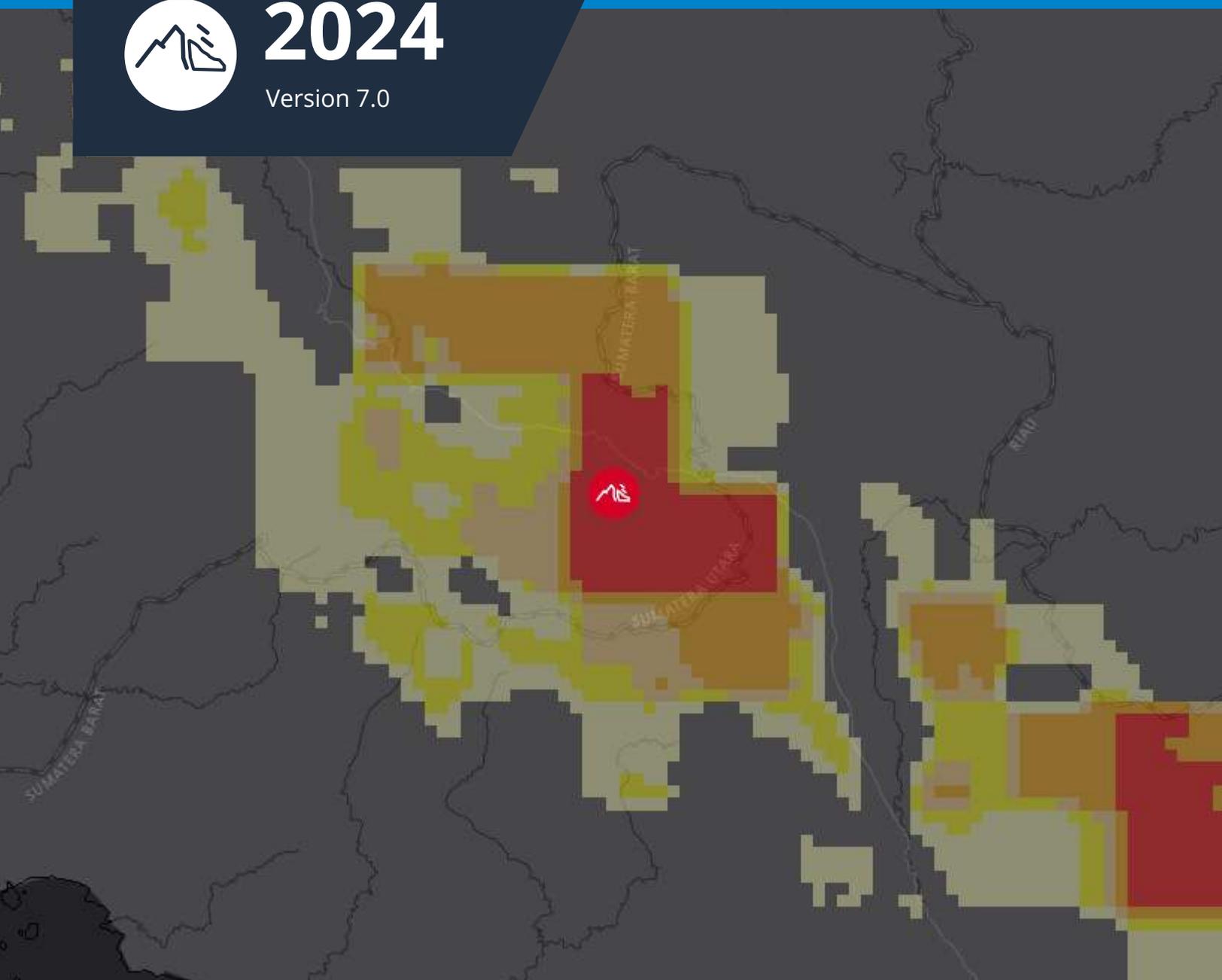

DISASTER-AWARE PRO[®]

Landslide Operations Checklist



2024

Version 7.0



Make better decisions, faster.

DISASTER AWARE PRO

Landslide Operations Checklist

Hazards can occur anywhere, and at anytime, requiring fast and effective decision making to protect lives and livelihoods. This procedural checklist is designed to assist emergency and disaster management practitioners in utilizing PDC's DisasterAWARE Pro system to plan for and respond to landslide hazard events. It provides guidance on how to use DisasterAWARE early warning and anticipatory insights to ensure effective actions are taken and how to use the system to know where a hazard is likely to occur, who will be impacted, the extent and severity of impacts, and what can be done to save lives and property.



Before using this checklist, make sure you meet the following prerequisites:

1 You are an emergency / disaster management practitioner.

This checklist is designed for emergency and disaster management practitioners who support emergency operations centers.

