elni REVIEW

1+2/2015

ISSN 1618-2502

ENVIRONMENTAL LAW NETWORK INTERNATIONAL

RÉSEAU INTERNATIONAL DE DROIT DE L´ENVIRONNEMENT

INTERNATIONALES NETZWERK UMWELTRECHT

elni REVIEW

CONTENTS

Editorial

On 25 September 2015, in New York, 193 Heads of State and Government adopted a resolution entitled 'Transforming our world: the 2030 Agenda for Sustainable Development' in the United Nations General Assembly. This Resolution defines 17 Sustainable Development Goals as well as 169 targets and can be considered the final integration of ecological, economic and social Sustainable Development objectives, supported by a separately established financing framework, the Addis Ababa Action Agenda, as well as a transparent and inclusive reporting system to observe progress as to the achievement of its goals and targets.

elni Review puts the spotlight on the current state of play as regards legal arrangements and implementation in respect to some of the Resolution's major objectives. Among these is the target to, "by 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world". Measured by this benchmark, and having in mind that 2015 was the "International Year of Soils", researchers from the *Ecologic Institut* (Berlin) analyse the national and international implementation of the "land degradation neutral world" target.

The impact of water quality, as well as quantity of quality water, on Sustainability Development is inter alia reflected in Goals 6 and 14 of the Agenda 2030. In addition, according to certain EU Water Framework Directive objectives, European waters have to achieve "good ecological and chemical status" by 2015. Against this background, experts from the *EU Network for Implementation and Enforcement of Environmental Law (IMPEL)* assess perspectives and actions to improve water quality in Europe.

Another sustainable development hotspot is the climate, which is addressed inter alia in the Resolution's 13th Goal. Amongst the most prominent instruments to combat climate change are emissions trading systems (ETS). *Jonathan Verschuuren* and *Floor Fleurke* examine the enforcement of the EU ETS in the Member States.

Furthermore, *Anaïs Berthier* questions access to the transposition of EU environmental law by Member States by analysing a ruling of the EU General Court in case C-612/13P (ClientEarth v Commission).

This issue's *Recent developments* section provides an update on the TTIP-related ISDS discussions, a conference report on how the perception of chances and risks affect innovations for sustainability as well as a statement on environmental impact assessment law in Turkey.

Julian Schenten/Gerhard Roller

October 2015

Authors of this issue

Ömer Aykul, Environmental Lawyer, Istanbul. omeraykul@superonline.com

Lisa Beiderwieden, B.A., graduate student of social sciences, Ruhr-Universität Bochum, Germany. lisa.beiderwieden@ruhr-uni-bochum.de

Anaïs Berthier, Senior Lawyer at ClientEarth, an organisation of activist lawyers committed to securing a healthy planet. More info: http://www.clientearth.org. info@clientearth.org

Sarah Brockmann, B.A., graduate student of international economics, Georg-August-Universität Göttingen, Germany. sarah.brockmann@stud.uni-goettingen.de

Andrea Carta, LL.M, legal strategist at Greenpeace - European Unit, Brussels. The views expressed in his article are his own. Andrea.Carta@greenpeace.org

Elizabeth Dooley, JD, LL.M. (Attorney), Researcher at the Ecologic Institut, Berlin. elizabeth.dooley@ecologic.eu

Nicoletta Dotti, Environment Protection Regional Agency (ARPA) Lombardia, IT - Director General Staff member. N.DOTTI@arpalombardia.it

Floor Fleurke, Assistant Professor for Environmental Law, Tilburg Law School, Tilburg University, the Netherlands. f.m.fleurke@tilburguniversity.edu

Ennid Roberts, LL.M. (Assessor iuris), Researcher at the Ecologic Institut, Berlin. ennid.roberts@ecologic.eu

Giuseppe Sgorbati, Environment Protection Regional Agency (ARPA) Lombardia, IT - Scientific Director and Coordinator of Water and Land Team in IMPEL (see: http://impel.eu/). G.SGORBATI@arpalombardia.it

Jonathan Verschuuren, Professor of International and European Environmental Law, Tilburg Law School, Tilburg University, the Netherlands. J.M.Verschuuren@uvt.nl

Land degradation neutrality under the SDGs: National and international implementation of the land degradation neutral world target

