



Risk-based land-use guide: Safe use of land, based on hazard risk assessment

Figure 2. Land-use risk management sequence of knowledge requirements and actions

L.C. Struik<sup>1</sup>, L.D. Pearce<sup>2</sup>, F. Dercole<sup>3</sup>, J. Shoubridge<sup>4</sup>, S. van Zijl de Jong<sup>5</sup>, J.D. Allan<sup>6</sup>, N.L. Hastings<sup>7</sup>, J.J. Clague<sup>8</sup>

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<sup>2</sup> Justice Institute of British Columbia, New Westminster, British Columbia  
<sup>3</sup> District of North Vancouver, British Columbia  
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<sup>6</sup> Risk management consultant, West Vancouver, British Columbia  
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doi:10.4095/25981  
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Recommended citation  
Struik, L.C., Pearce, L.D., Dercole, F., Shoubridge, J., van Zijl de Jong, S., Allan, J.D., Hastings, N.L., and Clague, J.J., 2015.  
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Get a mandate for risk management and put together a team to make it happen



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Get a mandate for risk management and put together a team to make it happen



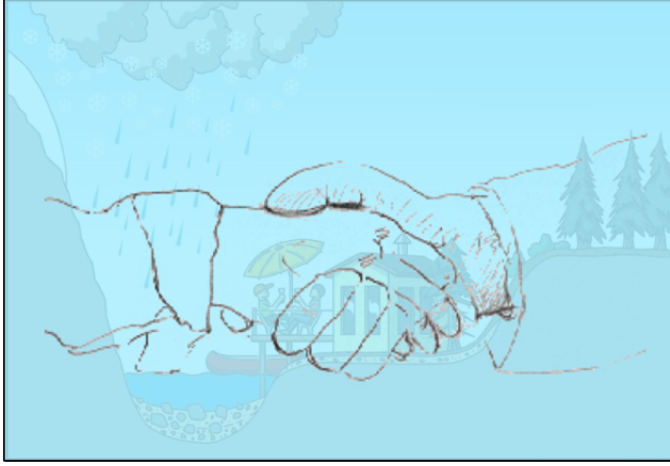
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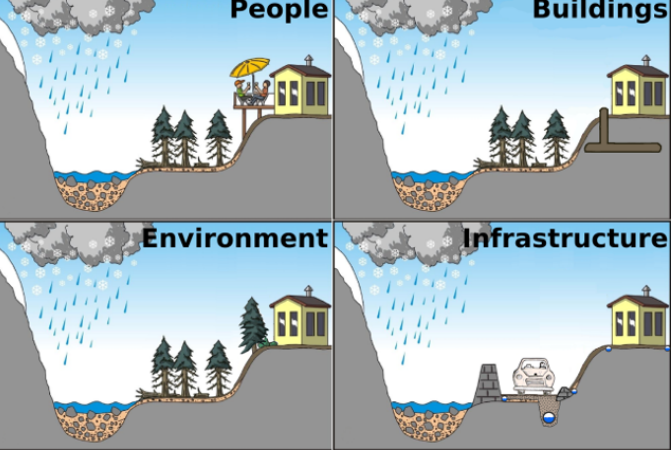
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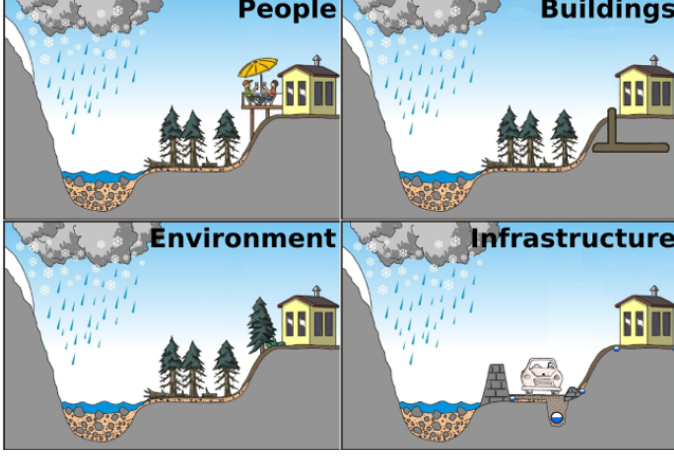
### 1.0 Establish Your Needs

