Conclusion. Comparing Access and Benefit-Sharing in Europe

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The concept of access and benefit-sharing (ABS) grew out of the emergence of the global governance of genetic resources during the second half of the twentieth century. The evolution of environmental ethics, of international environmental law, of North–South relations, and of international cooperation for scientific research all nourished an international regime, which eventually led to the Nagoya Protocol. The Protocol thus is the product of a series of international legal doctrines, as exposed in the introduction of this book. Likewise, the implementation of the Protocol will need to build on a series of existing legal principles and rules, which are currently governing issues related to access and benefit-sharing. As illustrated throughout the chapters in the first part of the book, these issues are numerous and differ from country to country, including inter alia property regimes, market regulation and access, industrial policy, health, international development, legislation related to environmental matters and nature conservation, agriculture, research & development, traditional knowledge, administrative laws, and private international law. In addition, the implementation will have to complement and/or further a plethora of quasi-legal instruments, best practices and private standards, all of which may or may not have been designed with ABS or the Nagoya Protocol in mind. Finally, European ABS instruments will also converge at the European level, where an EU-harmonised approach on compliance measures for users from the Nagoya Protocol was adopted in April 2014.1 The story of the Nagoya Protocol thus can be said to be one of legal confluence: born out of a union of legal doctrines, it gathers a large range of legal fields extending far beyond environmental law only, and combines (or will need to combine) existing legal regimes, numerous actors, both public and private, and a multitude of policy and private initiatives.

The confluence of these different streams into a functional ABS regime is of paramount importance for the EU, in particular for its biotechnology sector and its non-commercial biodiversity research sectors. Although being only

second to North America in terms of pharmaceutical sales, Europe dominates the world pharmaceutical manufacturing sector. For instance, EU countries and Switzerland together account for over 70% of the world exports of medicinal and pharmaceutical products, and medicaments. About half of the world largest cosmetics companies are located in Western-Europe, the largest by sales being France-based l'Oreal with 22.5 billion euros of sales in 2012. Moreover, through its extensive ex situ network of botanical gardens, culture collections and gene banks, Europe hosts a considerable amount of the world genetic material, be it endemic or non-endemic. Together with Switzerland and Norway, the EU member states approximately host a quarter of all botanical gardens worldwide, which keep over 50% of the world living plant accessions. In more than 500 culture collections and gene banks, these countries also possess 30% of all cultures of microorganisms and between 10 and 15% of the total accessions of germplasm for food and agriculture in the world.

More specifically, while not necessarily mentioned in this book, numerous examples of European research and development activities involving genetic resources and traditional knowledge can be found in the literature. Among many others, examples include:

- The development of *Vernonia Galamnensis*, the oil of which is used in plastic formation and coating, by the British company Vernique Biotech;
- The development of new tomato genotypes through the European EU-SOL project, by the Dutch breeding companies Enza Zaden B.V. (higher-yielding

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3 Figures from UN Commodity Trade Statistics Database, *Medicinal and Pharmaceutical Products, Other than Medicament (SITC 541) and Medicaments (including veterinary medicaments) (SITC 542)* (New York, 2011), Available at http://comtrade.un.org/.