Elizabeth Dooley, Ennid Roberts and Stephanie Wunder

1 Introduction*

On World Soil Day, December 5, 2013, the UN General Assembly announced that 2015 marked the 'International Year of Soils'.[1] This announcement aimed to promote the protection of soil and increase awareness and understanding of its importance.[2] It seems that soil is now, after decades defined by a lack of attention and awareness, finally receives a greater degree of the much-needed consideration. Examples of this development include the establishment of the Global Soil Partnership (2012), the Intergovernmental Technical Panel on Soils (2013), the 'Economics of Land Degradation' publication (2013) and the annual organisation of the Global Soil Week (as of 2012).

The agreed language in the 2012 outcome document of the Rio+20 UN Conference on Sustainable Development – 'The Future We Want' – also shows a high level of ambition: the heads of states and governments "*recognize the need for urgent action to reverse land degradation. In view of this we will strive to achieve a land degradation neutral world in the context of sustainable development*".[3] Furthermore, and of great importance, 'land degradation neutrality' and the need for 'sustainable land management' is also a target in the Sustainable Development Goals (SDGs), as adopted by the UN summit in New York in September 2015.

In 2015, two major events in particular can, potentially, help promoting awareness and contributing to the ongoing debate: (1) the UN summit for the adoption of the post-2015 development agenda that was held in New York in September 2015, and (2) the 12th session of the Conference of the Parties (COP12) to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification (UNCCD), held in Ankara in October.[4] However, it remains open whether that political momentum will be translated into legal requirements and policy frameworks that ensure the better protection of soils. To date, compared to other environmental issues (such as biodiversity, climate change, and air or marine pollution), land and soil have been held to be "*the poor cousins in the context of the development of international environmental law.*"[5]

Against that background, this article explores how the current momentum in international soil policy can be used to promote sustainable land use and reduce land degradation, particularly through the SDG process and using UN Conventions. It puts a special emphasis on the opportunities and challenges of the concept of 'land degradation neutrality'. Firstly, this article addresses the background on the pressing issue of land degradation. Secondly, it deals with the adopted SDGs and the inclusion of a target for land degradation neutrality. Thirdly, national implementation of the SDGs will be addressed including the need for countries to analyse their legislation and policies to determine whether they support land degradation neutrality. International conventions may direct more action toward and potentially increase the consistency and effectiveness of measures to accomplish the SDG targets, posing another avenue which could contribute to the achievement of land degradation neutrality. Particular emphasis is given to the UNCCD and the

* The authors would like to thank Harald Ginzky (Umweltbundesamt, UBA) for his valuable contributions provided prior to this publication on different occasions. Furthermore, the authors wish to emphasize that this article is based on a project funded by the UBA, resulting in the report S. Altvater, E. Dooley and E. Roberts, Legal Instruments to implement the objective "Land Degradation Neutral World" in International Law (2014), http://www.umweltbundesamt.de/en/publikationen/legal-instruments-to-implement-the-objective-land, and the publication E. Dooley, E. Roberts and S. Wunder, Rechtliche Instrumente zur Operationalisierung des Ziels der Land Degradation Neutral World, Zeitschrift für Umweltrecht (ZUR), Heft 4, 209-213 (2015).

1 UN News Centre, Spotlighting humanity's 'silent ally,' UN launches 2015 International Year of Soils, http://www.un.org/apps/news/story.asp?NewsID=49520#.VbI79Ub-vTo; UN General Assembly Resolution 68/232, http://www.un.org/en/ga/68/resolutions.shtml.

2 UN News Centre, Sustainable soil management key to curbing climate change and ensuring food security, (2015), http://www.un.org/apps/news/story.asp?NewsID=51236#.Va5JxkYS7hA.

