Systems-Based Scenario Planning

Introduction

Systems-Based Scenario Planning combines the analytical power of systems thinking with the strategic foresight of scenario planning to help peacebuilders navigate uncertainty in complex conflict environments. Unlike traditional scenario planning that may focus primarily on external drivers, this approach emphasizes understanding how system structures, feedback loops, and intervention choices might interact to produce different futures.

This template provides a structured process for developing scenarios that account for system dynamics, helping practitioners to:

- Anticipate how conflict systems might evolve under different conditions
- Test the potential impacts of various intervention strategies
- Identify robust approaches that work across multiple possible futures
- Recognize early warning signs that indicate which scenario is emerging
- Build adaptive capacity to respond to changing circumstances

Key Concepts

Systems Thinking Elements

- **Feedback Loops**: How actions create reactions that either reinforce or counteract initial changes
- **Time Delays**: Gaps between actions and their full effects that create complexity
- **Emergent Properties**: How system-level behaviors arise from interactions of components
- **Non-linearity**: How small changes can sometimes create large effects, and vice versa
- **Boundaries**: What is considered inside vs. outside the analyzed system

Scenario Planning Elements

- **Focal Question**: The specific strategic decision or issue being explored
- **Driving Forces**: Key trends and uncertainties shaping possible futures
- **Critical Uncertainties**: High-impact, unpredictable factors that differentiate scenarios
- **Plausible Futures**: Coherent, challenging, distinct possible future states
- **Early Indicators**: Observable signals that suggest a particular scenario is emerging

Systems-Based Scenario Development Process

Phase 1: System Analysis and Framing

Step 1: Define the Focal Question

- Clearly articulate the strategic question or decision facing peacebuilding efforts
- Define the timeframe for scenario exploration (typically 3-10 years)
- Establish the geographic and social boundaries of the analysis
- Identify key stakeholders whose perspectives should inform the process

Example Focal Questions:

- "How might the peace agreement implementation process evolve over the next five years?"
- "What approaches to resource sharing could create sustainable peace in this region by 2030?"
- "How might our reconciliation program need to adapt to changing conditions over the next decade?"

Step 2: Map the Current System

- Create causal loop diagrams showing key feedback structures
- Identify stocks and flows of critical resources, grievances, or capacities
- Map stakeholder relationships and power dynamics
- Document mental models and worldviews that influence the system

- Consider relevant archetypes operating in the conflict

Example Systems Mapping Approaches:

- Collaborative causal loop diagramming with diverse stakeholders
- Stock-flow analysis of critical conflict resources
- Leverage point identification to understand system drivers
- Conflict iceberg analysis to reveal underlying structures and mental models

Step 3: Identify Driving Forces

- Analyze STEEP factors (Social, Technological, Economic, Environmental, Political) influencing the conflict
- Differentiate between:
  - **Predetermined Elements**: Relatively certain trends or locked-in dynamics
  - **Critical Uncertainties**: High-impact factors that could evolve in different ways
- Consider both internal system dynamics and external contextual factors
- Assess how driving forces might interact with key feedback loops

Phase 2: Scenario Development

Step 4: Select Scenario Logic

- Choose 2-4 critical uncertainties that:
  - Have high potential impact on the focal question
  - Could evolve in significantly different ways
  - Would interact with system structures to create distinct futures
- Create a 2x2 matrix or alternative framework to organize possible futures
- Ensure scenarios represent meaningfully different system states, not just variations

Example Critical Uncertainties:

- Degree of external actor involvement (high vs. low)
- Resource availability (abundant vs. scarce)
- Social cohesion (fragmented vs. unified)
- Governance effectiveness (functional vs. dysfunctional)

- Identity politics (polarized vs. inclusive)

Step 5: Develop Scenario Narratives

For each scenario:

- Create a compelling story of how the future might unfold
- Describe how system structures and feedback loops would operate
- Explain how critical uncertainties evolved to create this future
- Include perspectives from multiple stakeholders
- Ensure internal consistency while challenging conventional thinking
- Provide a memorable name that captures the scenario's essence

Key Elements for Each Narrative:

- Initial conditions and starting points
- Key turning points and developments
- State of critical system elements by the scenario end point
- Dominant feedback loops that drive the scenario
- Winners, losers, and how power relationships evolve

Step 6: Systems Impact Analysis

For each scenario:

- Identify which feedback loops become dominant
- Analyze how stocks and flows would change over time
- Consider emergence of new system structures or relationships
- Assess potential tipping points where system behavior might change dramatically
- Map second and third-order effects of developments

