

Table of Contents

Abstract	8
I. Introduction	13
A. Connecting IP with Climate Change	13
B. Purpose of Research	13
II. Defining Green Technology	15
A. Green Technology	15
1. What is Green Technology?	15
2. Facts and Trends in Green Patent Filing	16
3. Increasing Investment and Technology Transfer	18
III. Background: International Legal Framework for Climate Change	21
A. Green Technology Innovation and Diffusion under International Law	21
1. Declaration of the UN Conference on the Human Environment (1972)	21
2. Agenda 21 (1992)	21
3. Convention on Biological Diversity (1993)	21
4. UN Framework Convention on Climate Change (1994)	22
a) Responsibility for Vulnerable Countries	23
b) Push Factors	23
c) Expert Group on Transfer of Technology	24
d) Bali Action Plan and Technology Transfer	24
e) Ad Hoc Working Group on Long-term Cooperative Action	24
5. UN Convention to Combat Desertification (1996)	26
6. Kyoto Protocol (1997)	26
B. Compatibility with TRIPS Flexibilities	27
1. Technology Transfer Obligation under TRIPS Articles 7, 8(1) and 66(2)	27
2. Exceptions to Rights under TRIPS Article 30	27
3. Compulsory Licensing under TRIPS and Beyond	29
a) For Public Health	29
b) For Climate Change?	30

IV. Role of the Patent System	33
A. Role of Patent Law	33
1. TRIPS Article 27(2) and Ordre Public	33
2. Business Method Patents: Bilski and Carbon Trading Inventions	36
3. Novelty and ‘Green’ Indication of a Known Substance	38
4. Non-obviousness: KSR and Green Technology	39
5. ‘Greenness’ and Utility Requirements	40
B. Role of Patent Policy	41
1. Activities by WIPO and Patent Offices	42
a) World Intellectual Property Organization	42
(1) Patent Cooperation Treaty	42
(2) Patent Classification: Catchword Index for Environmentally Sound Technology	43
(3) WIPO Development Agenda and Climate Change	43
b) Fast-tracking Services	44
(1) UK Intellectual Property Office: Green Channel	44
(2) USPTO: Green Technology Pilot Program	45
(3) Preferential Treatment for Patenting Green Inventions	45
(a) Benefits of Early Patenting	45
(b) Non-discrimination under TRIPS Article 27(1)	47
(c) Alternative: Verifying ‘Greenness’ Independent from Patent Grant	49
c) Information Services	49
(1) European Patent Office	50
(a) Patents and Clean Energy Project	50
(b) Classification Scheme for Clean Energy Technologies	51
(2) Opportunities Provided by Patent Information	51
(3) Licensing Best Practices	52
V. Green Technology Transfer and IP	57
A. Initiatives by IP Communities	57
1. Eco-Patent Commons	57
2. Japan Intellectual Property Association Proposal	58
3. Open Innovation: GreenXchange	59
B. IP Issues in Green Technology Transfer	60
1. Effects of Non-assertion Commitments	60
2. IP Ownership in R&D Collaboration	61
3. Financing Innovation and Patenting Costs	62

VI. Balancing IP and Competition	65
A. Patent Litigation and Developments in Law and Practices	65
1. GE's '039 Patent	65
2. Patent Law and Practices	67
B. Standardization and Patent Pooling	68
1. Green Technology Standards and Patent Pools	68
2. The Unocal Case: Abuse in Law of Environmental Standards	69
3. Green Technology Standards and IP Policies	70
VII. Conclusion	77
List of Works Cited	79