3 UN General Assembly, Resolution adopted by the General Assembly on 27 July 2012, 66/288. The future we want, para. 1.

4 For the climate sector, another major event is, of course, the 21st session of the Conference of the Parties (COP21) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) held in Paris in December 2015. It is important to note that COP21 also has the potential of furthering the ongoing soil protection debate. Given that soil plays a crucial role in terms of carbon sequestration, it does not come as a surprise that this is addressed in several proposals and debates in the run-up to COP21. For example, the French Minister for Agriculture, Stéphane Le Foll, has initiated a debate on how to increase the amount of carbon stored in soil by an annual four parts per thousand, i.e. the amount estimated to be sufficient to offset global GHG emissions, see Contribution de l'agriculture à la lutte contre le changement climatique: lancement d'un projet de recherche international: le «4 pour 1000» (2015), http://agriculture.gouv.fr/contribution-de-lagriculture-la-lutte-contre-le-changement-climatique-lancement-dun-projet-de; J. Weigelt, Boden bewegt! Plädoyer für einen Bodenschutz-Dialog, movum. Briefe zur Transformation, Heft 6 (2015); in addition, several other fora address land degradation in the context of COP21, see, for example, FAO, COP 21 Paris: three innovative proposals from Italy, A statement by FAO Director-General José Graziano da Silva (2015), http://www.fao.org/about/who-we-are/director-gen/faodg-statements/detail/en/c/284743/.

5 B. Boer/I. Hannam, Developing a Global Soil Regime, Legal Studies Research Paper No. 14/85, (2014), International Journal of Rural Law and Policy.

UN Convention on Biological Diversity (CBD) as the theoretically most appropriate conventions which may further the accomplishment of land degradation neutrality by adoption of stronger land-related obligations. Based on the preceding discussion, the paper will conclude with issues, concerns and suggestions for the future to strive for land degradation neutrality.

2 Drivers and impacts of land degradation

To halt and reverse land degradation will be essential for human wellbeing: There is a growing demand for fertile soil for food production as well as land area for physical construction (e.g. cities, infrastructure) to support an increasing global population. At the same time the extent of degraded land is increasing.[6]

Land degradation has been legally defined at the international level. Under Art. 1(f) UNCCD, land degradation is held to mean a *"reduction or loss, in arid, semi-arid and dry sub humid areas, of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns […]."*

Various soil threats which contribute to land degradation have been identified globally, including loss of soil organic matter, erosion, compaction, contamination, sealing, salinisation, landslides, flooding and desertification.[7] The presence and impacts of these threats are important to recognize since soils are a limited and non-renewable natural resource. Land degradation thus has numerous natural and anthropogenic causes. It can be the result of, for example, agricultural mismanagement or drought. Land degradation can also result from certain food subsidy policies, overgrazing, cultivation of monocultures, soil salinisation, excessive use of fertilizers and pesticides or agricultural activities on slopes leading to soil erosion.[8] Deforestation and poor soil fertility management lead to a loss of soil nutrients and are deemed to be a leading cause of anthropogenic land degradation. In addition, soil erosion can be triggered by wind and rain storms and extreme weather events. Also, wildfires occurring under hot and dry conditions can lead to a loss of biodiversity and soil erosion.[9]

Socio-economic and human rights implications of land degradation

In addition to its immediate environmental impacts, the issue of land degradation entails numerous other problems of different natures. Its financial impact, for instance, is deemed to amount to costs of approximately US$490 billion per year, and it affects the health and livelihoods of roughly 1.5 billion people (i.e. approximately 20% of the world's population).[10] A study by the Global Mechanism supported by the World Bank highlighted the negative economic impacts of land degradation due to the lack of sustainable land management, with losses averaging between 3-7% agricultural GDP.[11]

While land degradation is an issue of global relevance affecting different nations and geographical regions in different ways and to varying degrees, certain regions and states, including those that are already particularly affected by poverty and exhibit marginalized populations, are particularly vulnerable to the impacts of land degradation. Moreover, land degradation is clearly linked to distinct governance patterns: land degradation is particularly prominent in countries in which bad governance has reduced government effectiveness, while a reduction in land degradation occurs in areas where government effectiveness has increased.[12]

What is more, land degradation has immediate and serious human rights implications and can affect the realization of human rights such as the right to food or the right to health. This human rights dimension of land degradation has triggered debates about and calls for a human rights based approach to the issue.[13] In this context, it is noted that it is a 'moral imperative' to improve human well-being by protecting soil, which has become a critical aspect of human rights.[14] Most recently, the human rights implications of land and soil degradation gained further momentum through a statement made by the Secretary-General of the United Nations, Ban Ki-Moon, who highlighted

6 The distinction between soil and land generally recognises soil as more narrowly referring to a specific component of a land-based environmental system, whereas land more broadly refers to an integrated ecosystem combining soil, water, climate, land, landscape, terrain and vegetation, M.R. Carter, Concepts of Soil Quality, 1996 (with further references).