1.1 Define desired outcomes and priorities



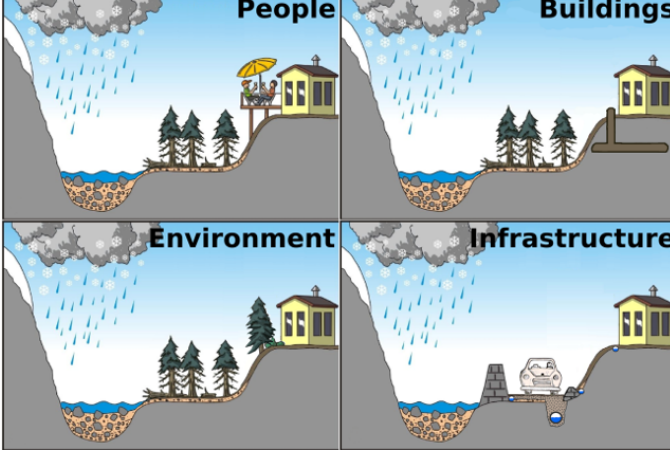
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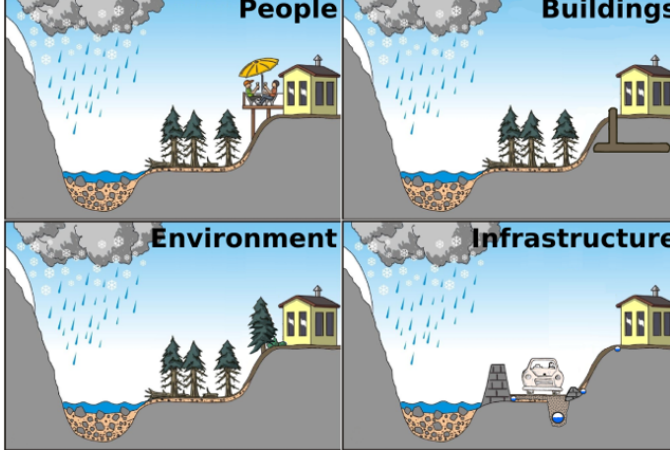
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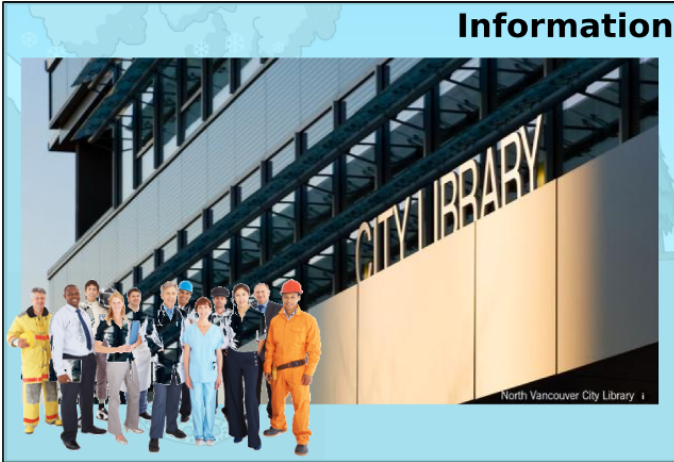
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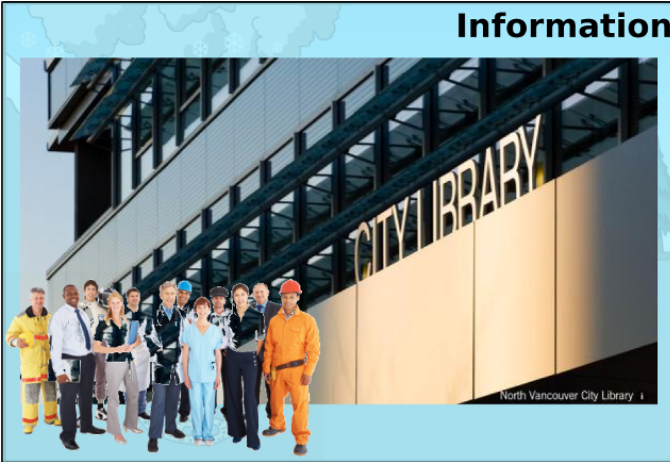
1.2 Acquire needed information and resources, including expertise, risk-reduction tools, regulations, and processes



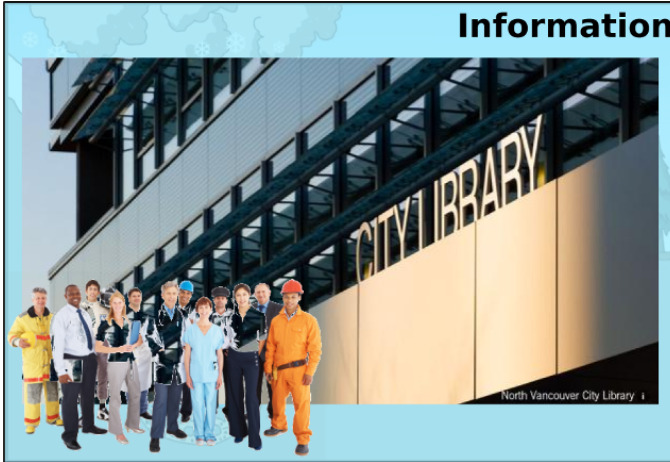
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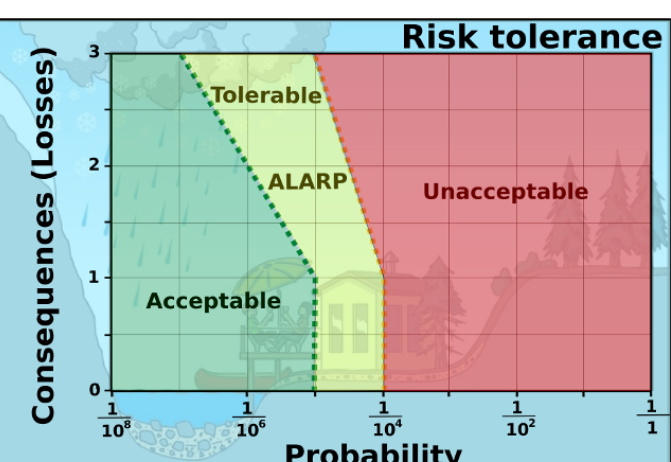
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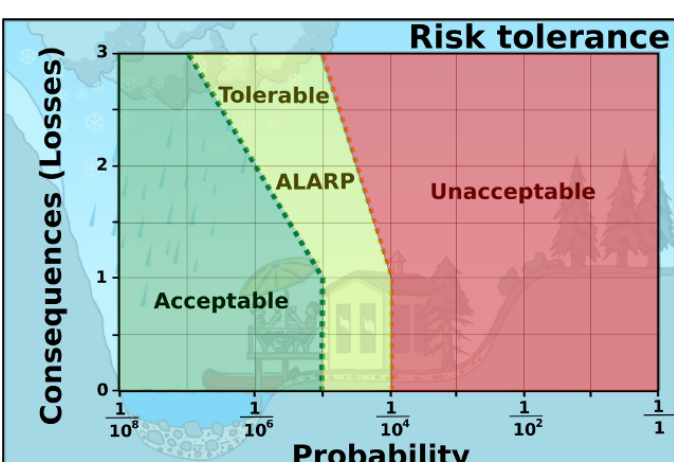
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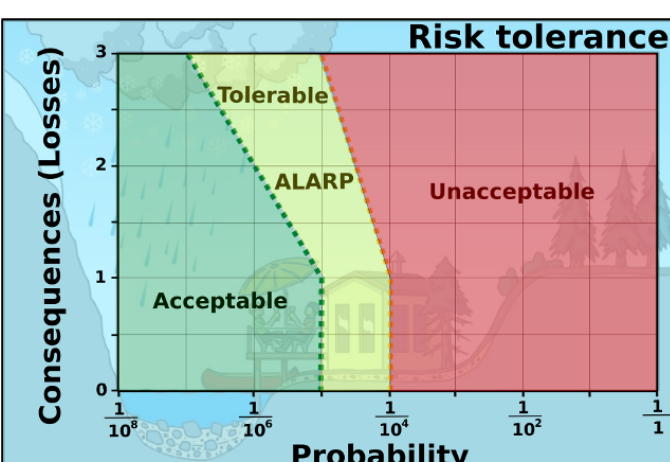
1.3 Define community tolerance for risk for each community priority



