

# National and International Approach to Nanotechnology Regulation: Convergence or Divergence?

Shahriar Kazemi Azar\*

M.A. Student of International Law at Shahid Beheshti University-Tehran-Iran  
(skazemi9@yahoo.com)

## Abstract

Nanotechnology is a system of innovative methods to control and manipulate matter at near-atomic scale to produce new materials, structures, and devices. For a few years now, nanotechnology has been recognized as a promising new growth innovator. This rapid technological advances and commercialization within the emerging field of nanotechnology will challenge traditional regulatory regimes. Nanotechnology is the latest technological innovation in global debates on risk regulation and international cooperation. Issues such as the environment, human health, occupational safety and intellectual property rights have revealed the need for specific law in this field. For this reason, governments and international organizations, such as the *European Union (EU)* and the *World Trade Organization (WTO)*, incorporated the nanotechnology into their existing laws by establishing standards and guidelines. Examining the current domestic laws and the international status of the nanotechnology shows a convergent approach to incorporate this technology into existing laws and moving towards the adoption of a comprehensive approach to the regulation of nanotechnology to make balance effectively between the risks and benefits associated with the nanotechnology.

**Keywords:** nanotechnology, regulation, risks, domestic law, international law, specific laws

## 1. Introduction

Emerging technologies create a peculiar, often complex, and fundamentally political problem for global governance. This problem exists not so much because technologies may produce environmental and health risks; systems of risk assessment and management are in place to deal with such risks. Rather, emerging technologies are problematic because of the persistent uncertainty that surrounds potential risks.[1] This is where the "law" react to the challenges presented by technology. The "law" is the regulator of the any social phenomenon, and therefore, is an integral part of it. In such a position, "law" is not in the sense of "end" and

---

\* I would like to show my gratitude to Ms. Pantea Soltanzadeh, Master Student of Environment Law, Faculty of Law, Shahid Beheshti University, for sharing her pearls of wisdom and comments with me.