



Root Causes Analysis

Case studies & exercises

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Causes of Problems

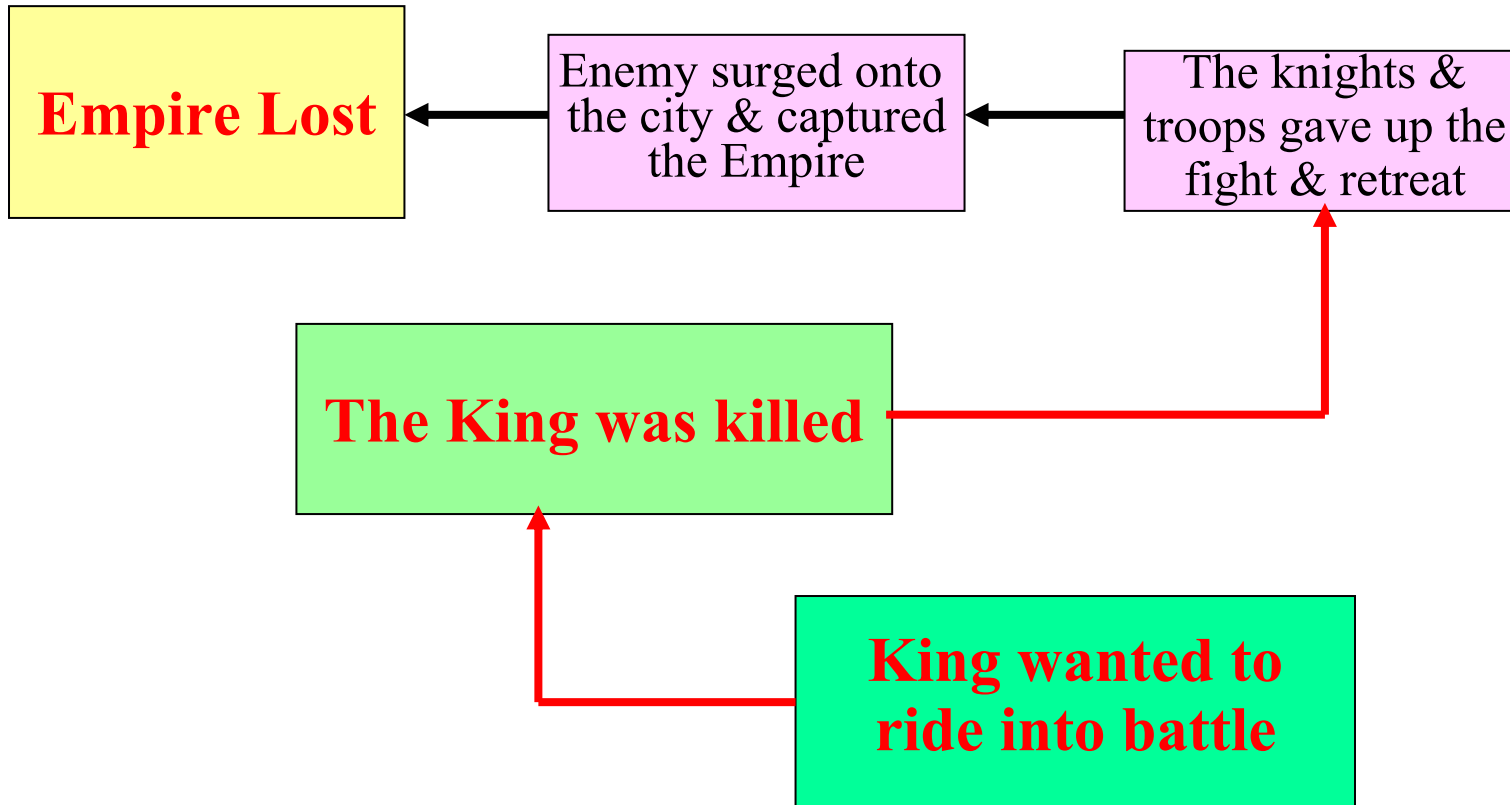
- Immediate causes (threats)
 - Root causes

If the Root Causes are not understood, efforts are wasted - by addressing only the immediate causes & never reaching the underlying root causes

→→→ problem still remains.

