Special Event on Genomics Information

Genomic information: technological & institutional dimensions

Scoping study:

Potential implications of new synthetic biology and genomic research trajectories on the International Treaty for Plant Genetic Resources for Food and Agriculture

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Presentations on study

- ✓ Study objectives, structure and methodology (Eric Welch, *Arizona State University*; Selim Louafi, *CIRAD*)
- ✓ Technological issues (Todd Kuiken, *North Carolina State University*)
- ✓ Legal dimensions (Margo Bagley, *Emory University*, recorded)
- ✓ Opportunities for benefit-sharing (Eric Welch)
- ✓ Implications for the Treaty

Study objectives, structure and methodology

Eric Welch, Arizona State University
Selim Louafi, CIRAD

Context

- Report focus
  - Evolving technological, legal and institutional context for exchange and use of digital sequence information
  - Implications for the principles and framework of the Treaty
- Broad perspective on a general trajectory rather than a detailed analysis of a particular technology
- Socio-technical approach
- Informational aim
- Does not address…
  - whether DSI is a genetic resource;
  - ethical or safety issues related to genetic engineering.

Key questions

- Technological
  - What are the characteristics of the technological change? How are sequence data stored, exchanged and shared? What are the documentation practices? Can DSI be traced to material?
- Legal
  - How are actors addressing ownership, property rights, and monitoring of DSI? What are the emerging IP practices? To what extent have researchers experienced regulatory or IP constraints?
- Benefit sharing
  - What are the different ways actors currently assign value to DSI? How accessible is DSI to individuals, institutions and countries? What potential benefit sharing opportunities are there for the Treaty?

Methods

- Small-scale, short term
- Background literature, reports and studies
- Interviews of researchers and other relevant actors in:
  - Universities
  - Non-profit research organizations
  - Private sector
  - Civil society organizations

Methods

- Purposive sampling strategy
  - Expertise in plant biology, agriculture and other sciences, law, innovation, international and developing country experience
- Confidential one to two hour interviews
- Interview protocol, transcribed
- Triangulated findings

Study framework

- Implications of DSI/dematerialization for the Treaty – six ABS principles, three general and three specific to the Treaty

- Three general principles
  - Identification
  - Monitoring of use
  - Value generation

To what extent does DSI/dematerialization affect these 3 general ABS principles ?

Study framework (2)

- Three specific features of Treaty's ABS approach
  - Pooling/standardization to facilitate access

    To what extent does DSI/dematerialization impact the aggregation and standardization approach promoted by the MLS?

  - Decoupled Benefit sharing from individual providers

    To what extent does DSI/dematerialization impact the MLS approach of decoupling benefit sharing from provision of genetic resources?

  - Diversity and interdependence of benefits

    To what extent does DSI/dematerialization affect the realization and relative weights of the different benefits foreseen under the MLS?

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