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Development and First Application of an Integrated Methodology for Risk Assessment of Mining Projects in French Guiana at the Territory Scale

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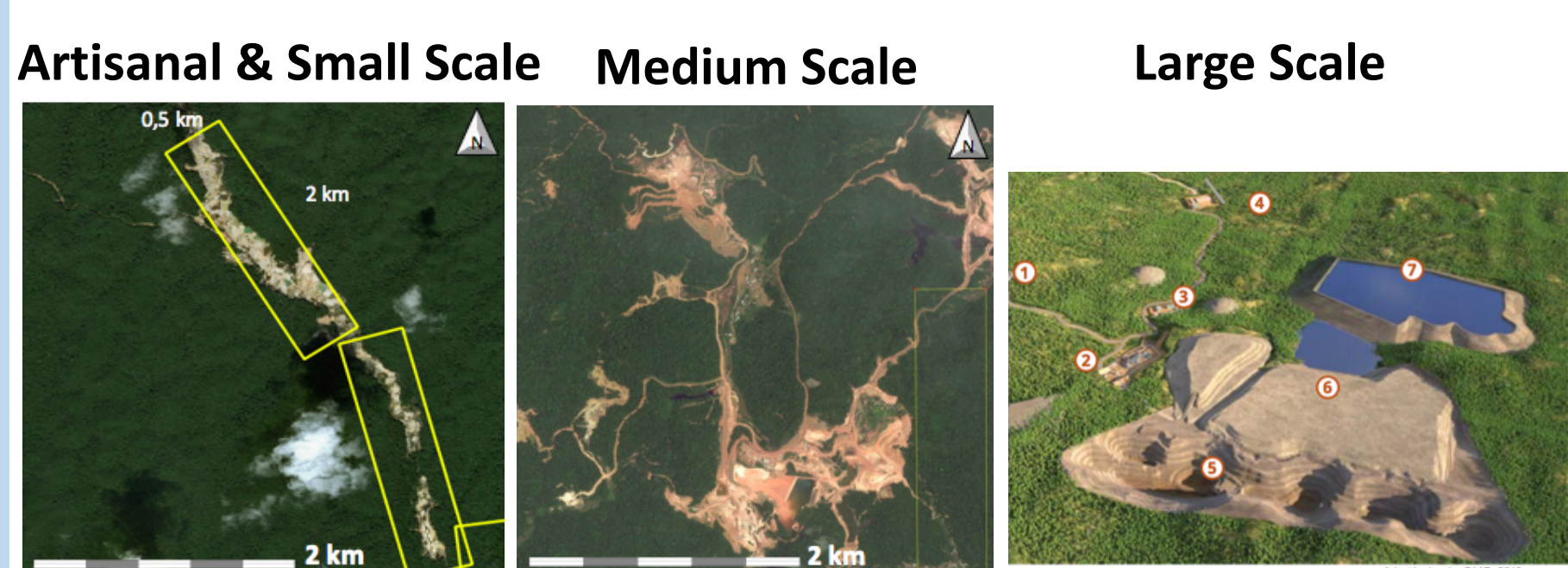
Context and objectives

Context:

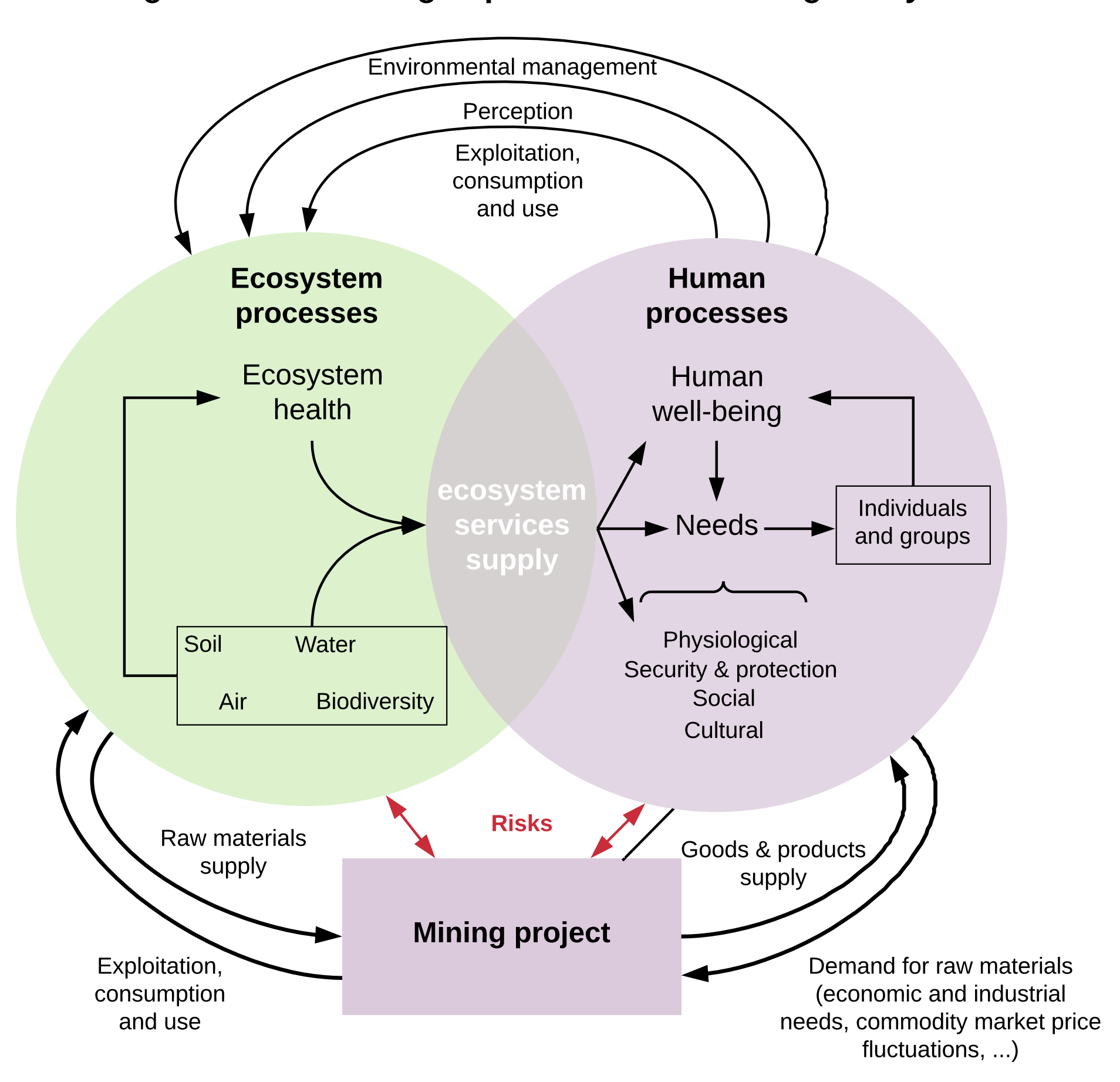
Gold mining plays a key role in the territorial complexity of French Guiana. Nevertheless, this activity is very controversial and most of the debates related to gold exploitation are based on the accidental and chronic risks which may be caused. These oppositions can lead sometimes also to the temporary or permanent interruption of a mining project.

Hence, the idea behind this thesis is to consider a mining project through a holistic approach at the territory scale as a matter of land-planning rather than a simple industrial object.