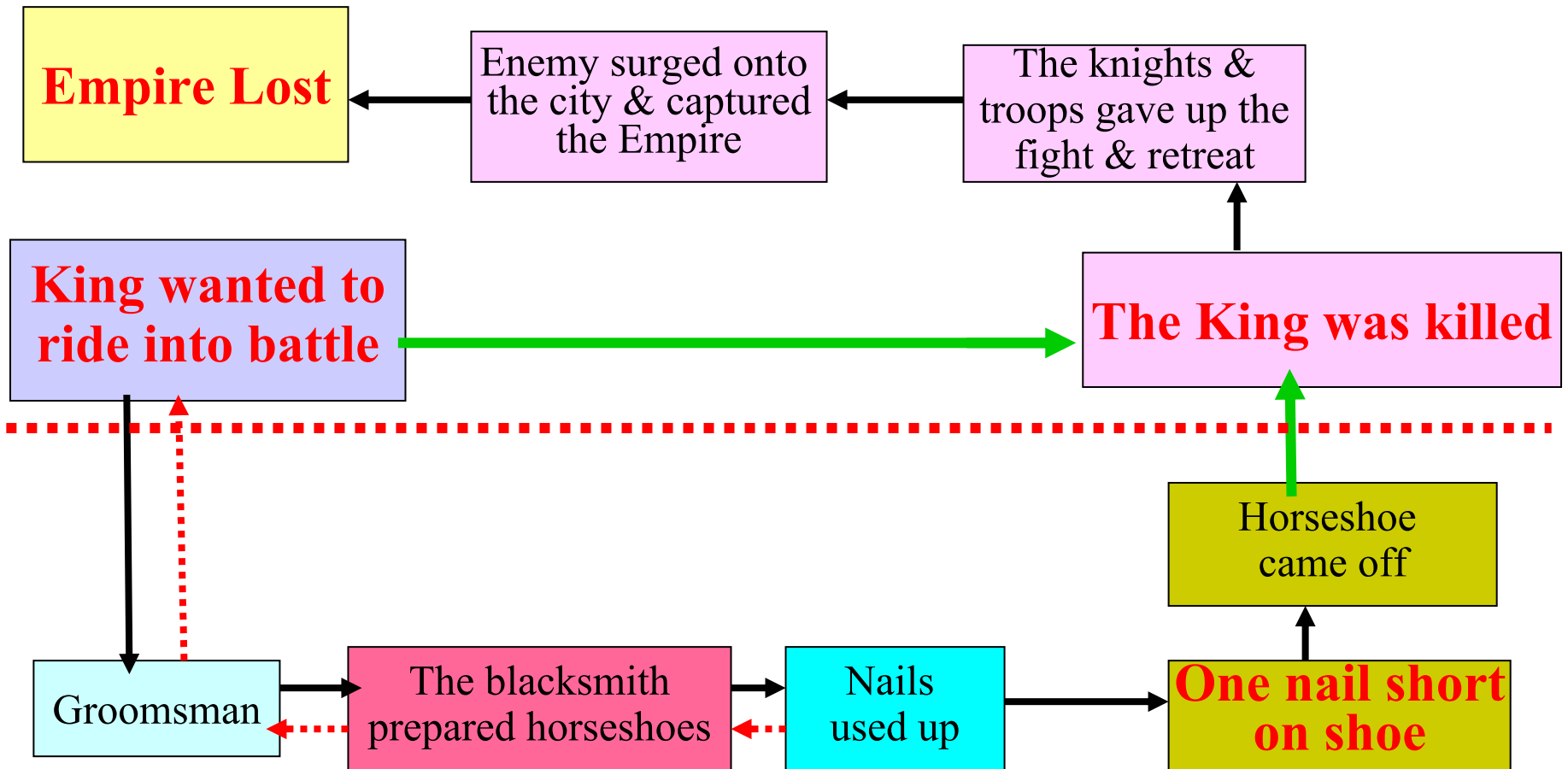
RCA Example

- Loss of the Empire



RCA example

- Loss of the Empire



RCA Example

- Situation # 1

- Plant Manager found oil on the floor;
- called & told Foreman to have Maintenance clean up the oil;
- next day(s) the situation repeated;
- Plant Manager raked Foreman for not following his directions;
- his words were to either get the oil cleaned up OR to find a new Foreman that would.