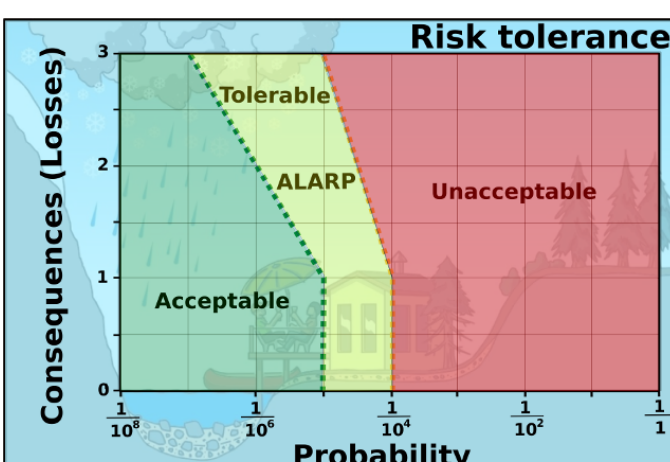
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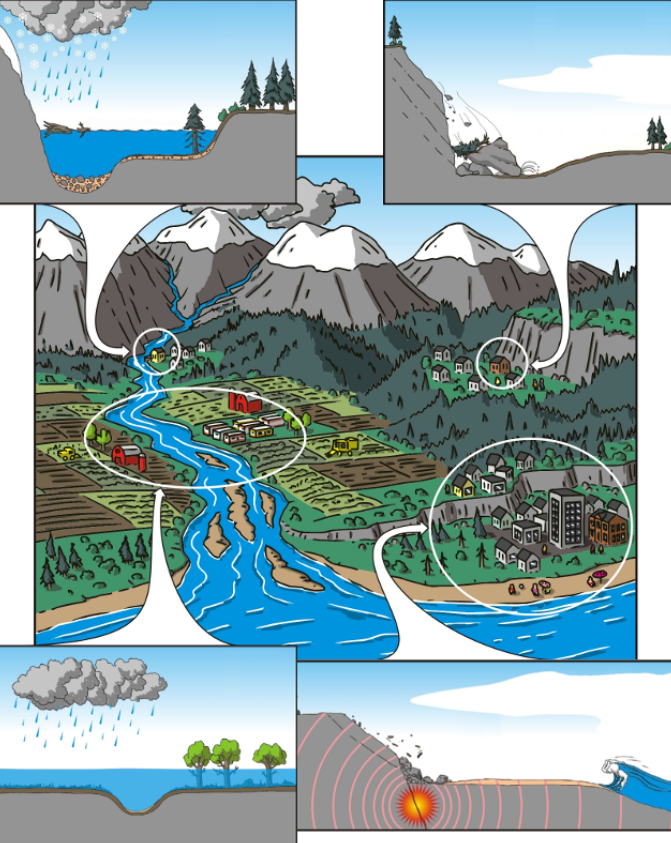


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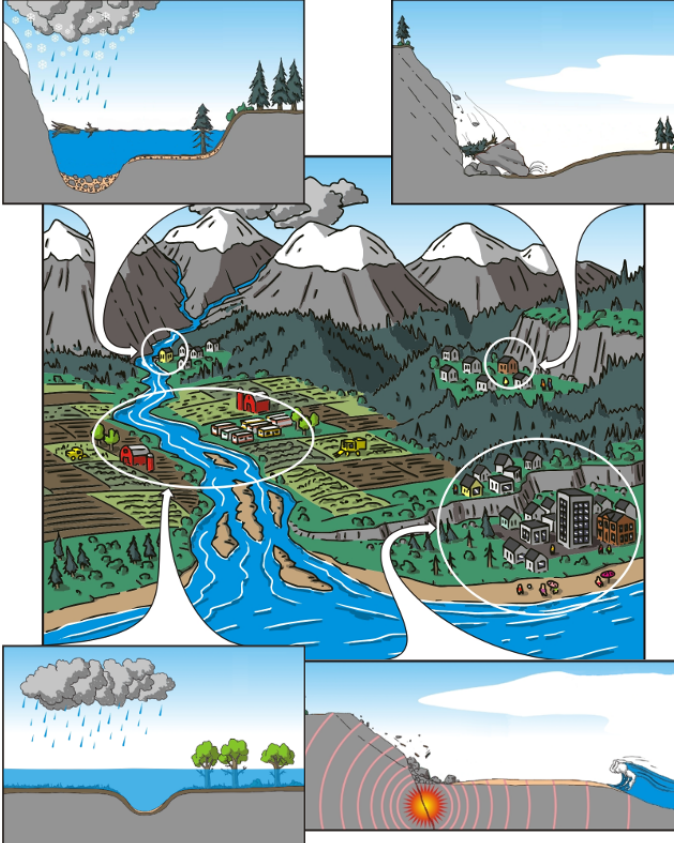
### 2.0 Define Hazard Potential