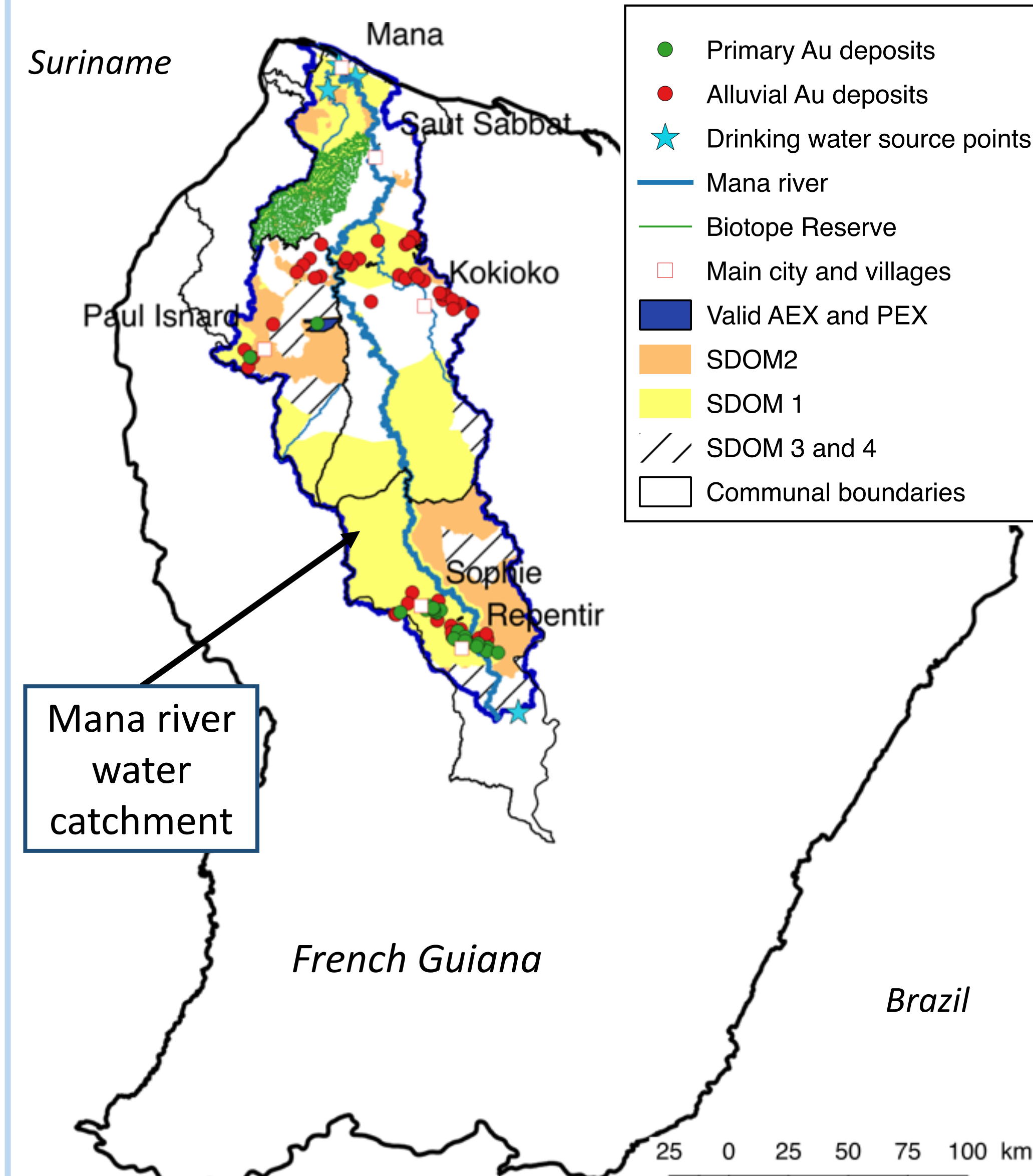
Main types of gold mining operator



Mining activities as integral part of a Socio-Ecological System

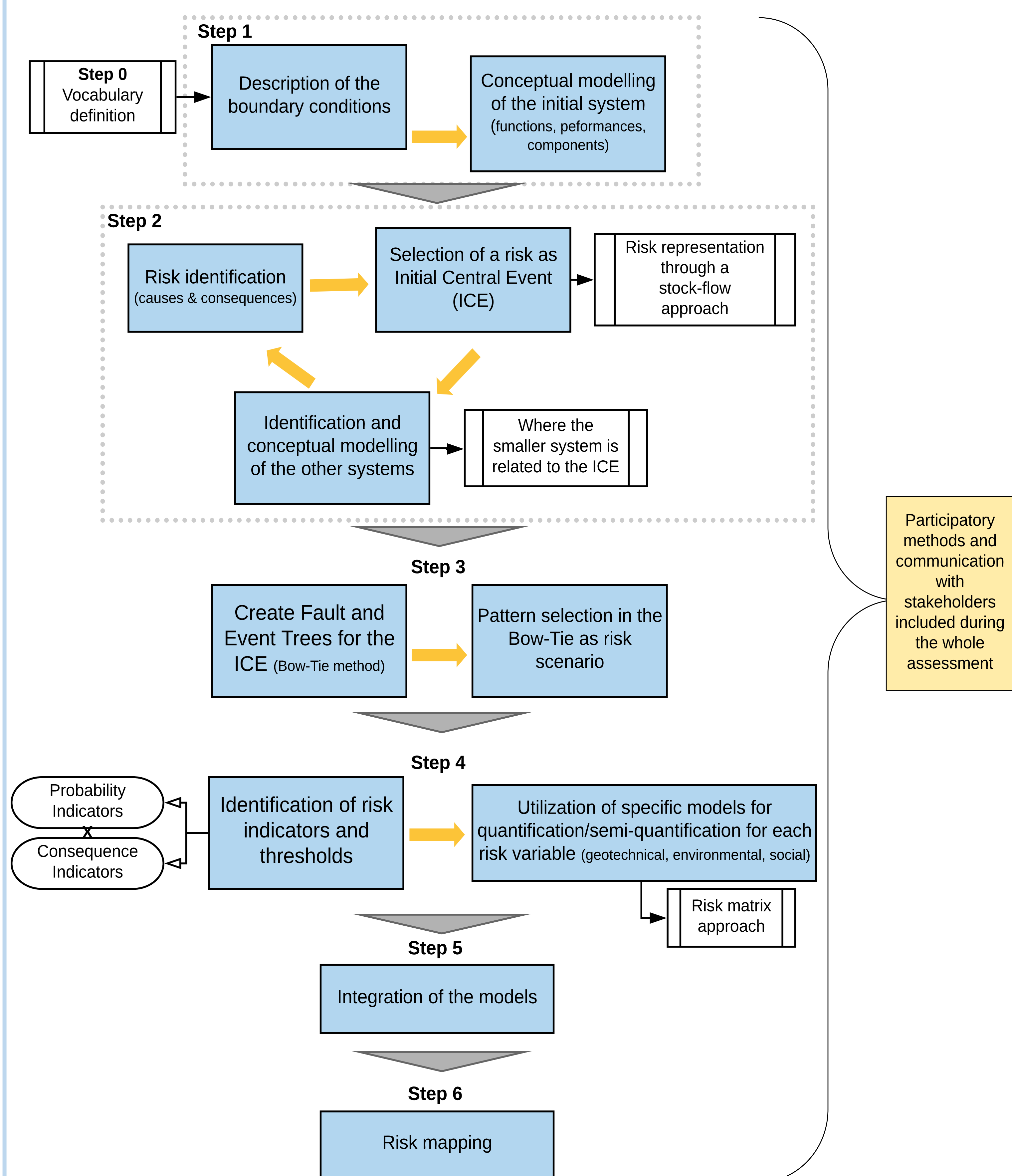


Selected area for the study

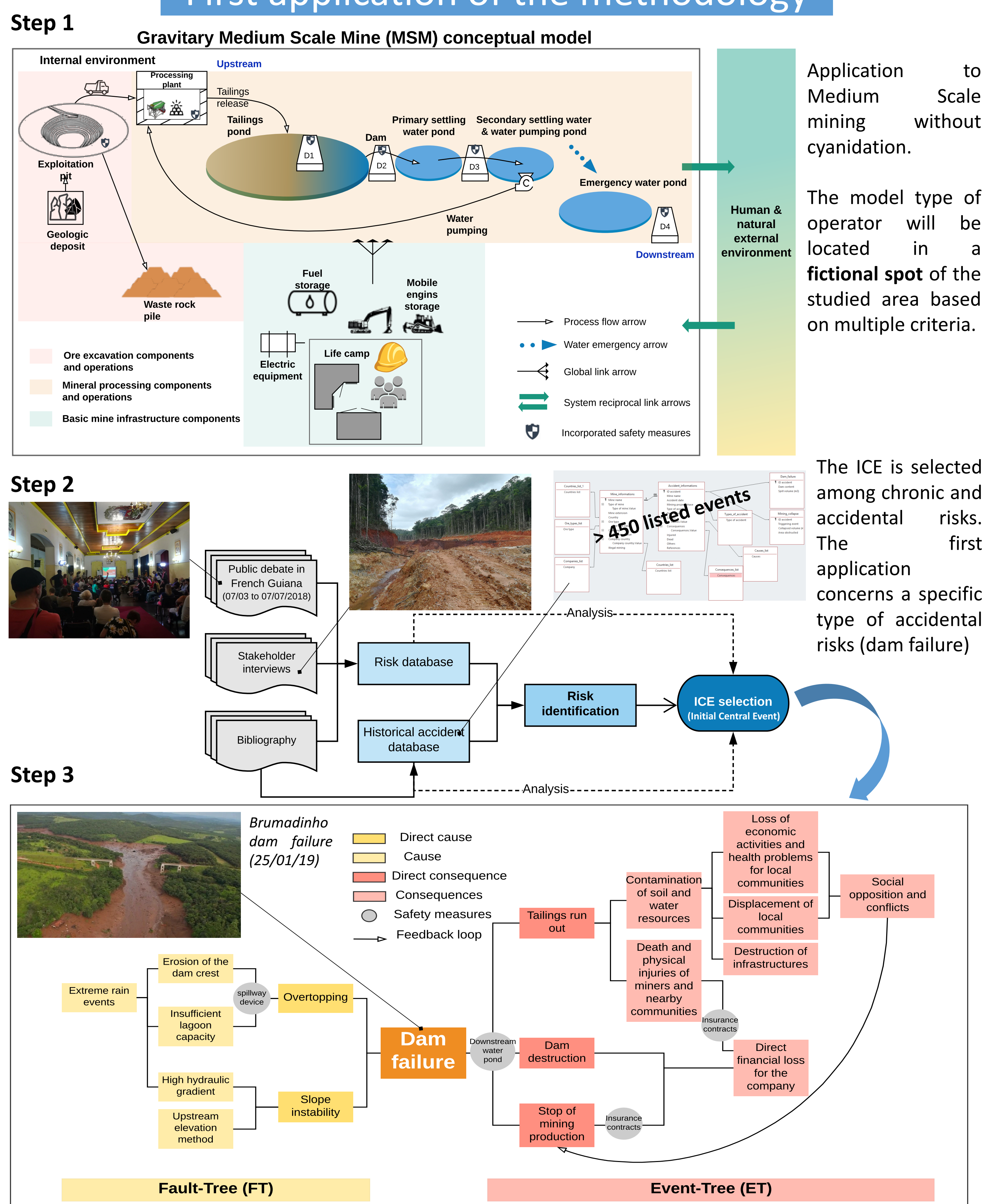


OBJECTIVE: To develop a methodology for risk assessment which integrates i) the specific nature and types of mining projects in French Guiana; ii) the spatio-temporal variability of risks; iii) the diversity of stakeholders of a mining project; iv) the different natures of the inbound and outbound risks.

Presentation of the methodology



First application of the methodology



Work Plan for the next year

1. Evaluate dam failure consequences using empirical methods chosen in the literature: adaptation and optimization of the method
2. Include stakeholder weights for consequence evaluation
3. Evaluate dam failure probability and combine probability and consequences to obtain risk maps
4. Apply the methodology to each mining operator type