

**Site Disturbance Record**

(Page 1 of 12)

**Protocol & Data Sheet**

(To be completed during the field visit)

Date:	Time:	<input type="checkbox"/> Control site	<input type="checkbox"/> Compared site
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Name of reporter:	Title:	River name:
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Site GPS- N:.....; E:.....; Elevation:.....

**Site Disturbances**

Please answer the following questions on some existing human activities along your rivers.

***Extracting sand and gravel***

\* If more than one site disturbance of this type, please make another entry at the end of this form.

Site name: .....

GPS point: N:.....E: .....

For example:

- People and machinery entering the river can destroy riverbank vegetation (see *General Information* above).
- These activities deepen the channel, reducing the amount of sunlight that reaches aquatic plants on the river bottom.



- Please describe what is happening?

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- Location:.....
- Distance from water quality monitoring site:.....
- Area:.....
- Date(s) of site disturbance(s):.....

**How serious is the disturbance?**

**Please tick one box.**

- Little Overall Disturbance
- Moderate Overall Disturbance
- Substantial Overall Disturbance

- In your opinion, how is this affecting your water resources (now or potentially in the future?)

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***Gold/mineral mining near your river site***

***or upstream of it***

\* If more than one site disturbance of this type, please make another entry at the end of this form.

Site name:.....

GPS point: N:.....E: .....

<p>For example:</p> <ul style="list-style-type: none"> <li>● People and machinery on the riverbanks can destroy riverbank vegetation.</li> <li>● Any poisonous substances used in mining operations can flow into the river and harm or kill aquatic organisms.</li> <li>● Humans who eat poisoned aquatic organisms can become ill.</li> <li>● Mining activities sometimes draw water from the river, which lowers its level and can harm aquatic organisms and their habitats.</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/> <hr/>	<p>- Location:.....</p> <p>- Distance from water quality monitoring site:.....</p> <p>- Area:.....</p> <p>- Date(s) of site disturbance(s):.....</p> <p><b>How serious is the disturbance?</b>  <b>Please tick one box.</b></p> <p><input type="checkbox"/> <b>Little Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Moderate Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Substantial Overall Disturbance</b></p>
<p><b><i>Development of residential/communities, schools, markets, hospitals, restaurants, road building, bridges near the riverbank</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
<p>For example:</p> <ul style="list-style-type: none"> <li>● These activities can destroy riverbank vegetation and create the problem to living aquatic life.</li> <li>● The main sites of public communities, hospitals, markets that people can release the bad pollutions in the river as well as bank erosion.</li> <li>● Road surfaces do not allow water to sink into the soil, causing water to run off the road surface and erode soil beyond the road. Runoff often carries pollutants from vehicles, such as gasoline and oil, as well as sediments.</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>- Location:.....</p> <p>- Distance from water quality monitoring site:.....</p> <p>- Area:.....</p> <p>- Date(s) of site disturbance(s):.....</p> <p><b>How serious is the disturbance?</b>  <b>Please tick one box.</b></p>


<ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>	<input type="checkbox"/> <b>Little Overall Disturbance</b> <input type="checkbox"/> <b>Moderate Overall Disturbance</b> <input type="checkbox"/> <b>Substantial Overall Disturbance</b>
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<p><b><i>Factories, power plants, /communities, schools, markets, hospitals, restaurants near the riverbank</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
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<p>For example:</p> <ul style="list-style-type: none"> <li>● These activities can destroy riverbank vegetation and aquatic life.</li> <li>● The main sites of public communities, hospitals, markets that people can release the bad pollutions in the river as well as bank erosion.</li> <li>● If there is discharge, spills</li> </ul>	
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<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>	<p>- Location:.....</p> <p>- Distance from water quality monitoring site:.....</p> <p>- Area:.....</p> <p>- Date(s) of site disturbance(s):.....</p> <p><b>How serious is the disturbance?</b>  <b>Please tick one box.</b></p> <input type="checkbox"/> <b>Little Overall Disturbance</b> <input type="checkbox"/> <b>Moderate Overall Disturbance</b> <input type="checkbox"/> <b>Substantial Overall Disturbance</b>
<ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>	


