent flooding and drainage problems due to the road work?	?	
		Are there plans and procedures to avoid landslides and soil erosion due to the road work?	?	

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
<b>Water Supply</b>	Yes	Are increased opportunities for disease transmission avoided?	Yes	<ul style="list-style-type: none"> <li>• Establish and maintain water treatment system.</li> <li>• Design and maintain water supply structure to minimize standing water and vector breeding sites</li> <li>• Plan water provision based on anticipated need and use plan for delivery area which allows current and future needs to be met.</li> <li>• Establish water resource use plan and monitor use and supply.</li> <li>• Consider economic incentives to conserve water.</li> <li>• Use hazardous chemicals as recommended and limit inappropriate use through education.</li> </ul>
		Are there plans and procedures to avoid an increase in population density having a negative environmental impact?	?	
		Is the overuse of ground or surface water supplies avoided?	No	
		Are chemicals used to clean or purify water managed in such a way to avoid human health dangers or contamination of the environment?	Yes	
<b>Sanitation, including latrines, waste treatment and transport infrastructure, and solid waste management.</b>	Yes	Is the creation of hazardous waste sites avoided?	No	<ul style="list-style-type: none"> <li>• Establish and maintain sites for sanitary and safe waste disposal operating at international standards.</li> <li>• Limit waste movement through appropriate collection systems meeting accepted best practices.</li> <li>• Minimize opportunities for disease transmission and vectors.</li> <li>• Establish and maintain environmental monitoring program covering air, land and water pollution.</li> </ul>
		Is additional pollution of land, water and air avoided?	No	
		Is an increase in disease transmission and presence of disease vectors avoided?	?	
<b>Health Care</b>	Yes	Is pollution from disposal of medical and other waste avoided?	?	<ul style="list-style-type: none"> <li>• Establish system for safe disposal of all wastes (solid and liquid).</li> </ul>

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
		Is an increased demand for traditional medical herbs and plants which exceeds sustainable yield avoided?	Yes	<ul style="list-style-type: none"> <li>Develop a resource management plan for harvesting of local medicinal herbs and plants.</li> </ul>
Creation of Small or Medium Enterprises (SME)	Maybe Yes.	Is unsustainable resource extraction avoided?	?	<ul style="list-style-type: none"> <li>Environmental impact review performed for each enterprise supported. A simple checklist may be sufficient if a number of similar types of SME are to be supported.</li> <li>Waste disposal plans meeting appropriate standards incorporated into enterprise business plan and monitored.</li> <li>Hazards and risks of location of enterprises assessed and appropriate mitigation measures identified before support provided.</li> </ul>
		Is the waste produced disposed of properly?	?	
		Are steps taken to avoid siting enterprises in hazardous locations.	?	
Relief Supplies	Yes	Are steps taken to ensure that relief packaging does not create a solid waste disposal problem?	No	<ul style="list-style-type: none"> <li>Use biodegradable, multi-use or recyclable packaging where possible.</li> <li>Collect packaging as part of distribution program.</li> <li>Develop program of education and facilities for safe disposal of personal hygiene materials.</li> <li>Base assistance on needs assessment including survivor input.</li> <li>Don't provide inappropriate materials.</li> <li>Select assistance based on local social and economic conditions and sustainability of supply.</li> </ul>
		Are steps taken to ensure that personal hygiene materials are disposed of properly and pose no health and sanitation problem?	No	
		Are steps taken to ensure relief assistance is appropriate or acceptable to survivors and not discarded?	Yes	
		Are there procedures to ensure that relief does not create new and unsustainable consumption habits on part of survivors?	No	

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
<b>Rubble removal</b>	Yes	Is the handling and disposal of rubble done in a way to avoid the creation of disease vector breeding sites, leading to increased disease levels?	?	Develop and follow plans to recycle rubble and dispose of unusable materials in way which minimizes negative environmental impact.
		Are rubble removal efforts also clearing obstructions to existing drainage/water flow systems so that flooding and sanitation problems can be avoided?	?	
		Is rubble being recycled to that greater natural resource extraction is not necessary?	Yes	
<b>(Re)Settlement</b>	Yes	Do resettlement plans address possible negative environmental impacts due to changes in land use and bio-diversity?	?	<ul style="list-style-type: none"> <li>• Develop and follow land use plan in reconstruction and siting of settlements.</li> <li>• Conduct hazard and risk assessment of existing and new settlements sites and incorporate results into site selection, planning and construction methods.</li> </ul>
		Are assessments and mitigation procedures been used to ensure that new settlements are not subject to new or greater hazards than before disaster?	Yes	
<b>Training</b>	Yes	Are steps taken to ensure that new skills do not lead to greater extraction of resources or production of waste?	No	Include environmental education and waste management options in training programs.

## Community Level Assessment

### Background

The community assessments summarized below was conducted between 17 and 20 December in the communities of Dingalan, Real and General Nakar. These communities were considered to several of the most affected by the floods and landslides.

The assessment in Dingalan was conducted by Rachel and Peter Aquino of Mediator's Network for Sustainable Peace. The assessments in Real and General Nakar were conducted by C. Kelly with the assistance of Brother Alvin, Franciscan Order.

In addition, information collected by Christian Aid and representing the whole of the Real-Infanta-Nakar area, was used in to supplement information collected during the Real and Nakar assessments. The base data compilation from the Christian Aid assessment is available on request. The community assessments also involved discussions with Oxfam field staff working on the Infanta-General Nakar area, and Social Action Committee/Catholic church staff in the Real, Infanta and Dingalan communities.