2.1 Identify hazards of concern, be they natural or man-made



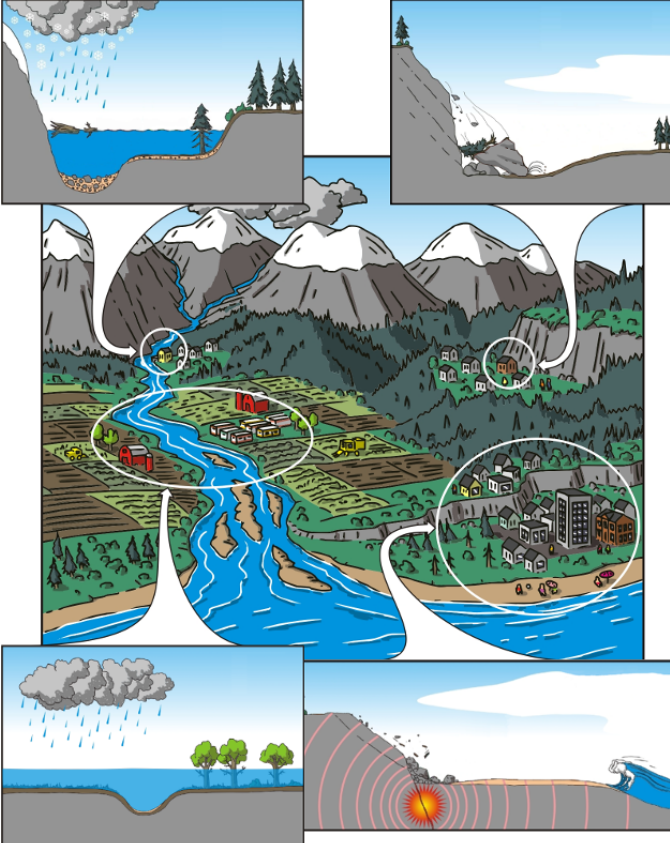
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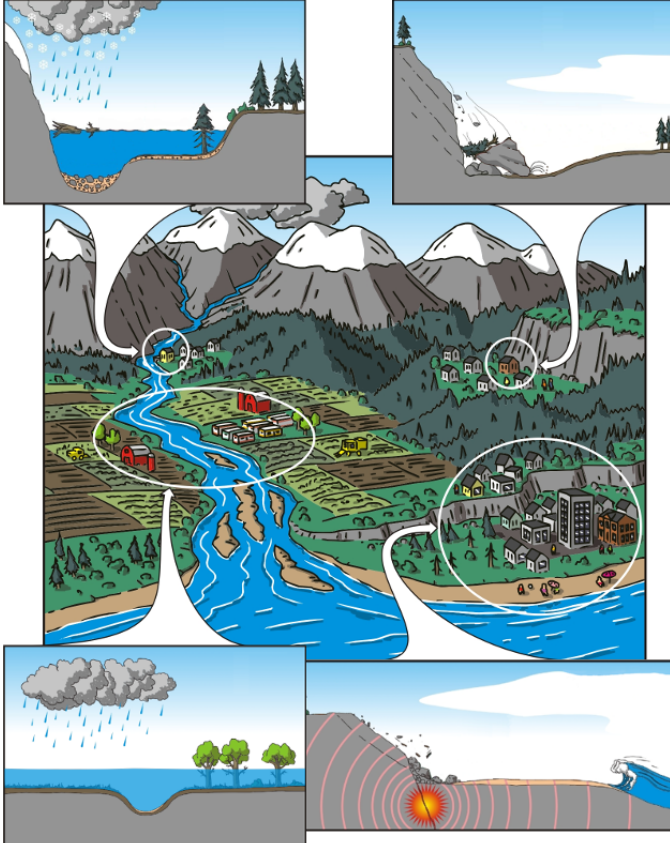
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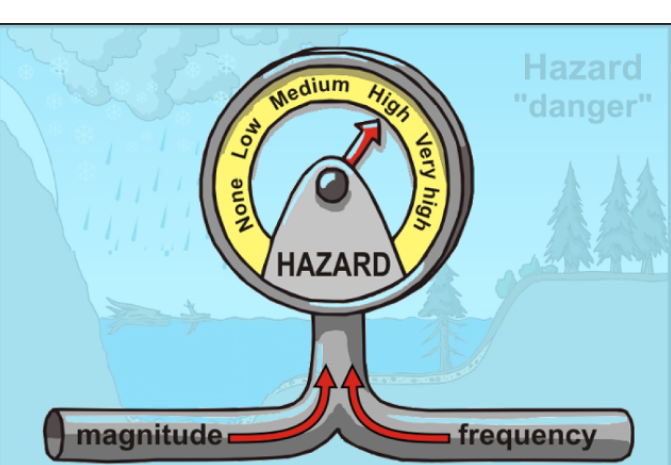