7 See, for example, Global Assessment of Human-induced Soil Degradation (GLASOD) project, UN Environment Programme (1987-1990); EU Soil Thematic Strategy, COM(2006)231 final; Intergovernmental Technical Panel on Soils (ITPS) (forthcoming) Status of the World Soil Resources Report.

8 Gesellschaft für Internationale Zusammenarbeit (GIZ), Verlieren Sie nicht den Boden unter Ihren Füßen! – Wie man den Wert unseres Bodens bestimmt, https://gc21.giz.de/ibt/var/app/wp342P/1522/index.php/der-wert-unseres-bodens/.

9 E. Nkonya, W. Anderson, Exploiting provisions of land economic productivity without degrading its natural capital, Journal of Arid Environments (JoAE) 112, 33-43 (2015).

10 UNCCD, Land Degradation Neutrality, Resilience at Local, National and Regional Levels (2015); a recent study published by ELD also addresses interesting aspects regarding the value of land, see ELD Initiative, the value of land: Prosperous lands and positive rewards through sustainable land management, available at www.eld-initiative.org.

11 L. Berry, J. Olson, D. Campbell, Assessing the Extent, Cost and Impact of Land Degradation at the National Level: Findings and Lessons Learned from Seven Pilot Case Studies (2003).

12 I. Lobos Alva, The governance challenge of a land degradation neutral world, CGIAR (2013).

13 See, for example, Secretariat of the UNCCD in cooperation with the Swiss Agency for Development and Cooperation, Human Rights and Desertification, Exploring the Complementarity of International Human Rights Law and the UNCCD, Issue Paper No. 1 (2008), p. 23.

14 See, for example, B. Boer/A. Boyle, Human Rights and the Environment, Legal Studies Research Paper No. 14/14 (2014), p. 6.

that "*[l]and degradation and desertification undercut human rights, starting with the right to food. Nearly 1 billion people lack adequate nutrition, and those living off degraded areas are among the most affected. Their situation could worsen if land degradation, as projected, reduces global food production by 12 per cent by 2035.*"[15]

Amongst the major issues in this context are involuntary migration of people from productive lands into marginal ecological and economic areas, unregulated or under-regulated use of agricultural pesticides and fertilizers, the contamination of land and water resulting from the escape of toxic chemicals from industrial sites or 'land grabbing'. This is the large scale acquisition (purchase or lease) of fertile agricultural lands in developing countries by investors, frequently (but not exclusively) private ones from developed countries.[16]

Against that background, the UNCCD Secretariat has invited states: "*[I]n accordance with their domestic legal and policy framework, to include provisions in their domestic law, possibly including constitutional or legislative review that facilitates the progressive realization of human rights such as the right to life, food and water in the context of the combat of DLDD [Desertification, Land Degradation and Drought]*".[17]

Given the broad array of negative impacts resulting from land degradation and the fact that soil is basically a non-renewable resource once degraded to the point that all functions are lost, the need for action to address this problem is urgent. Different policy options have been recommended to increase soil protection and prevent land degradation. Two of the most important ones will be discussed in detail below: (1) implementing a land degradation neutrality target under the SDG regime and (2) the adoption of new legal obligations, e.g. under the UNCCD regime.

3 SDGs and land degradation neutrality

The 2012 UN Conference on Sustainable Development in Rio de Janeiro (Rio+20 Conference) resulted in an agreement of the international community to aim for a 'land degradation neutral world'. In the final document of the Rio+20 Conference – 'The Future We Want' – the Heads of State and Government renewed their "*commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations*."[18] Furthermore, it is stressed in the document that: "*desertification, land degradation and drought are challenges of a global dimension and continue to pose serious challenges to the sustainable development of all countries, in particular developing countries. […] We recognize the need for urgent action to reverse land degradation. In view of this, we will strive to achieve a land-degradation-neutral world in the context of sustainable development.*"[19]

This commitment was accompanied by an agreement to launch a process to develop the SDGs to succeed the Millennium Development Goals (MDGs)[20] and contribute to the global development agenda for the post-2015 period. At the Rio+20 Conference, it was decided to establish an "*inclusive and transparent intergovernmental process open to all stakeholders, with a view to developing global sustainable development goals to be agreed by the General Assembly*".[21] This resulted in the Open Working Group of the UN General Assembly on Sustainable Development Goals, established in January 2013.