A separate assessment was made with representatives of indigenous populations living in the General Nakar area. The assessment was conducted in Manila while the representatives from the affected areas were in the city to organize relief assistance. The assessment was facilitated by Father Peter Montillana.

Of the assessments, the one conducted in Dingalan was more in depth than the other three. The Dingalan assessment and the one involving indigenous populations closely followed the REA Community Assessment Information Collection Guide. The Real and General Nakar assessments were modified to fit available time and circumstances, as both were conducted with individuals directly involved in running relief activities. Kelly and Brother Alvin also participated in a community meeting with flood survivors organized by Oxfam near Infanta.

### Assessment Results

The following table summarized the key issues identified during the four community assessments.

Item/Question	Real	Gen. Nakar	Dingalan	Indigenous Population (Ge.. Nakar area)	Importance Ranking <sup>9</sup>
<b>Context Questions: Score Yes = 1 ("bad") or No = 0</b>					
<b>Corresponds to Sections One and Two of the Organization Level Assessment.</b>					
Did the community report environmental concerns?	1	0	1	1	3
Did the community report environmental problems?	1	0	1	1	3
Are there unique areas near the community?	1	0	1	1	3
Are a large number of persons affected by the disaster?	1	1	1	1	4
Has the disaster been going on for a long time?	0	0	0	0	0
Are the disaster survivors concentrated?	1	1	1	1	4
Have the survivors moved a great distance?	0	0	0	0	0

<sup>9</sup> The importance ranking is calculated by adding the number of similar answers based on one answer (e.g. yes) being 1 and the other 0.

Is level of self-sufficiency low?	1	1	1	1	4
Is social solidarity low?	0	0	0	0	0
Is culturally homogeneity low?	0	0	0	0	0
Are most assets concentrated with a few individuals?	0	0	0	0	0
Is livelihood base limited (not diversified)?	0	0	0	1	1
Are expectations high?	1	1	1	1	4
Will current resource use reduce adequate availability in the future?	1	1	1	1	4 (see Note 1)
Is capacity to absorb waste limited?	1	1	1	1	4
Does the environment have limited resilience?	1	1	1	1	4 (see Note 2)
<b>Disasters/Hazards, Yes = 1 ("bad") or No = 0. Corresponds to Section Three of Organization Level Assessment.</b>					
Is drought a reported problem?	0	0	0	0	0
Is wildfire a reported problem?	0	0	0	0	0
Is conflict a reported problem?	0	0	0	1	1
Is animal disease a reported problem?	-	-	-	-	-
Is human disease a reported problem?	1	1	1	1	4
Are landslides/large scale mass movements reported as a problem?	1	0	1	1	3
Is flooding reported as a problem?	1	1	1	1	4
<b>Unmet Needs No = 1 ("bad") or Yes = 0. Corresponds to Section Four of the Organization Level Assessment.</b>					
Are adequate supplies of potable water available for humans?	0	1	1	0	2
Are adequate supplies of potable water available for animals?	-	-	-	-	-
Is shelter adequate for local expectations?	1	1	1	1	4
Is food adequate?	0	1	0	0	1 (see Note 3)
Is fuel adequate?	0	0	0	0	0
Are household resources adequate?	1	1	1	1	4
Is personal safety adequate?	1	1	1	1	4
Are human health conditions adequate?	0	0	0	1	1 (see note 4)
Is waste management appropriate?	1	1	1	1	4
Is the control of insects and breeding sites adequate?	-	-	1	-	1
Are agro-chemicals used safely?	0	0	0	-	0 (see Note 5.)

<b>Community Relief/Coping Strategies.</b>		
<b>Corresponds to Section Five of the Organization Level Assessment</b>	<b>Indicate Positive (+) or Negative (-) Impact on Local Environment</b>	<b>Comments</b>
Charcoal production	+/-	Impact depends on how long charcoal making continues and what sources are being used. Short term production using debris can increase

		local income; long term production can be unsustainable.
Cutting Lumber from trees washed down by floods/landslides	+/-	Production of lumber from salvaged trees will reduce demand to cut trees over short term if lumber is used locally, or if sales finance imports of other goods. Long term impact may be an expansion of timber cutting due to increased capacities (e.g., people coming into area to cut salvage logs moving onto standing trees.) Remnants of cutting and other woody debris (e.g., branches, small logs) also need to be turned into productive resources (fencing poles, charcoal) to limit demand on standing forests.
Migration	+ (at least locally)	Reduces local demand for resources.
Wild foods	+/-	Positive or negative impact depends on scale and intensity of harvesting. Activity more specific to indigenous populations.
Clean-up work (compensated and non-compensated)	+	General impact on health and welfare should be positive, but attention is needed to where waste is deposited. Income from clean-up work can be used to address food, NFI and other needs.
Relief Assistance/Sharing	+	Strong social solidarity among survivor groups and between outsiders and survivors reduces inappropriate aid and evens-out unequal concentrations of aid (e.g., too much food provided to one community is shared with other communities).

Note 1: The answer refers to the impact of logging. The salvaging of timber washed down by the floods will take several months of deplete through conversion to sawn lumber or charcoal production.

Note 2: Respondents generally expressed concern that logging was damaging the environment and would make similar disasters more likely in the future.