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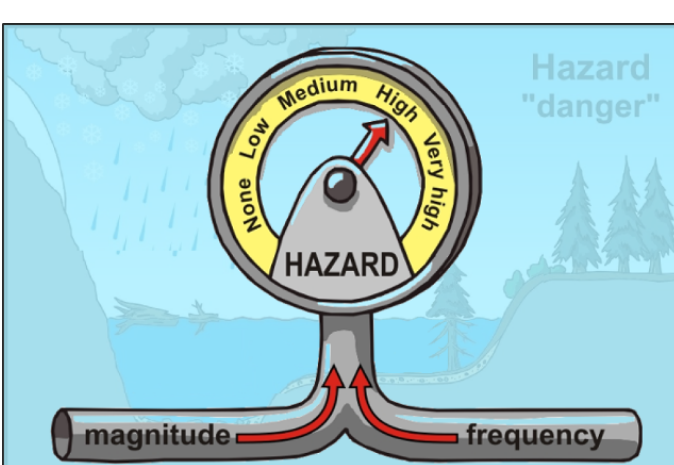
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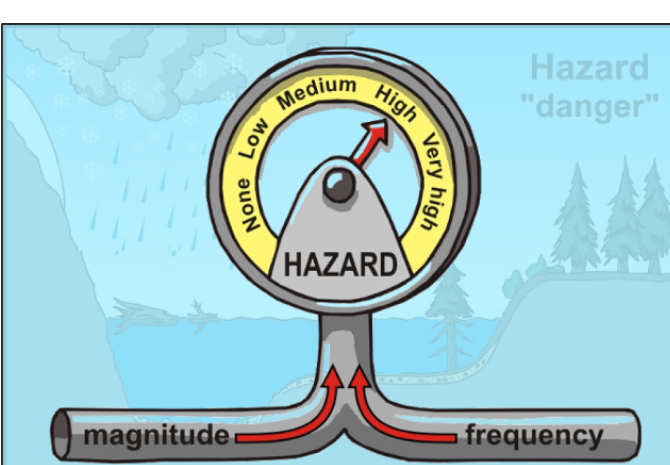
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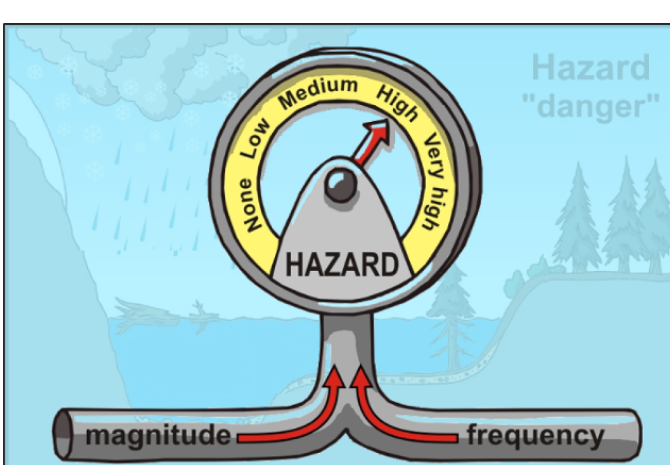
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### 3.0 Identify What Could Be Harmed

3.1 Identify the amount that people and things are exposed to the hazard



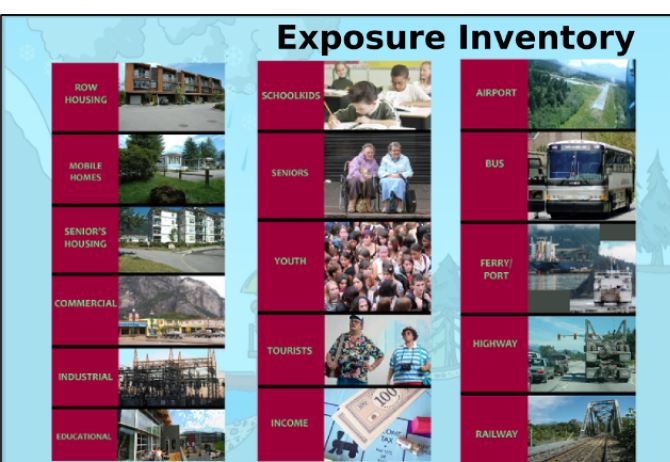
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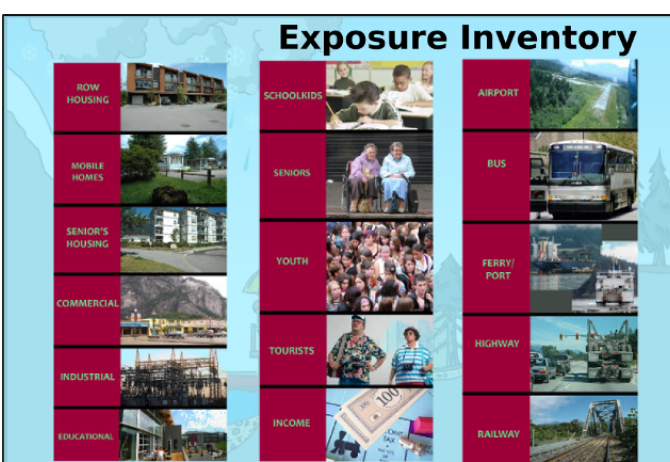
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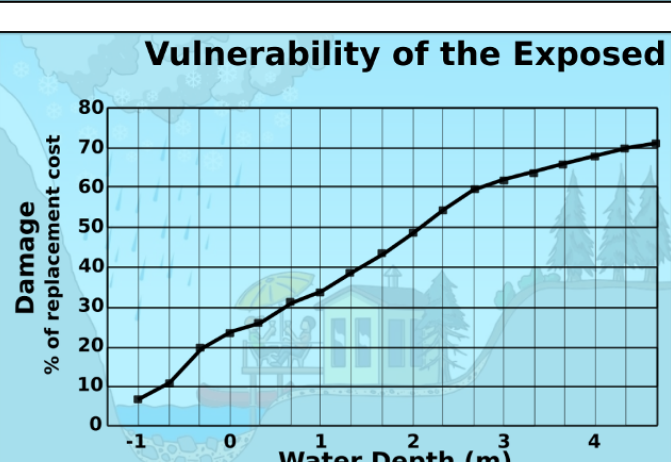