Phase 3: Strategic Implications

Step 7: Test Intervention Strategies

- Develop 3-5 potential intervention strategies aligned with identified leverage points
- Assess how each strategy would perform across different scenarios
- Identify robust strategies that create positive outcomes in multiple futures
- Recognize strategies that might work well in one future but create harm in others
- Consider how interventions might trigger system adaptations or resistance

Strategy Testing Template:

Strategy	Scenario 1 Outcomes	Scenario 2 Outcomes	Scenario 3 Outcomes	Scenario 4 Outcomes	Robustness
Strategy A					
Strategy B					
Strategy C					

Step 8: Identify Early Warning Indicators

- Develop observable indicators that would suggest a particular scenario is emerging
- Create a monitoring system to track these indicators
- Link indicators to specific feedback loops or system structures
- Include a mix of leading and lagging indicators
- Consider both quantitative metrics and qualitative signals

Indicator Development Template:

Indicator	Related System Element	Scenarios Indicated	Measurement Approach	Monitoring Frequency

Step 9: Design Adaptive Strategies

- Develop contingency plans for different scenario pathways
- Identify "no regrets" actions that make sense across all scenarios

- Create decision trees with trigger points for strategy adjustments
- Build organizational capacity to recognize and respond to changing conditions
- Consider how to maintain optionality while pursuing current priorities

Phase 4: Implementation and Learning

Step 10: Integrate with Planning and Operations

- Connect scenario insights to strategic planning processes
- Inform program design and theory of change development
- Brief key stakeholders on scenario implications
- Incorporate monitoring indicators into existing evaluation systems
- Schedule regular scenario reviews and updates

Scenario Development Worksheets

Worksheet 1: Critical Uncertainties Analysis

Driving Force	Certainty (High/Medium/Low)	Impact (High/Medium/Low)	Potential Range	System Elements Affected

Worksheet 2: Scenario Matrix Development

If using a 2x2 matrix approach:

Uncertainty 1: [Name and describe the uncertainty]

- Axis end point A: [Description]
- Axis end point B: [Description]

Uncertainty 2: [Name and describe the uncertainty]

- Axis end point A: [Description]
- Axis end point B: [Description]

Resulting Scenarios:

1. **Scenario 1 Name**: (Uncertainty 1A + Uncertainty 2A)
2. **Scenario 2 Name**: (Uncertainty 1A + Uncertainty 2B)
3. **Scenario 3 Name**: (Uncertainty 1B + Uncertainty 2A)
4. **Scenario 4 Name**: (Uncertainty 1B + Uncertainty 2B)

Worksheet 3: Scenario Narrative Template

Scenario Name:

Brief Description:

Key System Dynamics:

- Dominant feedback loops:
- Critical stocks and flows:
- Emergent properties:

Narrative Timeline:

- Initial conditions (present day):
- Early developments (year 1-2):
- Mid-term developments (year 3-5):
- End state (final year):

Stakeholder Impacts:

- Group A:
- Group B:
- Group C:

Implications for Peace Process:

- Opportunities:

- Challenges:
- Required capabilities:

Worksheet 4: Strategy Assessment

Strategy Name:

Strategy Description:

Key Leverage Points Targeted:

Resource Requirements:

Performance Across Scenarios:

- Scenario 1:
- Scenario 2:
- Scenario 3:
- Scenario 4:

Robustness Assessment:

Adaptation Options:

Worksheet 5: Early Warning System

Indicator	Description	Measurement Approach	Related Scenario	Threshold for Action

Case Example: Post-Conflict Elections

Focal Question

"How might the upcoming electoral process affect conflict dynamics over the next three years, and what interventions could promote peaceful democratic transition?"

System Analysis

Key feedback loops identified:

- Reinforcing loop: Security concerns → group mobilization → increased tensions → greater security concerns
- Balancing loop: Inclusive processes → trust building → reduced tensions → space for more inclusion
- Reinforcing loop: Media reporting → public perception → political behavior → newsworthy events

Critical Uncertainties Selected

1. **Electoral Process Integrity**: High integrity vs. Contested results
2. **Security Environment**: Stable vs. Volatile

Scenario Matrix

1. **"Peaceful Transfer"**: High integrity + Stable security
2. **"Contested but Contained"**: Contested results + Stable security
3. **"Dangerous Transition"**: High integrity + Volatile security
4. **"Democratic Breakdown"**: Contested results + Volatile security

Sample Narrative for "Contested but Contained" Scenario

Initial Conditions: The pre-election period is characterized by political tensions but functioning security services. International observers are present but have limited coverage. Civil society organizations are active in voter education and monitoring.