Note 3: Concern was expressed in each assessment that food supplies would diminish in coming months even if supplies are considered adequate at present or for the immediate future.

Note 4: Concern was expressed in each assessment that the availability of adequate health care would diminish as "medical missions" and temporary clinics close in the coming months.

Note 5: Based on reported awareness of proper use of pesticides. Not independently confirmed.

## Dingalan Community Level Assessment

Conducted with a group of men and women (majority) who had recently received relief assistance at local Catholic church. The group came predominantly from one community affected by flooding, landslides and debris flows.

### General information

1. Date: December 17, 2004
2. Time started: 3.10pm
3. Time ended: 5.40 pm
4. Name of community: palik, dingalan, aurora
5. Persons conducting the assessment:
  - a. Facilitator: Rachel Aquino
  - b. Records: Peter Aquino
  - c. Observer: Charles Kelly
6. Distance of Community from main road: 3km from center/district capital
7. Nature of access: some road, dirt road, rocky / no road
8. Ethnic groups and religious diversity present in the community:  
Dumagat, tagalog; Iglesia ni Cristo Catholics Protestants, Methodist, Born Again Christians, Mormons, Adventist, Muslims (very few), Iglesia ng Dios, tatang (Pentecostal); Dating Daan
9. Description of the community: Rainy and windy
10. Description of the origin of the community:  
Have always been here; ever since they could remember; tagalog speakers, bicol speakers, kapampangan speakers indicate previous antecedents
11. Number of people currently living in the community:  
Paltic: 7000; 3000 voters; 11 barangays..... Dingalan 10000+
  - a. Mahogany: 900+/- individuals;
  - b. Narradeco: 37+/- families;
  - c. Kamagong: 90+/- families;
  - d. Narra: 92+/- families;
  - e. Mulawin, including Narradeco: 230+/- families;
  - f. Almaciga: 200+/- families
12. Are there people who migrated/displaced from the area?  
Yes. Manila, Bataan, Bulacan, Nueva Ecija; most of them ended up in evacuation centers
13. How does the group describe the environment in which the community is located?  
Forest cover – Sierra Madre (ipil II), Mahogany; Pasture-Mahogany (coconut grove) jackfruit, mango, mahogany  
Mahogany was beautiful before, had a nursery, houses clumped together. Narra had rows of houses, 2 roads. Now it's a desert in the last 10 years.
  - a. after Violeta—mahogany, narra, kamagong were severely affected;
  - b. after Winnie—all of the puroks including almaciga;
  - c. after Yoyong—Ormoc-like;
14. Is the community near any unique environmental areas?  
Watershed—government protected area
15. Are there any areas which the community considers as special?  
“Madilim” (dark place)—mystical place in mahogany; never logged but rattan (yantok); mainly it was the men who recounted this

16. Does the community have any specific concerns about the environment?  
Strong pacific currents, waves (recent change)
17. Does the group see the location of the community as one that is safe?  
The road was good but impassable now, former water channels are gone and have now shifted or disappeared, everywhere rocky, nowhere to plant
18. What are the rules that the community has governing the use of natural resources?  
To replant when they slash and burn
19. How does the community resolve a dispute over the use of natural resources water or other natural resources?  
Barangay dispute management/justice system; quarrels/dispute over ownership of live animals, for instance
20. Nature of livelihood system  
Fishing—1;  
Vegetable farming, slash and burn, charcoal—2;  
Trading/selling—3;  
Others include coconut farming, rattan harvesting, boat making
21. What are major means of incomes and who involve from family members? Describe major occupation in terms of importance.  
Mostly men do the above, women do laundry, selling (could include selling fish) and housekeeping
22. What are major means of incomes and who involve from family members?  
They live on a hand to mouth existence; no savings; no permanent jobs; temp jobs are usually menial
23. What are the criteria for wealth classification?  
Lack of income means both husband and wife usually do work. Men do menial temp work, women do laundry
24. Are there any development projects working with the community and what do they do?  
There was road before, but now its washed out; yakal I—shell craft-making for women (DOLE), DOLE also lent money; classroom-building initiated by Representative Angara—5 classrooms, 1 room under construction; tricycle-seed money for motorcycle, no side car; cattle dispersal by DA; DSWD also provided seed money for small scale livelihood projects
25. What disasters have affected the community in the past year?  
Flood, small scale erosion, usual pest infestations for livestock (normal), sporadic sea accident (missing and sinking), dengue, drought strong winds, earthquakes (1990) with landslides, encounter between NPAs and military—15 min. gunfire (1991)
26. Why were these events different than normal conditions?  
All out of the ordinary
27. What was the cause and impact of the disaster?  
Earthquake split the rocks and the mountain “developed cracks”; river/streams changed course; continuous rains saturated the soil; the forest was intact but there was landslide nonetheless. Despite little to no logging; some talk of timber washed away as “marked” (as trees that shouldn’t be cut)
28. What damage happened as a result? (Refers to the typhoons/storms/floods/landslides)  
In Umiray 150 deaths; Paltic 24 deaths; Mulawin / Narradeco 34 dead;  
Road non passable, houses destroyed or sunk in mud, gardens destroyed; boats destroyed
29. How many people have left the community due to the disaster, where did they go and when are they expected back?