2 You have registered for a DisasterAWARE Pro user account.

In order to make use of this checklist you must have an active DisasterAWARE Pro user account. To register, visit <https://disasteraware.pdc.org> and create an account.

3 You have completed all DisasterAWARE tutorials and set up your Smart Alert notifications.

To understand where to access key features and functions of the system referenced in this checklist, you will have had to complete the Beginner and Advanced DisasterAWARE tutorials provided at <https://www.disasteraware.org/tutorials>.

Other helpful resources

DisasterAWARE Quick Start Guide
<https://www.disasteraware.org/quickstartguide>

DisasterAWARE Full User Guide
<https://www.disasteraware.org/userguide>

Need help?

Problems logging in?

 disaster@pdc.org

Disaster response support:

 response@pdc.org



Landslide Monitoring and Early Warning Checklist

Global landslide alerts are provided through an innovative partnership between PDC and [NASA's Earth Applied Sciences Disasters](#) program area. NASA's Landslide Hazard Assessment for Situational Awareness model (LHASA) has been integrated into PDC's ready-made, "Early Warning for All" and Risk Intelligence solution, DisasterAWARE. This includes automated landslide exposure reporting through PDC's Event Brief.

ALERT AND NOTIFICATION - NEW LANDSLIDE HAZARD IDENTIFIED

T = Time of Event

Position Responsible = To be assigned by agency

Time Elapsed (Minutes)	Trigger / Activity	Position(s) Responsible
T1+ 0:00	<input type="checkbox"/> New landslide hazard / threat identified: DisasterAWARE SmartAlert sends an alert/notification for a new landslide hazard in the designated area of responsibility (AOR), or it is identified by the emergency management organization's DisasterAWARE Pro monitoring activities. If there is knowledge of a hazard from another source and it is not shown in DisasterAWARE, contact response@pdc.org to have it added.	



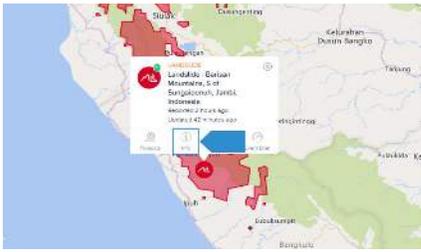
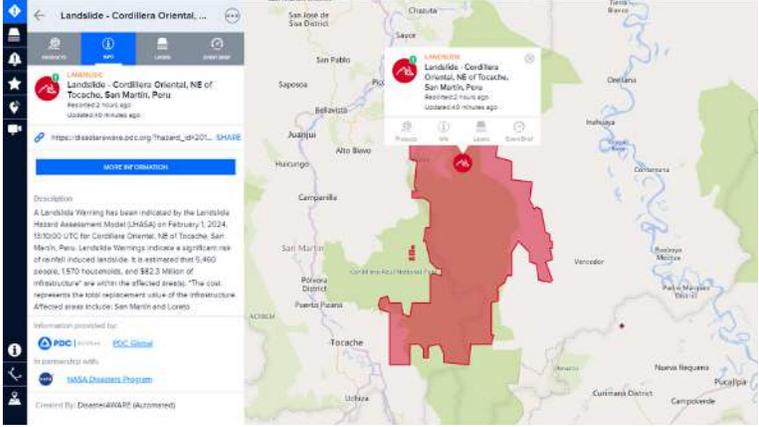
Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
1	T+ 0:05	<input type="checkbox"/> Determine hazard severity (WARNING/WATCH/INFORMATION) in DisasterAWARE via the landslide hazard icon color on the map: Note: Landslides hazards were developed in partnership with NASA and are predictive. Warning (Red): Conditions are right for a landslide to occur and may impact populations and infrastructure. There is a high likelihood that action will need to be taken. Watch (Yellow): Conditions are favorable for a landslide to occur and may impact populations and infrastructure. Monitor closely and be prepared to act if necessary. Information (Blue): A significant landslide has recently occurred with severe impacts on population or infrastructure. Agencies are responding. No additional threat is anticipated.	