Example

• Situation # 2

- Plant Manager found oil on the floor;
- called & asked Foreman WHY ?;
- Foreman indicated there was a leaky pipe joint;
- Plant Manager asked WHY ? and when the joint had been replaced;
- Foreman responded that Maintenance installed joints over the past few weeks and each one seemed to leak and Maintenance had been talking to Purchasing;
- Plant Manager then went to talk with Purchasing, indicated receiving bad batch of joints from Supplier;
- Purchasing indicated they had been trying for the past 2 months to get Supplier to make good joints;
- Plant Manager asked WHY ? purchased from this disreputable supplier and found this was the lowest bidder;
- this was direction received from the Finance;
- Plant Manager went to talk to the Finance WHY ? always provided such direction;
- the Finance said because Plant Manager ordered the most possible cost conscious and purchasing from the lowest bidder saved lots of money.
Plant manager realized he was the REASON.

Getting to the Root Causes of Problems

Example

- Problem : A community is over-harvesting a wetland resource.
- Solution → legal measure to prohibit/limit the harvest amount/rate.
- Will this solve the problem ? OR
Will this only change the nature of the problem ?

Different solutions ?

If these questions are answered.

- Is the resource used locally or sold for cash?
- Are there acceptable / affordable substitutes ?
- Has the harvesting rate remained the same, but external influence has reduced the stock of that resource ?
- Is the harvest done by the people in the community with no other source of income ?
- etc.

What is Root Causes Analysis ?

- Finding **real causes** of the problem and dealing with it rather than continuing to deal with the symptoms.
- A step by step method that leads to the discovery of a root cause or root causes.
- An investigation traces the cause and effect trail from the end failure (impact/problem/issue/unwanted situation) back to the root cause.
- Identifying the **linkages** between **issues** affecting the ecosystem (e.g. wetlands) and **their causes** in order to solve the problems more effectively.
- Identifying the **real and potential threats** and **their underlying root causes**, to the health of wetlands.

Overview of RCA Process

- A team of at least 3-6 knowledgeable people, brought together (in a series of meetings) to investigate the failure using evidence left behind from the unwanted situation.
- The team brainstorms to find as many causes of the unwanted situation as possible.
- Using evidence remained after the unwanted situation, and discuss with people involved in the situation, all the non-contributing causes are removed, and the contributing causes retained.
- A problem tree is constructed, starting with the final unwanted situation and progressively tracing each cause that led to the previous cause; this continues till the trail can be traced back no further; each result of a cause must clearly flow from the one before it (if it is clear that a step is missing between causes it is added in and evidence looked for to support its presence).
- Once the fault tree is completed and checked for logical flow, the team then determines what changes to make to prevent the sequence of causes and consequences from again occurring.

Points to remember

- Take time to identify the root causes.
- Make a thorough analysis of the situation taking all factors (internal & external) into account.
- Utilize a range of problem-solving techniques to identify the root causes of the problem.
- Be prepared to identify new and non-traditional approaches to address the problems.