Many went to town center or to Manila, Plan, Cabanatuan to relatives/to rent; most are expected to return when the area is rehabilitated

30. When did the disaster start and how long is it expected to continue?

The disaster is not yet finished and would go on. Never be the same again as the water level is now higher than the land level (i.e. places where they used to live)

31. Has the type of work that people do to support families changed since the start of the disaster?

Yes, mainly now they do charcoal. No more planting; now subsisting on relief goods; they feel the waste of timber is a shame

32. What has the community done to address the disaster? What coping mechanisms have been used?

They depend on rations, no livelihood, no emergency measures.

a. Violeta was totally unexpected. There was too much rain. Around 5-6pm the people were evacuated

33. Since the disaster began, how do people in the community get money and have these sources changed?

Rations only. Ask for assistance from relatives elsewhere.

34. Has the community been able to address (1) most, (2) some, (3) few of the impacts of the disaster from their own resources?

See related questions.

35. Has the community received any assistance from the government or NGOs to deal with the disaster?

Yes, gov and non-gov.

36. What kind of assistance was received?

Mostly food, utensils. They take turns cooking.

37. Was this assistance considered to be (1) a lot of assistance, (2) enough assistance, (3) just some assistance, (3) little assistance?

Little assistance but they are not going hungry or some say it depends on family size (ration inversely proportionate). Generally, they get by.

There is no overall efficient system for non-gov distribution.

38. Has this assistance (1) improved, (2) stabilized or (3) not had much impact on conditions in the community?

Improved

39. Has the assistance which has been provided caused any problems for the community? (

No impact on the environment

40. When the disaster is over, how long does the community think it will take for environmental conditions to return to normal?

Merely to look into it would take 5 years

41. How did the community get water before the disaster

Pumped well for general use. Springs for drinking. River for Laundry washing.  
Piped/distributed water indoors

42. How does the community describe the water quality before and after the disaster?

Clean. Tasted good. Now it tastes linty. Also has a fish smell. Go to river for bathing.

43. Is there enough water for everyone in the community

Not enough supply.

44. What types of shelter does the community use and has there been any change after the disaster?

Reinforced concrete, galvanized roof, hollow blocks; in mahogany, not one house is left standing

45. How did community members get materials to build a house/

Purchased—building materials

46. Does the community have any problems with shelter since the disaster?

Overcrowded evacuation shelters. Too few toilets, need to taking turns to use.

47. How did the community meet their clothing needs?

Purchased before the disaster

48. Are there any changes after the disaster?

Nothing is left. Now they subsist entirely on relief.

49. How will additional clothing be secured?

No idea.

50. How do community members get food?

Purchased and/or planted.

51. Do all the community members have enough food?

No one goes hungry. Relief is more than enough a the moment (see also response to 37)

52. How does the community get fuel for cooking and other uses

LPG, firewood, charcoal

53. Has the supply of fuel changed because of the disaster?

There is an increase in firewood fuel, good for at least 5 months.

54. Have community members lost any household resources?

Before they had TV, refs, stereos, now, they're gone.

Utensils, personal hygiene products, small things were stolen

55. How will these be replaced: sale of assets, gift, purchase, etc?

Gradually, but will take years.

56. Do people in the community have any concerns about personal safety, either in the community or when outside the community?

There has been much trauma. Inability to sleep. Anxiety about robbery, "nerves"

57. Is there adequate health care for the community?

Illnesses related to floods. Flu, colds, diarrhea, ringworms. Enough meds for this, for now.

58. Has the availability of health care changed since the disaster?

Has enough assistance from gov.

59. Is health care free, including drugs?

Some have to pay but are reimbursed arranged by DSWD, as long as you can show medical certification and receipt.

60. If health care is not free, how do community members pay the costs involved?

They borrow money

61. Does the community use latrines?

Yes

62. Are there enough latrines?

In the evacuation centers there are problems among evacuees with sharing use of latrines with others.

63. If no, why people do not have them?

Lack of water and number of people in evacuation centers-36 rooms in total

64. Is there any agro-chemicals use in the village?

Yes, for vegetables (string beans). Comes from Dept of Agriculture (DA)

65. Have agro-chemical users received training on safe use?

Training from upland farmers association, trained in turn by DA

66. Is the community aware of the dangers of excessive application of agro-chemicals

Yes, using only 2 capfuls in the sprayer

67. How would the group describe a good future for the community?

Mahogany/forests should be brought back to normal; work/livelihood; rebuild infrastructure; livelihood for women—stores; dike to protect community from landslides; water channels; infrastructure; higher houses; as long as it stays sunny, to clear the roads; electricity; restore the waterfalls; reforestation; education, the kids should be taught about environment; doctors, medicine, emergency response system should be present;

68. What suggestions do community members make as to how environmental issues in the community should be addressed?

#### Comments

Community involvement; avoiding slash and burn; cooperation and unity in protecting the environment, education

In discussions, expressed priority was for temporary shelter—small huts in a provided location.

#### **Real Community Level Assessment**

Assessment conducted primarily with Municipal Councilor in English at site of expected relief distribution.

Note that mechanism of damage was landslides originating locally, some only covering a few 000 meters and flooding from Agos river.

1. Date: 19 December 2004

2. Time Started: 1130

3. Time End: 1230 (approx)

4. Name of Community: Real

5. Person/s conducting the assessment: C. Kelly

6. Distance of community from main road and district capital:

On main road.

7. Nature of access to the community:

Paved

8. Ethnic group/s and religion diversity present in the community: --

9. Description of the community.

Tropical area on coast with limited space between shore and hillside. Generally well vegetated, with well built houses, electricity, phones and public and commercial services.