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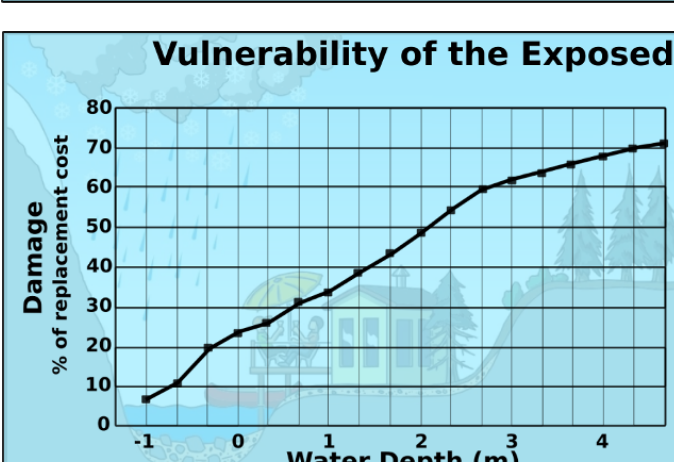
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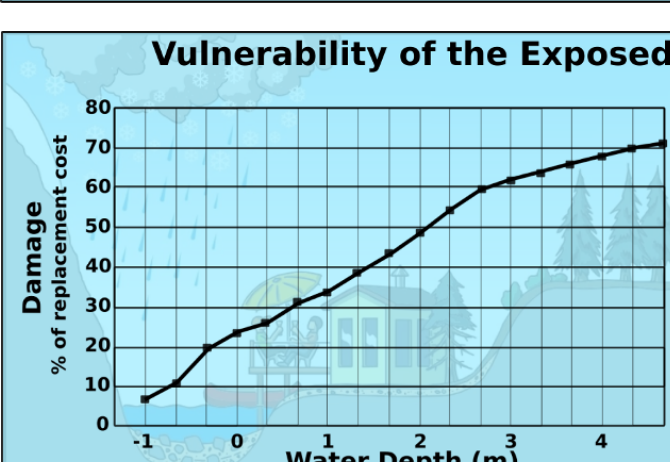
3.2 Determine how much the people and things exposed to the hazard are vulnerable to harm in a hazard event



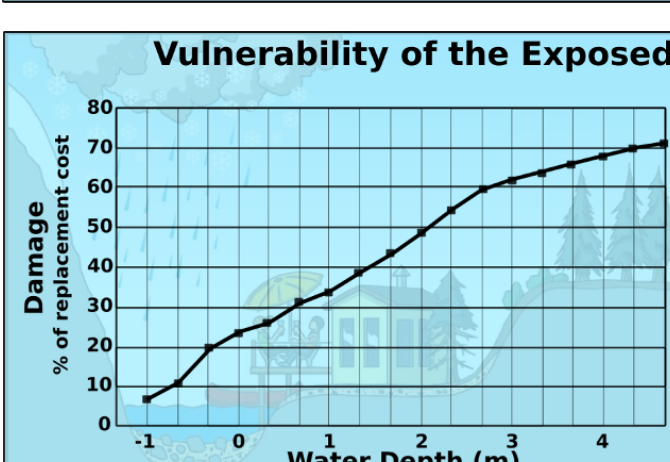
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### 4.0 Calculate Potential Losses

4.1 For probable hazards of concern, determine the amount of losses (consequences) that result from people and things exposed to a potential event



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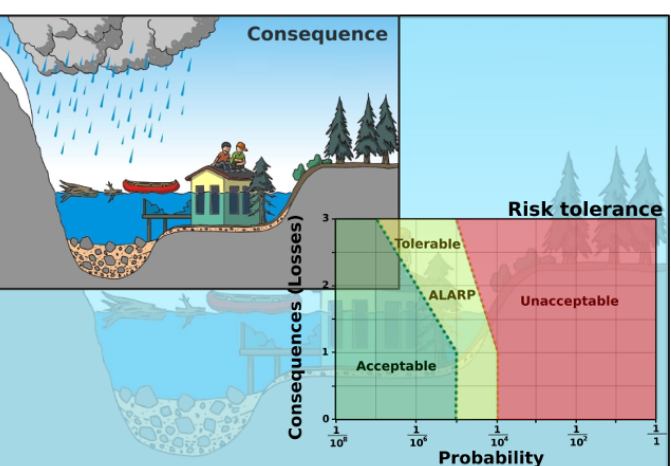
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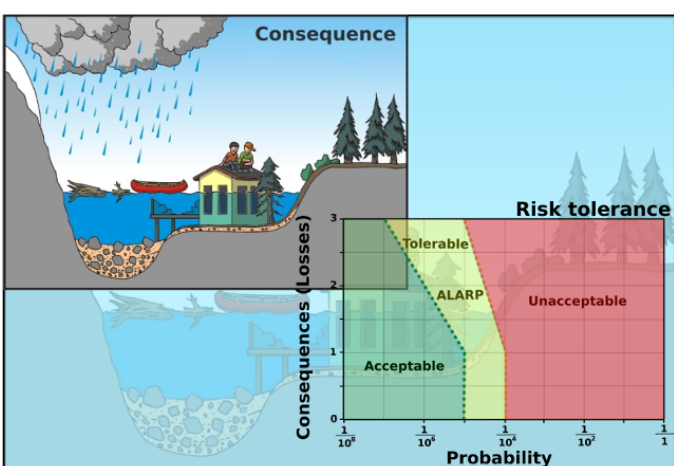
### 5.0 Recommend Safe Land-use