3.1 UN Open Working Group proposals for SDGs

In June 2014, the Open Working Group proposed 17 SDGs along with a set of 169 targets complementing the goals.[22] This proposal guided the intergovernmental negotiations over the course of the next year, resulting in the UN Sustainable Development Summit in September 2015 where the post-2015 development agenda was adopted.[23] Goal 15 is of immediate relevance for the issue of land degradation. It reads as follows: "*Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.*"

As one of the specific targets under this goal, target 15.3 goes into further detail with regard to addressing land degradation neutrality: "*By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.*"[24]

Generally, this target of achieving a land degradation neutral world (LDNW) and its temporal component

15 UN Secretary-General Ban Ki-moon, Message on World Day to Combat Desertification: Invest in healthy soils (2015), http://www.un.org/sg/statements/index.asp?nid=8730.

16 See, for example, B. Boer, Environmental Law Dimensions of Human Rights (2015), p. 159; see also, for example, J. von Braun/R. Meinzen-Dick, "Land Grabbing" by Foreign Investors in Developing Countries: Risks and Opportunities, IFPRI Policy Brief 13 (2009).

17 Ben Boer, *supra* note 17, p. 160; J. Ziegler, Message from UN Special Rapporteur on the Right to Food, in Human Rights and Desertification: Exploring the Complementarity of International Human Rights Law and the UNCCD (UNCCD Secretariat, ed., 2008) 7.

18 UN General Assembly, Resolution adopted by the General Assembly on 27 July 2012, 66/288. The future we want, para. 1.

19 Ibid., para. 206.

20 See for details, for example, UN, News on MDGs, http://www.un.org/millenniumgoals/.

21 UN General Assembly, *supra* note 19, para. 248.

22 UN OWG on SDGs, Introduction and Proposed Goals and Targets on Sustainable Development for the Post 2015 Development Agenda (2014), http://sustainabledevelopment.un.org/content/documents/4523zerodraft.pdf.

23 UN General Assembly, Decision adopted by the General Assembly on 18 September 2015, 70/L.1. Transforming our world: the 2030 Agenda for Sustainable Development.

24 UN OWG on SDGs, *supra* note 23.

are regarded as ambitious,[25] having evolved through various debates and initiatives, such as the Zero Net Land Degradation (ZNLD) target developed under the UNCCD.[26] Yet the target fails to address means to achieve the target.[27] Additionally, the target had been proposed to aim for land degradation neutrality by 2020, which in the end was replaced by a 2030 target, reducing its level of ambition.[28]

3.2 Other SDGs and targets of relevance for land and soil

In addition to Goal 15 and target 15.3, other SDGs and targets are of indirect relevance in this context as their realization will impact land or depends on the approach to land and land degradation. As stated above, land degradation has manifold socio-economic and human rights implications. Accordingly, a number of goals expressly mention the relevance of land. Goal 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture), for example, links hunger to soil quality in target 2.4, noting that sustainable and resilient agricultural practices should be implemented by 2030 and progressively enhance soil quality. Furthermore, Goal 3 (Ensure healthy lives and promote well-being for all at all ages) highlights in target 3.9 that to this end, the number of deaths and illnesses from, inter alia, soil pollution needs to be substantially reduced by 2030. Also, Goals 7 (Ensure access to affordable, reliable, sustainable and modern energy for all), 11 (Make cities and human settlements inclusive, safe, resilient and sustainable) and 12 (Ensure sustainable consumption and production patterns) have clear links to land and soil quality.[29] Further goals worth mentioning for the purpose of highlighting the cross-cutting nature and interdependency of the SDGs are goals 1 (End poverty in all its forms everywhere), 6 (Ensure availability and sustainable management of water and sanitation for all) or 13 (Take urgent action to combat climate change and its impacts).