10. Description of the origin of the community:

Immigration from areas to the south.

11. Number of people currently living in the community:

See Gov. statistics.

12. Are there people who migrated/displaced from the area?

Not reported.

13. How does the group describe the environment in which the community is located?

Not reported.

14. Is the community near any unique environmental areas?

On coast.

15. Are there any areas which the community considers as special?

Not asked.

16. Does the community have any specific concerns about the environment?

Erosion, in typhoon area.

17. Does the group see the location of the community as one that is safe from floods, erosion, and other problems?

Typhoon area. People now more worried when rain falls.

18. What are the rules that the community has governing the use of natural resources?

Not indicated.

19. How does the community resolve a dispute over the use of natural resources (forest, pasture or land use) water or other natural resources?

Not indicated.

20. Nature of livelihood system:

- (1) Farming: upland and lowland
- (2) Coconut plantations
- (3) Gardens
- (4) Fishing (small scale)
- (5) Palm wine

Women are involved in truck farming and farming. Men in other tasks

Logging and charcoal making were also indicated as income sources.

21. What are major means of incomes and who involve from family members?

See above.

22. What are the criteria for wealth classification?

Most have a similar level of wealth.

23. Are families supported by only one type of work, or by several family members with different occupations?

Several.

24. Are there any development projects working with the community and what do they do?

No.

25. The community been affected by typhoons (last major in '80s). Until floods/landslides, other disasters not a problem.

26. For each type of event identified, ask whether this event was considered a disaster, that is, why was it different than normal conditions?

Not discussed.

(Following refer to landslides and floods)

27. What was the cause and impact of the disaster?

Logging and heavy rains.

28. What damage happened as a result?

Data available from gov.; included loss of life, lost of shelter from landslides and damage to fields (covered with dirt and debris/logs).

29. How many people have left the community due to the disaster, where did they go and when are they expected back?

Not indicated.

30. When did the disaster start and how long is it expected to continue?

Will take 5 years to recover.

31. Has the type of work that people do to support families changed since the start of the disaster?

Work cleaning up in Infanta and rebuilding houses. Work in fields difficult.

32. What has the community done to address the disaster?

Relief aid, aid from NGOs and family connections; self-help.

33. Since the disaster began, how do people in the community get money and have these sources changed?

Not discussed.

34. Has the community been able to address (1) most, (2) some, (3) few of the impacts of the disaster from their own resources?

Few.

35. Has the community received any assistance from the government or NGOs to deal with the disaster? (Yes/no).

Yes.

36. What kind of assistance was received?

Some food aid. (Some clothing also reported as being provided. Also medical missions providing health care.)

37. Was this assistance considered to be (1) a lot of assistance, (2) enough assistance, (3) just some assistance, (3) little assistance?

Little assistance. Worried about conditions after January when most aid is expected to end.

38. Has this assistance (1) improved, (2) stabilized or (3) not had much impact on conditions in the community?

Stabilized.

39. Has the assistance which has been provided caused any problems for the community?

None indicated.

40. When the disaster is over, how long does the community think it will take for environmental conditions to return to normal?

See above.

41. How did the community get water before the disaster: purchase, wells, cisterns, lakes, ponds etc.? Indicate more than one if needed)

Pipes, springs.

42. How does the community describe the water quality before and after the disaster?

Better before.

43. Is there enough water for everyone in the community? Compare before and after the disaster.

Yes, but sources not considered safe. (Oxfam noted that people were washing clothes and bathing near water pumps, which was contributing to sanitation problems.)

44. What types of shelter does the community use and has there been any change after the disaster? If yes, describe major changes.

Wood or cement houses before the disaster; zinc, cement or thatch roofs. Many destroyed by landslides.

45. How did community members get materials to build a house before the disaster: purchase, collect from country side, receive as gift, etc?

Purchase.

46. Does the community have any problems with shelter since the disaster? If there are problems, note what they are.

Yes. Priority need.

47. How does the community meet their clothing needs?

Purchase.

48. Are there any changes after the disaster?

People lost clothes and other belongings

49. How will additional clothing be secured: purchase, manufacture, and/or gift?

Unclear, probably combination of donation and purchase.

50. How do community members get food: own production, purchasing in market, gift etc.?

Production and purchase.

51. Do all the community members have enough food?

Generally adequate.

52. How does the community get fuel for cooking and other uses?

LPG, wood, charcoal.

53. Has the supply of fuel changed because of the disaster? If yes, describe how and why.

More wood; more charcoal being produced.

54. Have community members lost any household resources (utensils, soap for personal hygiene, bedding, tools etc.) due to the disaster?

Yes. Some all household resources, others most, some none.

55. How will these be replaced: sale of assets, gift, purchase, etc?

Not clear.

56. Do people in the community have any concerns about personal safety, either in the community or when outside the community? If yes, who is affected and why?

Worried when it rains a lot.

57. Is there adequate health care for the community?

Yes, for now.

58. Has the availability of health care changed since the disaster?

Increased.

59. Is health care free, including drugs?

Sometimes.

60. If health care is not free, how do community members pay the costs involved?

Not reported.

61. Does the community use latrines?

Yes.

62. Are there enough latrines?

Unclear.

63. If no, why people do not have them?

See above.

64. Is there any agro-chemicals use in the village? If yes, note type, sources and for what purpose the agro-chemicals are used.

Not asked.

65. Have agro-chemical users received training on safe use?

Not asked.