5.1 Evaluate if potential losses are acceptable



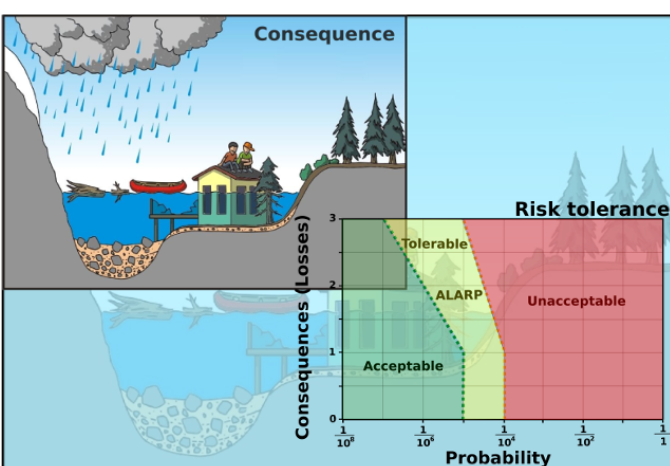
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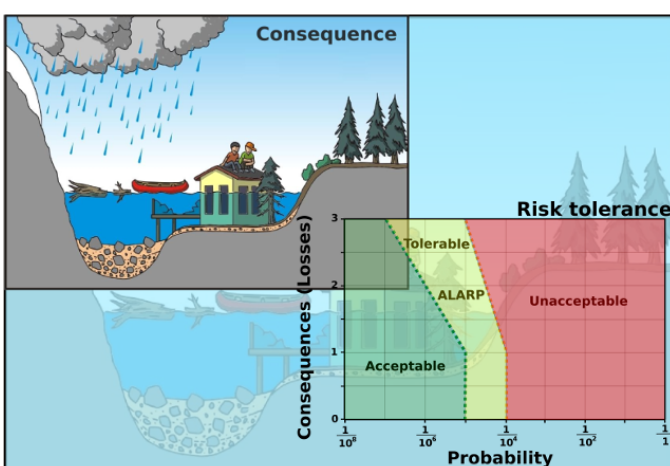
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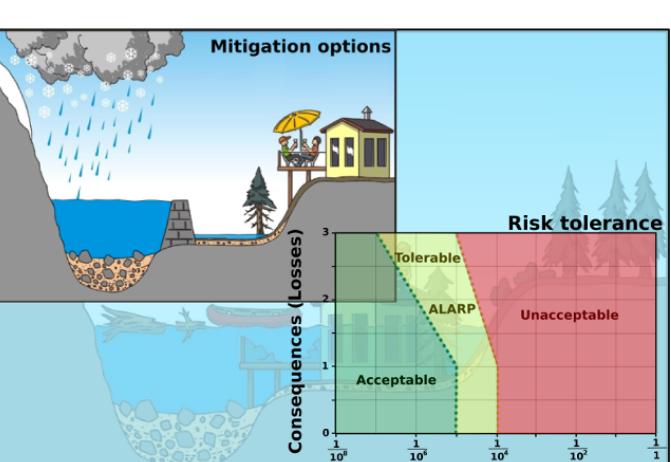


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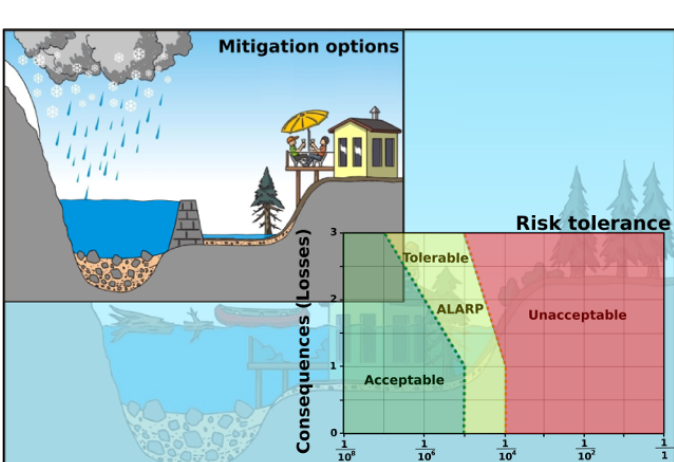
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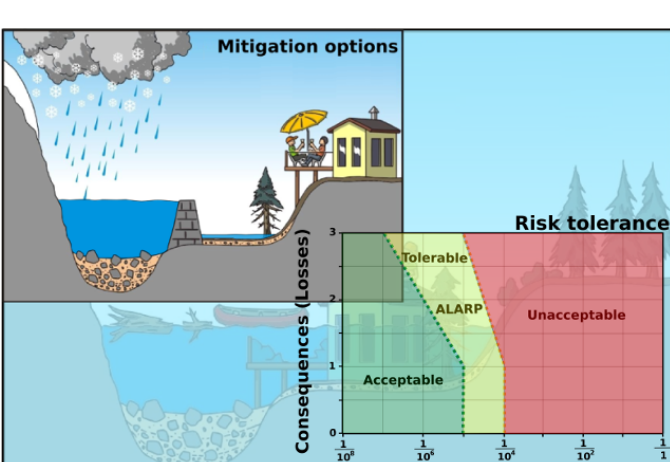
5.2 If necessary, determine how to reduce potential losses to acceptable levels, and evaluate the cost-benefit of those actions



