

# NSAW 2013

## AIARE Risk Communication Handout

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**Practical Backcountry Risk Management** by Ben Pritchett (benp@avtraining.org)

**Avalanche Risk** = Avalanche Hazard & Exposure & Vulnerability

**Manage Risk** (ISO 31000)

- Establish the Context
  - *“What’s Today’s situation?”*
- Risk Assessment
  - *“What can go wrong? Where? Why?”*
  - *“How Likely, and what’s the consequence?”*
  - *“Given our risk tolerance, are we prepared to manage the risk?... Cost / benefit analysis.”*
- Risk Treatment
  - *“Given the hazard, how are we going to keep ourselves safe?”*

**Plan Together, Decide Together, Act Together**

- Consult the bulletin for patterns, apply those patterns to exclude dangerous terrain
    - (*Avalanche Problems Defined*, Brian Lazar [http://www.americanavalancheassociation.org/tar/TAR31\\_2\\_LoRes.pdf](http://www.americanavalancheassociation.org/tar/TAR31_2_LoRes.pdf))
  - Use a Trip Plan as a checklist to guide the process
  - Use terrain images to improve risk communication
  - Leverage everyone’s experience to make the decision process efficient
  - Invite alternate perspectives (Devil’s Advocate)
  - Reference specific margins in the terrain between you and an expected avalanche proportional to your uncertainty
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**“What’s the Problem”** by Colin Zacharias

**3 Critical opportunities to effectively communicate risk**

**1. During the Forecast**

- Voice for all, veto for any
- Everyone has to have an opinion
- Contract that you can’t change your mind in the field!!! – blood oath w/ a 24 hour “let it wait rule”
- Where won’t you go? What terrain is “red”, or off limits for the day
- Hesitation....is an automatic red
- Unanimous, consensus, decision
- Define safety margins in the terrain

**2. Evaluating uncertainty in the field**

- Talk about what you see, what you know and what you don’t know. *Talk about your uncertainty!*
- When you gather information: *Why? Where? What’s critical? What does it mean to you?*
- When you speak think first, write it down, then talk: *Simple, concise, relevant*
- Tie your opinion to the terrain: *Where don’t we want to go?*
- Consider that decisions in the field are made under pressure – keep that bias in mind

**3. A reflection on what went right and what went wrong**

- Share perceptions of how the risk was managed
- How committing did the day or an event feel; did you manage the risk well? “I wish we hadn’t gone there.”
- What would you do differently? What strategies were necessary, successful, questionable?

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## Recommended Reading on Decision Behavior

### Thinking Fast and Slow by Daniel Kahneman

Kahneman introduces two mental systems, one that is fast and the other slow. Together they shape our impressions of the world around us and help us make choices. System 1 is largely unconscious and it makes snap judgments based upon our memory of similar events and our emotions. System 2 is painfully slow, and is the process by which we consciously check the facts and think carefully and rationally. Problem is, System 2 is easily distracted and hard to engage, and System 1 is wrong as often as it is right.

- On Observations:
  - *"The situation has provided a cue; this cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is nothing more and nothing less than recognition."*
- On Developing Expertise:
  - *"Whether professionals have a chance to develop intuitive expertise depends essentially on the quality and speed of feedback, as well as on sufficient opportunity to practice."*
  - *"Learn to recognize situation in which mistakes are likely and try harder to avoid significant mistakes when the stakes are high."*

### Checklist Manifesto by Atul Gawande

Gawande begins by making a distinction between errors of ignorance (mistakes we make because we don't know enough), and errors of ineptitude (mistakes we made because we don't make proper use of what we know). Failure in the modern world, he writes, is really about the second of these errors, and he walks us through a series of examples from medicine showing how the routine tasks of surgeons have now become so incredibly complicated that mistakes of one kind or another are virtually inevitable: it's just too easy for an otherwise competent doctor to miss a step, or forget to ask a key question or, in the stress and pressure of the moment, to fail to plan properly for every eventuality.

- On Checklists:
  - *"Checklists are precise. They are efficient, to the point, and easy to use even in the most difficult situations. They do not try to spell out everything--a checklist cannot fly a plane. Instead, they provide reminders of only the most critical and important steps--the ones that even the highly skilled professional using them could miss. Good checklists are, above all, practical."*
  - *"We don't like checklists. They can be painstaking. They're not much fun. But I don't think the issue here is mere laziness...It somehow feels beneath us to use a checklist, an embarrassment. It runs counter to deeply held beliefs about how the truly great among us--those we aspire to be--handle situations of high stakes and complexity. The truly great are daring. They improvise. They do not have protocols and checklists. Maybe our idea of heroism needs updating."*
  - *"Checklists remind us of the minimum necessary steps and make them explicit. They not only offer the possibility of verification but also instill a kind of discipline of higher performance."*

### Sources of Power: How People Make Decisions by Gary Klein

Gary Klein studies decision-making in the field, tagging along with firefighters, standing by in intensive-care units, and watching chess masters play lightning-fast "blitz" games to learn how people make choices with time constraints, limited information, and changing goals.

Sources of Power essentially lends the validity of scientific research to techniques that many of us use every day. There's intuition, mental simulation, storytelling and metaphor which enable decision makers to devise meaningful frameworks. This book ranks high the "must read" list for instructors teaching risk management and uncertainty.

- On Creating Options
  - *"Be sensitive to when you need to compare options and when you don't. When you're new to a situation, you may need to cast a wide net. Other times, you can rely on your expertise and drill down on a smaller set of alternatives."*
- On Teamwork
  - *"The communication of intent is critical for teamwork. No one can anticipate every contingency. Therefore intent is used to improvise and adjust."*
  - *"To what degree does the team share an understanding of the situation? Giving team members a chance to voice divergent views, as well as [an opportunity] to pull ideas together, [allows] the members to know the assumptions guiding their actions."*

### Decisive: How to Make Better Choices in Life and Work by Dan and Chip Heath

Research in psychology reveals that our decisions are disrupted by an array of biases and irrationalities: We're overconfident. We seek out information that supports us and downplay information that doesn't. Short-term emotions distract us. When it comes to making choices, it seems, our brains are flawed instruments. Unfortunately, merely being aware of these shortcomings doesn't fix the problem, any more than knowing that we are nearsighted helps us to see. The real question is: How can we do better?

- On having a Decision Making Process
  - *"A better decision process substantially improves the results of the decisions..."*
- On Creating Options
  - *"Being stuck in a narrow frame is hard to recognize, but only when you're inside it."*
- On Decision Making
  - *"...in helping us to make a decision logjam the single most effective question may be: What would I tell my best friend to do in this situation?"*