Continued... ALERT AND NOTIFICATION - NEW LANDSLIDE HAZARD IDENTIFIED

T = Time of Event

Position Responsible = To be assigned by agency

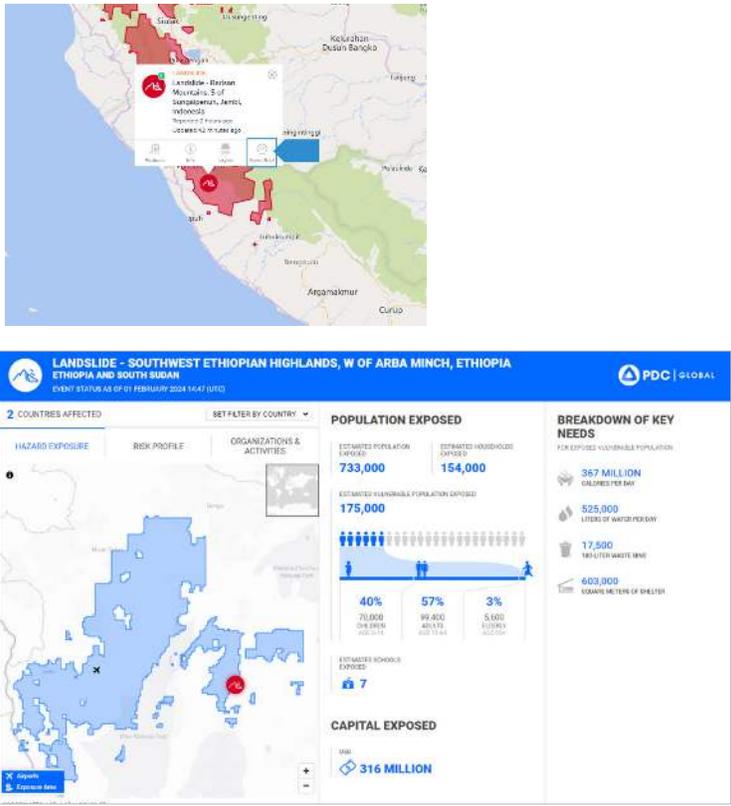
Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
2	T+ 0:20	<p><input type="checkbox"/> Review key hazard information in DisasterAWARE:</p> <p> Click on the hazard icon of interest. A hazard icon tooltip will pop-up. Click the Info link in the tooltip for the hazard description, when it was reported, last updated, and for a quick summary about the potential hazard impacts.</p> <p> Use the hazard tooltip to quickly access the following information: Number of products available, type of hazard, location of hazard, first report and updated time record, links to products, information, hazard-specific layers, and PDC's Event Brief.</p> <p>Click on the Info Icon in the hazard icon tooltip. The SmartAlert notification area will be outlined on the DisasterAWARE base map, and the Info panel will appear with a description of the landslide hazard.</p> <p></p>	



Continued... ALERT AND NOTIFICATION - NEW LANDSLIDE HAZARD IDENTIFIED

T = Time of Event

Position Responsible = To be assigned by agency

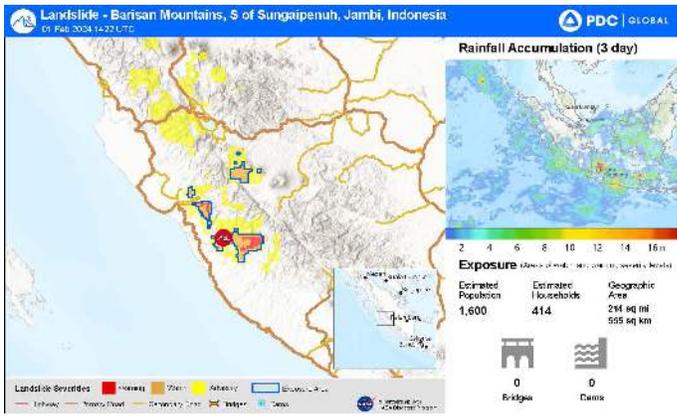
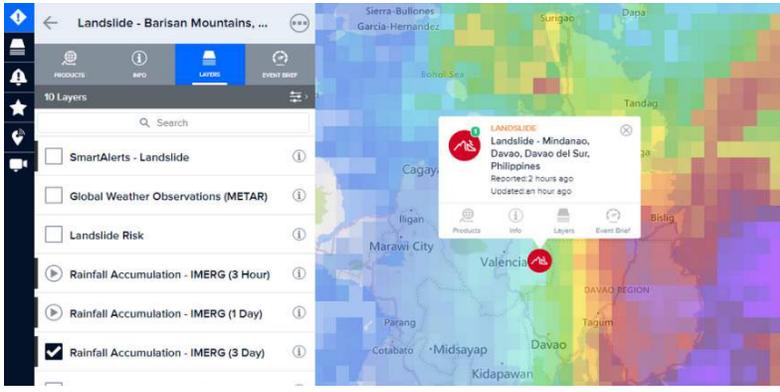
Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
3	T+ 5:00	<p><input type="checkbox"/> Review Event Brief:</p> <p>PDC's Event Brief is a hazard-specific report which routinely updates and provides the latest information on the severity and potential impacts of a hazard. Event Brief is available when the population and infrastructure exposed meet the minimum threshold for reporting. When not available, click the More Information icon in the Info panel.</p> <p> With the hazard icon tooltip visible, click the Event Brief icon.</p> <p>Event Brief</p>  <p>Event Brief will automatically load in a new browser tab. At the top of the report, the number of affected countries is shown alongside a dropdown menu that can be filtered by country. Review the following key pieces of information from the report:</p> <ul style="list-style-type: none"> • Population exposed including vulnerable groups • Potential impacts to critical infrastructure (e.g. hospitals, schools...) • Capital exposure (estimated value of exposed infrastructure) • Breakdown of potential key needs • Risk profiles • Easy access to related products • Other information such as weather and historical hazards 	