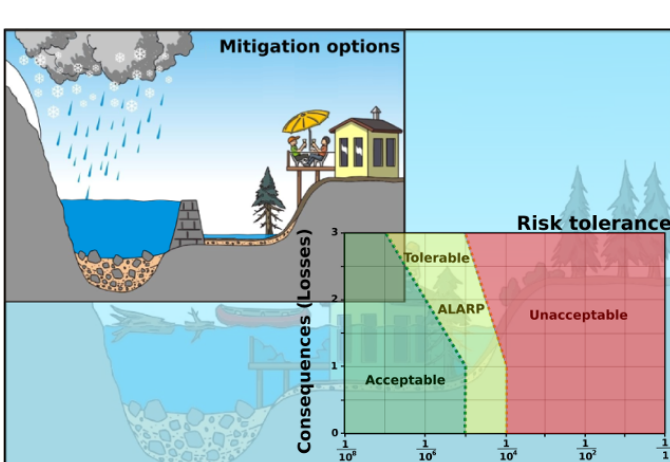
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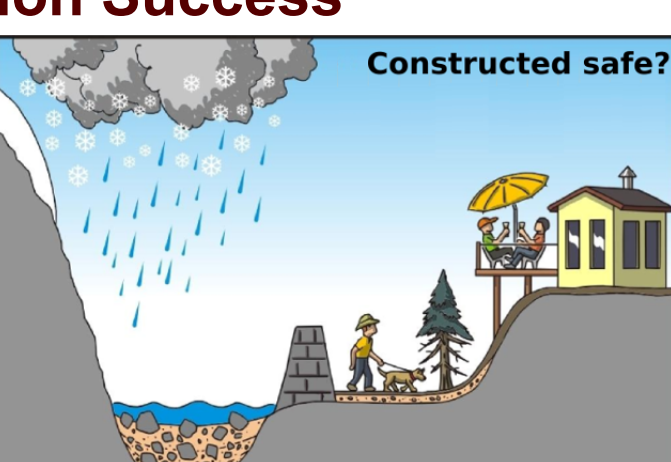


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6.1 Determine if the completed development actually has acceptable risk as planned



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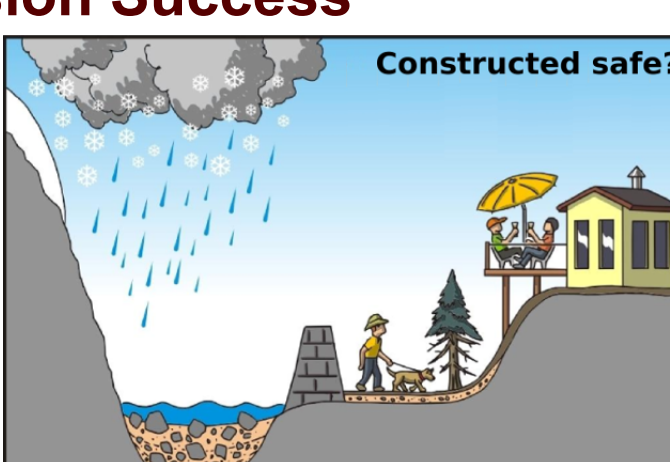
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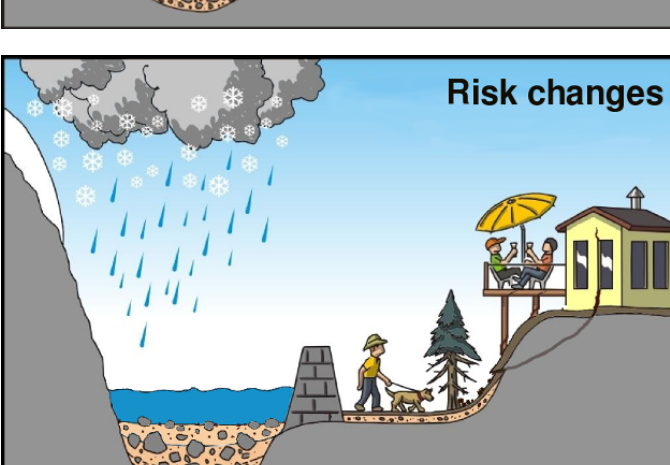
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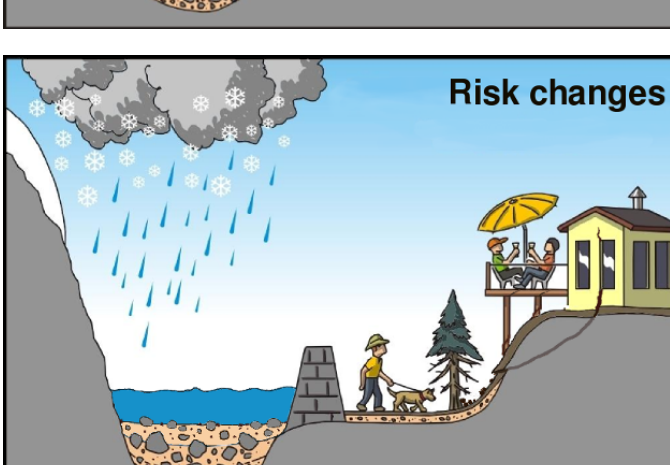
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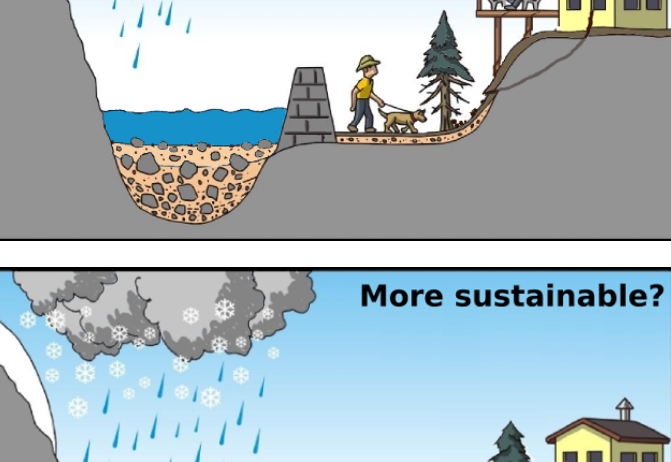
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6.3 Determine which decisions would have better achieved sustainable acceptable risk, share that knowledge, and incorporate it into future policy



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