Exercise

- Group work
- Discuss & select 1 threat to wetland
- Brainstorm, analyse, summarize the root cause(s)
- Present

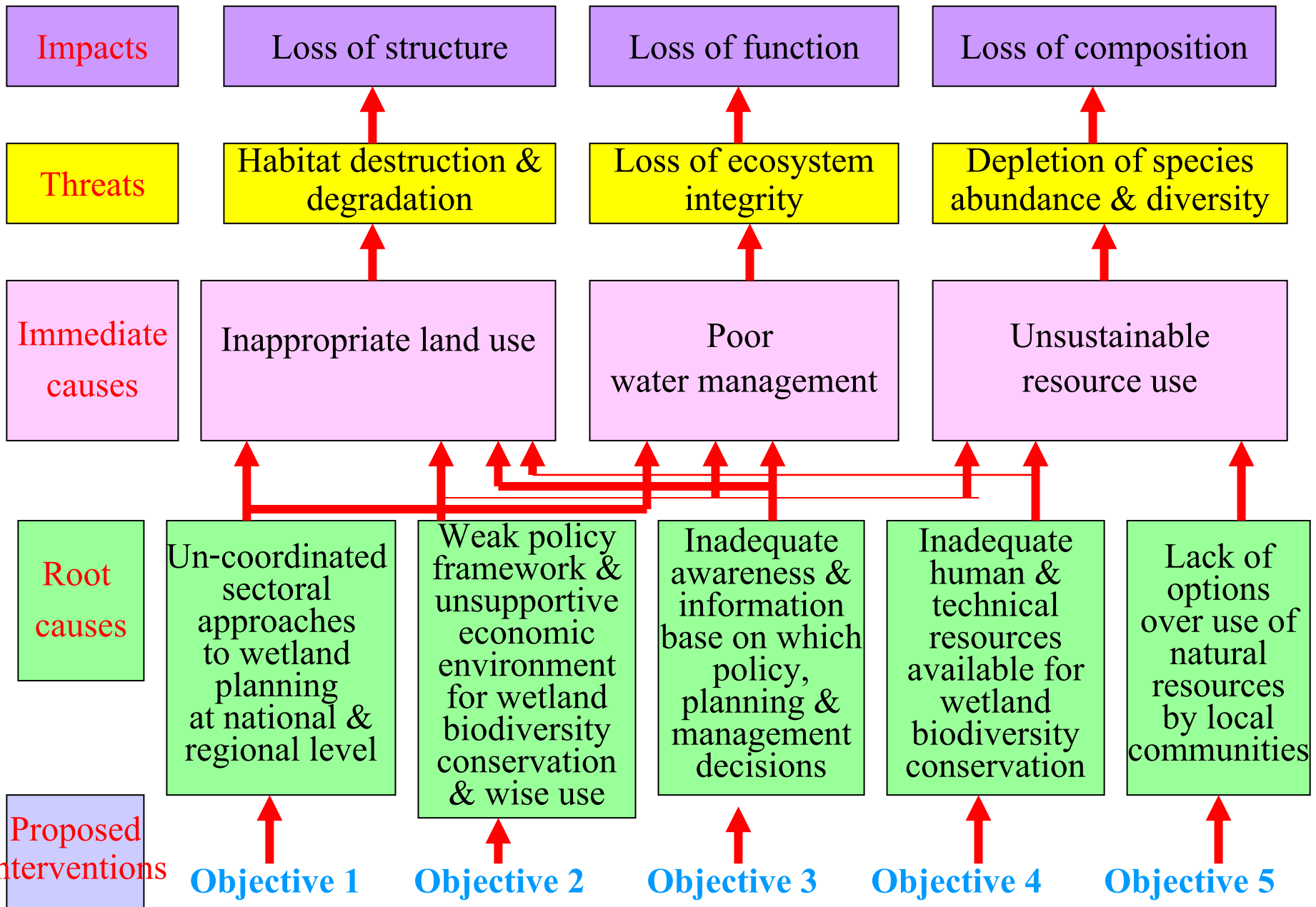
Root Causes Analysis

- Example

Root Causes Analysis of wetland degradation and loss; threats to wetland biodiversity in the Lower Mekong Basin

(UNDP-IUCN-MRCS-GEF)

Root Cause Analysis of Threats to Wetland Biodiversity



Thank you

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Research and Training Center



Asian Wetlands Network

