

Building Technical Capabilities for Resilience and
Sustainability

Legal and Policy Challenges in Support of Resilience and Sustainability

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Sustainable Development Goals

- eradicating poverty in all its forms and dimensions,
- combating inequality within and among countries,
- preserving the planet,
- creating sustained, inclusive and sustainable economic growth, and
- fostering social inclusion.

Effective Legal Approaches for SDG Achievement

- Support vibrant marketplace
- Priority of controls
 - (1) the marketplace,
 - (2) private arrangements,
 - (3) the law
- Law should step in only when free and open marketplace isn't working
- Primary role of law:
 - (a) correct the marketplace, and
 - (b) provide important goods and services desired by society not otherwise produced by the marketplace

Development of GI Management Systems

- used across all three dimensions of sustainable development
 - economic / social / environmental
- used to:
 - help track and address economic growth, social development, environmental protection, and eradication of poverty and hunger
 - assessing desertification, drought, land degradation, freshwater scarcity, and loss of biodiversity
 - planning and building of infrastructure
 - emergency response and disaster recovery
 - ...

Typical cyberinfrastructure legal issues:

- intellectual property rights
- privacy rights
- security, encryption, and management practices
- hacking and other cybercrimes
- rights of citizen access to gov't data
- controlling private power
- licensing and contracts
- liability in the provisioning of data and online services
- jurisdiction over disputes

How does one know which legal issues need to be considered and how addressed?

(1) Be aware that your design may give rise to or lessen legal conflicts. Awareness and education are critical.

(2) Meet at least the legal requirements of your home jurisdiction.

(3) Think globally. Follow the concepts of ethics driven design.

Benefits of Ethics by Design

- aspire to laudable goals such as beneficence, nonmaleficence, autonomy, and justice for all
- core ethical values are more objective and tend not to change over time or with location
- concerns of minorities and disenfranchised more likely to be protected
- designs tend to embed adaptability to individual human conditions
- morally defensible products and services likely to be acceptable among and across nations
- greater enduring value over time
- likely to result in higher economic and societal benefits