66. Is the community aware of the dangers of excessive application of agro-chemicals?

Not asked.

67. How would the group describe a good future for the community?

Restore good livelihoods and living conditions. Restore the environment and rehabilitate the hills, including reforestation. Secure local control over natural resources. Improve/restore food production.

Comments:

Respondents placed a priority on rehousing and shelter.

Comments indicated that immediate clothing needs were met, but there was concern about immediate and long term food supplies.

Concern also expressed about rehabilitation of fields, which are covered in mud and trees/branches/debris.

Need for seeds/root crops to plant to replace rice cultivation noted. (Area near respondent is a vegetable production area.)

**General Nakar Community Level Assessment**

Assessment conducted with head of relief operations at the Mt. Carmel school (resident in area since '91) with input from 61 year old life long resident of area (both female).

Assessment included visit to school facilities and inspection of damage due to flooding. School is distribution point for Catholic Church aid. Flooding by Agos river (Sierra Madre watershed) was main agent of damage.

1. Date: 19 Dec 2004
2. Time Started: 1515 (approx)
3. Time End: 1630 (approx)
4. Name of Community/Location: Mt. Carmel School. General Nakar
5. Person/s conducting the assessment : C. Kelly, Brother Alvin

6. Distance of community from main road and district capital: On main road, approx 10 km from Infanta

7. Nature of access to the community: paved

8. Ethnic group/s and religion diversity present in the community: Filipino

9. Description of the community.

Small town with disbursed housing (concrete block and wood), with water and power supplies. Intermixed farms and housing on edge of town.

10. Description of the origin of the community:

NA

11. Number of people currently living in the community

See gov. document.

12. Are there people who migrated/displaced from the area?

People have left to Manila after the floods.

13. How does the group describe the environment in which the community is located?

Considered good location.

14. Is the community near any unique environmental areas (e.g., national park, industrial site)?

Near river.

15. Are there any areas which the community considers as special, such as holy sites, locations of natural resources or places which are protected by tradition?

None indicated.

16. Does the community have any specific concerns about the environment?

None indicated

17. Does the group see the location of the community as one that is safe from floods, erosion, and other problems?

Had had some flooding in the past, but had affected lower part to town. People knew how to live with the floods (houses on stilts or two story).

18. What are the rules that the community has governing the use of natural resources (agriculture land, forests, pasture, water)?

Not discussed.

19. How does the community resolve a dispute over the use of natural resources (forest, pasture or land use) water or other natural resources?

Not discussed.

20. Nature of livelihood system:

Farming and fishing – equal importance and seasonal: people farm when fishing isn't possible and fish when farming tasks are not important. Crops include rice, banana, cassava and gavia (taro). Charcoal production starting. 5-10% have stable jobs.

Some migrant labor/seamen.

21. What are major means of incomes and who involve from family members? Describe major occupation in terms of importance.

22. What are the criteria for wealth classification?

Generally equal.

23. Are families supported by only one type of work, or by several family members with different occupations?

Several. See above.

24. Are there any development projects working with the community and what do they do?

None reported.

25. Disaster affecting the community:

Floods (lower part of settlement, never as bad as this flood), typhoons.

26. For each type of event identified, ask whether this event was considered a disaster, that is, why was it different than normal conditions?

Not discussed.

The following questions focus on the flooding.

27. What was the cause and impact of the disaster?

Flooding, different from past. Damage caused by depth of flood, amount of mud and debris and area affected, level of damage to buildings and irrigate rice fields, lives lost.

On day of floods, rain all day. Flood waters rose in evening (@2100) to above first floor level. Began dropping @0300 next day. People from surrounding area took shelter in second floor of school building. No warning. Lost recently harvested rice (stored below flood level) as well as material in school (e.g., library, computers, farm animals, facilities, dormitories) and damage to buildings.

28. What damage happened as a result? Describe human and material damages.

Loss of life and animals, damage to buildings and farm land, mud, trees and debris filling buildings and farm land.

29. How many people have left the community due to the disaster, where did they go and when are they expected back?

Not specified.

30. When did the disaster start and how long is it expected to continue?

With Winnie. No end projected.

31. Has the type of work that people do to support families changed since the start of the disaster?

No work. Farming difficult/impossible due to damage to fields. Fishing difficult due to losses and debris in sea.

32. What has the community done to address the disaster? What coping mechanisms have been used?

Relief aid, sharing.

33. Since the disaster began, how do people in the community get money and have these sources changed? (List sources and changes.)

No money.

34. Has the community been able to address (1) most, (2) some, (3) few of the impacts of the disaster from their own resources?

Some.

35. Has the community received any assistance from the government or NGOs to deal with the disaster? (Yes/no).

Yes. Church/NGOs and Gov.

36. What kind of assistance was received?

Food, some FNI, clothing (some), health care.

37. Was this assistance considered to be (1) a lot of assistance, (2) enough assistance, (3) just some assistance, (3) little assistance?

Little to enough.

38. Has this assistance (1) improved, (2) stabilized or (3) not had much impact on conditions in the community?

Stabilized, but more needed as people begin to recover.

39. Has the assistance which has been provided caused any problems for the community?

Considerable damage/change to the environment (damage to fields, roads, housing). No problems reported over relief.

40. When the disaster is over, how long does the community think it will take for environmental conditions to return to normal?

Disaster not over. Recovery period unclear.