Early Developments: Election day proceeds with minimal violence, but results show statistical anomalies. Opposition parties reject the results and call for protests. Security forces show restraint but maintain a strong presence in urban centers.

Dominant Feedback Loops: The "media reporting → public perception" loop becomes highly activated, with competing narratives about election validity. The "inclusive processes → trust building" loop weakens as political polarization increases.

End State: A negotiated power-sharing arrangement emerges after three months of tension. While deeply unsatisfying to all parties, it prevents widespread violence. Democratic institutions are weakened but not collapsed, creating fragility for the next electoral cycle.

Strategy Testing (Partial Example)

- **Strategy: Early deployment of international observers**
  - Performs well in "Peaceful Transfer" (helps ensure integrity)
  - Valuable in "Contested but Contained" (provides neutral assessment)
  - Insufficient alone in "Dangerous Transition" (can't address security)
  - Potentially counterproductive in "Democratic Breakdown" (may become targets)
- **Strategy: Multi-party dialogue platform**
  - Essential in "Contested but Contained" (creates negotiation channel)
  - Valuable in "Dangerous Transition" (maintains communication)
  - Highly effective in "Peaceful Transfer" (resolves minor disputes)
  - Limited value in "Democratic Breakdown" without security guarantees

Early Warning Indicators (Partial Example)

- Incidents of pre-election intimidation (increasing suggests "Volatile security" scenarios)
- Election administration technical preparations (delays suggest "Contested results" scenarios)
- Rhetoric from key security force commanders (hardline statements suggest "Democratic Breakdown")
- Media coverage balance (increasingly partisan coverage suggests "Contested" scenarios)

Implementation Considerations

Facilitation Guidelines

- Include diverse stakeholders in the scenario development process
- Create safe spaces for exploring difficult or sensitive futures
- Balance analytical rigor with intuitive understanding
- Use visual methods to make system relationships clear
- Document assumptions explicitly throughout the process

Common Challenges

- **Cognitive Biases**: Tendency to favor expected or preferred futures
- **System Complexity**: Difficulty capturing all relevant dynamics
- **Stakeholder Disagreement**: Differing views on what's plausible or important
- **Implementation Gap**: Failure to connect scenarios to actionable strategies
- **False Precision**: Over-specifying details instead of focusing on key dynamics

Adapting for Different Contexts

- **Low-Resource Settings**: Simplify the process while maintaining key systems elements
- **Highly Volatile Environments**: Use shorter timeframes and more frequent updates
- **Polarized Contexts**: Consider separate initial workshops before bringing groups together
- **Traditional Communities**: Integrate oral storytelling and indigenous foresight methods
- **Urban Settings**: Focus on complex social network dynamics and information flows

Integration with Other Systems Tools

Complementary Approaches

- **Causal Loop Diagramming**: Informs understanding of feedback mechanisms
- **Stock and Flow Analysis**: Provides quantitative estimates for scenario variables
- **Leverage Points Identification**: Helps prioritize intervention strategies

- **Systemic Action Research**: Connects scenarios to participatory learning
- **Conflict System Archetypes**: Offers templates for how scenarios might unfold

Sequencing Recommendations

1. Start with system mapping to understand current dynamics
2. Develop scenarios to explore potential futures
3. Use leverage point analysis to identify strategic intervention options
4. Create early warning systems for ongoing monitoring
5. Revisit scenarios regularly to incorporate new learning

Conclusion

Systems-Based Scenario Planning provides a structured approach to navigating uncertainty in complex conflict environments. By combining systems thinking's focus on relationships and feedback with scenario planning's exploration of multiple futures, practitioners can develop more robust, adaptive strategies for peacebuilding.

The most valuable outcome is not perfect prediction—which is impossible in complex systems—but rather enhanced strategic thinking, improved situational awareness, and greater adaptive capacity. When done effectively, this process helps peacebuilders move from reactive response to proactive engagement with emerging possibilities, ultimately creating more sustainable pathways to peace.

Additional Resources

- Kahane, A. (2012). *Transformative Scenario Planning: Working Together to Change the Future*
- Meadows, D. (2008). *Thinking in Systems: A Primer*
- Ogilvy, J. (2015). *Scenario Planning and Strategic Forecasting*
- Ricigliano, R. & Chigas, D. (2011). *Systems Thinking in Conflict Assessment*
- Stroh, D.P. (2015). *Systems Thinking for Social Change*