<p><b><i>Agriculture near river bank such as: garden/crop farming, livestock grazing, swidden agriculture.</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
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<p>For example:</p> <ul style="list-style-type: none"> <li>● These activities can destroy riverbank vegetation.</li> <li>● Fertilizers and pesticides used on crops can become chemical pollution in the river.</li> <li>● Humans who eat aquatic organisms poisoned by pesticides can become ill.</li> <li>● Livestock wastes can cause organic pollution in the river.</li> </ul>	
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<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul>	<p>- Location:.....</p> <p>- Distance from water quality monitoring</p>
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<p>populations of aquatic organisms.</p>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/>	<ul style="list-style-type: none"> <li>- Location:.....</li> <li>- Distance from water quality monitoring site:.....</li> <li>- Area:.....</li> <li>- Date(s) of site disturbance(s):.....</li> </ul> <p><b>How serious is the disturbance? Please tick one box.</b></p> <p><input type="checkbox"/> Little Overall Disturbance</p> <p><input type="checkbox"/> Moderate Overall Disturbance</p> <p><input type="checkbox"/> Substantial Overall Disturbance</p>
<ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/> <hr/>	

<p><b><i>Fishing intensity</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
<p>For example:</p> <ul style="list-style-type: none"> <li>● Overfishing can deplete populations of fish, which can cause other organisms to decrease or disappear.</li> </ul> <p><i>Please note: Lao rivers can accommodate a lot of fishing pressure as long as the aquatic habitats that support them are healthy.</i></p>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/>	<ul style="list-style-type: none"> <li>- Location:.....</li> <li>- Distance from water quality monitoring site:.....</li> <li>- Area:.....</li> <li>- Date(s) of site disturbance(s):.....</li> </ul> <p><b>How serious is the disturbance? Please tick one box.</b></p> <p><input type="checkbox"/> Little Overall Disturbance</p> <p><input type="checkbox"/> Moderate Overall Disturbance</p> <p><input type="checkbox"/> Substantial Overall Disturbance</p>
<ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/> <hr/>	

<p><b><i>Human sewage and solid waste</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
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For example:

- Human sewage can cause organic pollution in the river.
- Solid waste (trash, car washing and other discarded items) can get into the river and harm aquatic organisms.
- Some trash may contain toxic substances that can harm or kill aquatic organisms.
- Trash from human activities often gets into rivers. Trash can include plastic bags and other items that do not break down. If aquatic organisms swallow plastic items, they can die. Plastic items that become stuck on the riverbed can smother aquatic organisms and their habitats.



- Please describe what is happening?

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- In your opinion, how is this affecting your water resources (now or potentially in the future?)

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- Location:.....
- Distance from water quality monitoring site:.....
- Area:.....
- Date(s) of site disturbance(s):.....

**How serious is the disturbance?  
Please tick one box.**

- Little Overall Disturbance
- Moderate Overall Disturbance
- Substantial Overall Disturbance

***Boat traffic***

**Site name :.....  
GPS point: N:.....E: .....**

For example:

- People walking into and out of the river to get into a boat can destroy riverbank vegetation.
- Boats can stir up sediments on the riverbed, which can clog the gills of aquatic organisms.
- Motor boats can leak gasoline and oil into the river, causing chemical pollution.



- Please describe, what is happening?

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- In your opinion, how is this affecting your water resources (now or potentially in the future?)


- Location:.....
- Distance from water quality monitoring site:.....
- Area:.....
- Date(s) of site disturbance(s):.....


**How serious is the disturbance?  
Please tick one box.**

- Little Overall Disturbance
- Moderate Overall Disturbance
- Substantial Overall Disturbance



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<p><b><i>Bathing and washing of clothes in the river</i></b>          * If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....          GPS point: N:.....E: .....</p>
<p><b>For example:</b></p> <ul style="list-style-type: none"> <li>● These activities introduce soap and/or detergent into the river, causing chemical pollution.</li> <li>● People walking down to the river can destroy riverbank vegetation.</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?  <hr/><hr/><hr/><hr/></li> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)  <hr/><hr/><hr/><hr/></li> </ul>	<ul style="list-style-type: none"> <li>- Location:.....</li> <li>- Distance from water quality monitoring site:.....</li> <li>- Area:.....</li> <li>- Date(s) of site disturbance(s):.....</li> </ul> <p><b>How serious is the disturbance?          Please tick one box.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Little Overall Disturbance</li> <li><input type="checkbox"/> Moderate Overall Disturbance</li> <li><input type="checkbox"/> Substantial Overall Disturbance</li> </ul>
<p><b><i>Unusual animal conditions in/near River</i></b>          * If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p>Site name :.....          GPS point: N:.....E: .....</p>
<p><b>For example:</b></p> <ul style="list-style-type: none"> <li>● Dear fish or using explosives to catch fish</li> <li>● Animals, waterfowl died</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe, what is happening?  <hr/><hr/><hr/><hr/></li> <li>● In your opinion, how is this affecting your water resources (now or</li> </ul>	<ul style="list-style-type: none"> <li>- Location:.....</li> <li>- Distance from WQM site:.....</li> <li>- Area:.....</li> <li>- Date of site establishment:.....</li> </ul>