41. How did the community get water before the disaster: purchase, wells, cisterns, lakes, ponds etc.? Indicate more than one if needed)

Piped.

42. How does the community describe the water quality before and after the disaster?

Good before; poor now.

43. Is there enough water for everyone in the community?

Piped supply not operating, water quality a question.

44. What types of shelter does the community use and has there been any change after the disaster?

Before: wooden or cement block buildings. Now: whatever available (note: not plastic sheeting seen).

45. How did community members get materials to build a house before the disaster: purchase, collect from country side, receive as gift, etc?

Purchase.

46. Does the community have any problems with shelter since the disaster? If there are problems, note what they are.

Yes (see #44). Shelter expressed need. Problem is cleaning out buildings covered with mud and debris. (Mud level said to be less than in Infanta, but up to 1 meter).

47. How does the community meet their clothing needs?

Purchase.

48. Are there any changes after the disaster? Describe.

Some relief (no more clothes needed for moment), people will need to purchase more clothing.

49. How will additional clothing be secured: purchase, manufacture, and/or gift?

Mostly purchase, probably some relief.

50. How do community members get food: own production, purchasing in market, gift etc.?

Purchase and production.

51. Do all the community members have enough food? If not, who is most affected by the lack of food?

Food in short supply. Can't purchase because of lack of money and lack of employment. Relief aid not yet enough, but increasing.

52. How does the community get fuel for cooking and other uses? (purchase, free collection, other means – note)

Wood, LPG.

53. Has the supply of fuel changed because of the disaster? If yes, describe how and why.  
Increased.

54. Have community members lost any household resources (utensils, soap for personal hygiene, bedding, tools etc.) due to the disaster?

Yes, some to all.

55. How will these be replaced: sale of assets, gift, purchase, etc?

Relief and purchase.

56. Do people in the community have any concerns about personal safety, either in the community or when outside the community? If yes, who is affected and why?

Yes. Fear of more floods. Spontaneous evacuation in response to rumor on previous Friday.

57. Is there adequate health care for the community?

Yes.

58. Has the availability of health care changed since the disaster?

Yes. Medical teams.

59. Is health care free, including drugs?

Some.

60. If health care is not free, how do community members pay the costs involved?

Sales of assets or borrowing.

61. Does the community use latrines? If yes, indicate their type, location and ownership.

Yes, but most are flooded or full of mud.

62. Are there enough latrines?

No.

63. If no, why people do not have them?

See #61.

64. Is there any agro-chemicals use in the village? If yes, note type, sources and for what purpose the agro-chemicals are used.

Not discussed.

65. Have agro-chemical users received training on safe use?

NA.

66. Is the community aware of the dangers of excessive application of agro-chemicals?

NA

67. How would the group describe a good future for the community?

Return to conditions before flooding, including rehabilitation of fields and facilities.

68. What suggestions do community members make as to how environmental issues in the community should be addressed?

Cleaning/clearing of debris; rehabilitate fields, flood prevention. Restoration to conditions before the flood.

Comments:

Issues of clearing flood debris, including mud and trees/timber, reestablishing fields and water supplies and shelter noted as priorities in discussions.

Conditions in community transitioning from immediate relief to longer term relief.

Considerable recovery efforts needed to return people to reliance on farming and fishing as main livelihood options.

Need expressed for seedlings and seeds for vegetable and root crops and possibly maize.

Rice production not considered possible until fields cleared and irrigation systems reestablished.

Note: Same comments for Real.

Note: Also mentioned in community relief planning meeting in Infanta where expressed priorities were water, rehab of ag production capacity and temporary shelter.

**Indigenous Population Community Level Assessment (General Nakar area)**

1. Date: 16 December 2004

2. Time Started: 1800

3. Time End: 1910

4. Name of Community: Not specified – assessment was with representatives of indigenous populations living in up-land areas near General Nakar.

5. Person/s conducting the assessment: C. Kelly

6. Distance of community from main road and district capital: Not indicated.

7. Nature of access to the community: dirt/trail

8. Ethnic group/s and religion diversity present in the community: Aita/Nigritos

9. Description of the community.

Communities located at foot to hills; groups of houses; no real towns; slash-and-burn agriculture; near rivers; affected by logging and roads.

10. Description of the origin of the community:

Originally lived by sea shore; forced inland by immigrants (lowlanders) who took ancestral lands.

11. Number of people currently living in the community:

Not indicated

12. Are there people who migrated/displaced from the area?

Some have moved to towns or Manila.

13. How does the group describe the environment in which the community is located?

Before: forest; now logged and deforested. Decrease in the number of wild animals.

Poaching by lowlanders.

14. Is the community near any unique environmental areas? Tulag cave;

15. Are there any areas which the community considers as special, such as holy sites, locations of natural resources or places which are protected by tradition?

Medical/sacred places.

16. Does the community have any specific concerns about the environment? Logging and intrusion of lowlanders; Green circle company. Title to land.

17. Does the group see the location of the community as one that is safe from floods, erosion, and other problems?

Before was safe: had slow floods. Now nature can't hold back the water and locations are unsafe.

18. What are the rules that the community has governing the use of natural resources (agriculture land, forests, pasture, water)? Is there any difference for males and females?

Have rules on use of the environment: Don't waste resources. Rituals on hunting and farming. Limits on resource use and hunting. Now things are changing.

19. How does the community resolve a dispute over the use of natural resources (forest, pasture or land use) water or other natural resources?