Continued... ALERT AND NOTIFICATION - NEW LANDSLIDE HAZARD IDENTIFIED

T = Time of Event

Position Responsible = To be assigned by agency

Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
4	T+ 8:00	<p><input type="checkbox"/> Review Hazard Products:</p> <p> With the hazard tooltip visible, click the Products link to review specialized hazard maps and products.</p> <p>Products</p> 	
5	T+ 15:00	<p><input type="checkbox"/> Use data to support daily operational readiness, impact assessment, and reporting:</p> <ul style="list-style-type: none"> Note receipt of the hazard alert (Information, Advisory, Watch, or Warning) in daily operations event log. With the hazard tooltip visible, click the Layer icon to turn on hazard-specific Layers layers as needed. Be sure to also check for additional relevant data in the Layers panel (left menu) to further enhance your situational awareness (e.g., terrain, weather observations, risk and vulnerability, critical infrastructure, and regional and country-specific layers). Utilize the Bookmark feature to save and share specific layers / maps with partners and senior leaders. Create drawings to add key information to be shared with partners and senior leaders. Use the Print feature to save and email/print maps or products. Use the above features and products to keep Senior Leadership informed as required by your emergency management organization's Standard Operating Procedures (SOP). 	



Continued... ALERT AND NOTIFICATION - NEW LANDSLIDE HAZARD IDENTIFIED

T = Time of Event

Position Responsible = To be assigned by agency

Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
6	T+ ...	<input type="checkbox"/> <p>Hazard monitoring:</p> <ul style="list-style-type: none"> Continue to monitor hazard impacts in AOR using DisasterAWARE Pro's automated updates, including alert level changes, Event Brief anticipated impact reports, and potential resource requirements needed for response operations. Use information in SA products as needed. Continue to update Senior Leadership as required. If authorized, upload situational awareness products as updates occur.³ Continue monitoring until the hazard expires in DisasterAWARE Pro or monitoring is no longer required. 	
7	T+ ...	<input type="checkbox"/> <p>Supervisory oversight:</p> <p>Ensure checklist tasks have been completed or are in progress as appropriate. Ensure daily operations event log is up to date with all:</p> <ul style="list-style-type: none"> Hazard and weather-related information received. Notifications and reports to Senior Leadership as required. Continue until hazard expires in DisasterAWARE Pro or monitoring is no longer required. 	

³Approved organizations only. For more information or to request a product be uploaded, contact response@pdc.org.



! HAZARD REQUIRES EMERGENCY RESPONSE ACTIVATION

T = Time of Event

Position Responsible = To be assigned by agency

Time Elapsed (Minutes)	Trigger / Activity	Position(s) Responsible
T2+ 0:00	<input type="checkbox"/> Hazard severity reaches need for Emergency Response Operation: Senior Leadership activates Emergency Response Operations as provided for by the emergency management organization's SOP.	

Action	Time Elapsed (Minutes)	Description	Position(s) Responsible
8	T+ 10:00	<input type="checkbox"/> Prepare initial incident brief: <ul style="list-style-type: none"> Review Event Brief updates and hazard layers to include in initial incident briefing materials. 	
9	T+ 20:00	<input type="checkbox"/> Conduct initial incident briefing: <ul style="list-style-type: none"> Provide initial incident brief to Incident Command/Senior Leadership. 	
10	T+ ...	<input type="checkbox"/> Monitor/gather data/report/keep records: <ul style="list-style-type: none"> Continue to monitor hazard in DisasterAWARE Pro for automatic updates, impacts in AOR, and potential resource requirements needed for response operations under changing conditions. Use information in SA products and briefings for Incident Command, Senior Leadership, the Media, etc. as needed. If authorized, upload situational awareness products as updates occur.² Continue for duration of incident. 	
11	T+ ...	<input type="checkbox"/> Incident timeline oversight: Ensure checklist tasks have been completed or are in progress as appropriate. Ensure organization records and DisasterAWARE Pro Hazard product file (as appropriate) are up to date with: <ul style="list-style-type: none"> Hazard and weather-related information received. SA products issued. Briefings for Incident Command/Senior Leadership as provided for by emergency management organization's SOP. Continue for duration of incident.	

²Approved organizations only. For more information or to request a product be uploaded, contact response@pdc.org.

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