<p>potentially in the future?)</p> <hr/> <hr/> <hr/> <p><b>Please tick one in the box</b></p> <p><input type="checkbox"/> <b>Little Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Moderate Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Substantial Overall Disturbance</b></p>	
<p><b><i>Unnatural fluctuations in water level</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p><b>Site name :</b>.....</p> <p><b>GPS point: N:</b>.....<b>E:</b> .....</p>
<p><b>For example:</b></p> <ul style="list-style-type: none"> <li>● This could be due to a dam, water diversions, water withdrawals, or other human activities.</li> <li>● Low water levels can cause aquatic organisms to become stranded above the water level, where they suffocate without the dissolved oxygen contained in water. Stranded organisms are also more exposed to predators.</li> <li>● Low water slows down and warms up.</li> <li>● Low, slow water does not effectively flush out pollutants. This can degrade drinking water supplies and allow disease organisms to multiply, impacting human health.</li> <li>● High water levels can cause riverbank erosion and sedimentation downstream.</li> <li>● High water moves fast and can dislodge aquatic organisms from the river bottom.</li> <li>● Flooded rivers can pick up pollutants and trash from riverbanks.</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/> <ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/> <hr/>	<ul style="list-style-type: none"> <li>- Location:.....</li> <li>- Distance from water quality monitoring site:.....</li> <li>- Area:.....</li> <li>- Date(s) of site disturbance(s):.....</li> </ul> <p><b>How serious is the disturbance?</b>  <b>Please tick one box.</b></p> <p><input type="checkbox"/> <b>Little Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Moderate Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Substantial Overall Disturbance</b></p>
<p><b><i>Unusual physical characteristics of water resources</i></b></p> <p>* If more than one site disturbance of this type, please make another entry at the end of this form.</p>	<p><b>Site name :</b>.....</p> <p><b>GPS point: N:</b>.....<b>E:</b> .....</p>



<p><b>For example:</b></p> <ul style="list-style-type: none"> <li>● River: taste, smell, color</li> <li>● The well: taste, smell, color</li> </ul>	
<ul style="list-style-type: none"> <li>● Please describe what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/> <ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/>	<p>- Location:.....</p> <p>- Distance from water quality monitoring site:.....</p> <p>- Area:.....</p> <p>- Date(s) of site disturbance(s):.....</p> <p><b>How serious is the disturbance? Please tick one box.</b></p> <p><input type="checkbox"/> <b>Little Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Moderate Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Substantial Overall Disturbance</b></p>
<p><b>Other (please specify and insert a new entry for each different site disturbance)</b></p>	<p>Site name :.....</p> <p>GPS point: N:.....E: .....</p>
<ul style="list-style-type: none"> <li>● Please describe, what is happening?</li> </ul> <hr/> <hr/> <hr/> <hr/> <ul style="list-style-type: none"> <li>● In your opinion, how is this affecting your water resources (now or potentially in the future?)</li> </ul> <hr/> <hr/> <hr/>	<p>- Location:.....</p> <p>- Distance from water quality monitoring site:.....</p> <p>- Area:.....</p> <p>- Date(s) of site disturbance(s):.....</p> <p><b>How serious is the disturbance? Please tick one box.</b></p> <p><input type="checkbox"/> <b>Little Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Moderate Overall Disturbance</b></p> <p><input type="checkbox"/> <b>Substantial Overall Disturbance</b></p>



Sum of Points =

$$\text{Observer Score} = \frac{\text{Sum of Points}}{10 \text{ Disturbances}} =$$

<b>Site Disturbance Score Range</b>		
Little overall disturbance	Moderate overall disturbance	Substantial overall disturbance
3.0 – 2.6	2.5 – 1.7	1.6 – 1.0

*Complete a Site Sketch below.*