No problem. Avoid conflict.

20. Nature of livelihood system:

Hunting, farming, wild animals/food (rice, roots, bananas)

21. What are major means of incomes and who involve from family members?

Logging. Sharing.

22. What are the criteria for wealth classification?

Before equal. Now some rich, but generally equal.

23. Are families supported by only one type of work, or by several family members with different occupations?

Semi-nomadic; various sources of livelihoods.

24. Are there any development projects working with the community and what do they do?

No.

25. The community has been affected by

Floods, strong winds, tornados, erosion (new problem), rats/birds/wild pigs, T.B., heat wave, environmental change.

26. For each type of event identified, ask whether this event was considered a disaster, that is, why was it different than normal conditions?

Not covered.

The following focused on the typhoon/floods/landslides

27. What was the cause and impact of the disaster?

Two storms caused the disaster: Winnie and Yoyo. Previous storms didn't have the same impact, with damage from winds, strong rain, erosion. Nature couldn't take it; storms overloaded environment.

28. What damage happened as a result? Describe human and material damages.

See above. Considerable loss of housing. Note: Damage reported in gov. documents, although may be underreported for indigenous populations.

29. How many people have left the community due to the disaster, where did they go and when are they expected back?

People moved to safer locations (numbers not specified)

30. When did the disaster start and how long is it expected to continue?

With Winnie, no end in sight.

31. Has the type of work that people do to support families changed since the start of the disaster?

No work. Some IPs worked in logging, which had stopped. Others did not have regular employment.

32. What has the community done to address the disaster? What coping mechanisms have been used?

Distribute (relief) goods, sharing, data collection.

33. Since the disaster began, how do people in the community get money and have these sources changed?

Most people don't rely on money.

34. Has the community been able to address (1) most, (2) some, (3) few of the impacts?

Some to few. Need more help.

35. Has the community received any assistance from the government or NGOs to deal with the disaster? (Yes/no).

Yes.

36. What kind of assistance was received?

Church (larger part)/gov., food, NFI, restore community (efforts just started)

37. Was this assistance considered to be (1) a lot of assistance, (2) enough assistance, (3) just some.

Just some.

38. Has this assistance (1) improved, (2) stabilized or (3) not had much impact on conditions in the community?

Not clear.

39. Has the assistance which has been provided caused any problems for the community? (Prompt for impact on the environment.)

None reported.

40. When the disaster is over, how long does the community think it will take for environmental conditions to return to normal?

6 months before a harvest; considerably more time to restore nature.

41. How did the community get water before the disaster: purchase, wells, cisterns, lakes, ponds etc.?

Springs.

42. How does the community describe the water quality before and after the disaster?

Good.

43. Is there enough water for everyone in the community? Compare before and after the disaster.

Enough.

44. What types of shelter does the community use and has there been any change after the disaster? If yes, describe major changes.

Simple wood and "grass"/palm/rattan huts.

45. How did community members get materials to build a house before the disaster: purchase, collect from country side, receive as gift, etc?

Purchased wood and nails, collected rattan.

46. Does the community have any problems with shelter since the disaster? If there are problems, note what they are.

Yes. See above.

47. How does the community meet their clothing needs?

Purchase.

48. Are there any changes after the disaster? Describe.

No.

49. How will additional clothing be secured: purchase, manufacture, and/or gift?

Purchase if have money.

50. How do community members get food: own production, purchasing in market, gift etc.?

Own production, some purchases

51. Do all the community members have enough food? If not, who is most affected by the lack of food?

Ok for now. Concern about the future.

52. How does the community get fuel for cooking and other uses? (purchase, free collection, other means – note)

Wood.

53. Has the supply of fuel changed because of the disaster? If yes, describe how and why.

Increased.

54. Have community members lost any household resources (utensils, soap for personal hygiene, bedding, tools etc.) due to the disaster?

Yes.

55. How will these be replaced: sale of assets, gift, purchase, etc?

Mutual support, purchasing. Noted problems with lack of wage labor, empowerment and ways to replace logging.

56. Do people in the community have any concerns about personal safety, either in the community or when outside the community? If yes, who is affected and why?

Attack from loggers.

57. Is there adequate health care for the community?

No clinics; lack of drugs.

58. Has the availability of health care changed since the disaster?

No.

59. Is health care free, including drugs?

No.

60. If health care is not free, how do community members pay the costs involved?

Collect items from the forest to pay medical expenses.

61. Does the community use latrines? If yes, indicate their type, location and ownership (family, group of families, communal).

No.

62. Are there enough latrines?

NA

63. If no, why people do not have them?

Not custom.

64. Is there any agro-chemicals use in the village? If yes, note type, sources and for what purpose the agro-chemicals are used.

No.

65. Have agro-chemical users received training on safe use?

NA

66. Is the community aware of the dangers of excessive application of agro-chemicals?

NA

67. How would the group describe a good future for the community?

Want to go back to original state before logging and arrival of lowlanders. Want to have enough food, gov. recognition of ancestral rights to the land. Want culture and faith preserved. Want future to be good according to their culture.

Comments:

Respondents indicate concerns about drinking, quality of water, impact of "modern" food on health and welfare.

Discussions tended to focus on community rather than individual actions; and on sharing rather an acquiring personal possessions.

Noted that some IPs do work in logging and this has increased wealth for individuals.

Logging mentioned as main source of income for recovery.

Prime concerns seems to be over food, shelter and maintenance of culture.