It remains to be seen how these interconnections are dealt with in practice. Yet it is becoming increasingly clear that the SDGs' implementation will require an integrated, coherent approach, with consistent targets in different policies and sectors, including energy, consumption and agriculture.[30]

4 National implementation of the SDGs and land degradation neutrality

Now that the SDGs have been adopted, implementation depends on the individual nations: they need to take action to effectively implement laws, policies, strategies and plans that will achieve the SDGs according to the target by the proposed deadline. Unlike the MDGs, the SDGs also apply to industrial states and emerging economies.

Goal 17 provides that countries should "*Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development*".[31] Various targets are proposed to support developing countries' implementation, including financing, technology collaboration and access, and capacity building. Additionally, all countries are to enhance their policy coherence for sustainable development and more specifically implement trade preferences for the least developed countries.

With regards to the land degradation neutrality target, countries will need to implement the outcome of the September 2015 summit at the respective national level. It remains to be seen in what ways countries choose to implement the SDGs, how they will deal with synergies and trade-offs between the targets (e.g. between land demanding targets for biomass for energy, food, urban areas and nature protection), on what level the goals will be implemented, whether and how they will be regionally adapted or what indicators countries will choose to measure progress. Germany, for example, decided to implement the SDGs in a first step through an update and revision of its national Sustainability Strategy ('Nachhaltigkeitsstrategie') in 2016.[32]

The interconnections between the different SDGs as well should feed into countries' reviews of their laws and policies' impacts on land degradation. As a standalone target, policies and laws regarding land use may

25 Caspari, T., G. van Lynden, Z. Bai, Land Degradation Neutrality: An Evaluation of Methods, German Federal Environment Agency Report No 002163/E (2015).

26 The ZNLD target was part of the proposal from the UNCCD for adoption at the Rio+20 Conference. It proposed to be achieved by "*(a) managing land more sustainably, which would reduce the rate of degradation; and (b) increasing the rate of restoration of degraded land, so that the two trends converge to give a zero net rate of land degradation*". UNCCD, *supra* note 11.

27 See S. Bauer/K. Meijer, Goal 15, in: The SDGs of the Post-2015 Agenda: Comments on the OWG and SDSN Proposals (Markus Loewe and Nicole Rippin (eds.), German Development Institute).

28 UN General Assembly, *supra* note 24, p. 25. See also F. Dodds, Proposed Revision of some SDG Targets by the Co-Chairs (2015), http://earthsummit2012.blogspot.de/2015/05/proposed-revision-of-some-sdg-targets.html; A. Grainger, Is Land Degradation Neutrality feasible in dry areas?, JoAE 112, 14-24 (2015) (highlighting the likelihood that the 2020 target would be revised to a 2030 target before the final SDGs were adopted).

29 Target 11.7a indirectly combats the threat of soil sealing by targeting sustainable land use planning. Target 12.2 aims to achieve sustainable management and efficient use of natural resources by 2030; Target 12.3 then targets food waste as the inefficient use of land resources to produce food that does not effectively contribute to food security; and Target 12.4 aims to reduce releases to air, water and soil of chemicals and wastes by 2020, thereby combatting the threat of soil contamination.

30 For details of this debate, see for example, S. Bauer, I. Dombrowsky and I. Schulz, Post 2015: Die Verhandlung der Sustainable Development Goals für eine ambitionierte globale Entwicklungsagenda nutzen! DIE, Analysen und Stellungnahmen (2014); C. Brandi, C. Richerzhagen and K. Stepping, Post 2015: Warum ist der Wasser-Energie-Land-Nexus für die künftige Entwicklungsagenda wichtig?, DIE, Analysen und Stellungnahmen (2013).

31 UN General Assembly, *supra* note 24, p. 26.

32 See http://www.bundesregierung.de/Content/DE/StatischeSeiten/Breg/Nachhaltigkeit/0-Buehne/2015-07-03-ein-zukunftsvertrag-fuer-die-Welt.html;jsessionid=6A5BFC845C154FFF1E56B859E5E6FC29.s3t2.

be judged to be insufficient, but the fact that they may counteract efforts to accomplish the SDG to eradicate poverty, for instance, heightens the importance of adequately considering whether revisions are necessary in order to work towards multiple different SDG targets.

A crucial question will also be how developed countries will address issues of global responsibility. For example: How will a developed country like Germany implement a target on food security or land degradation that are less of a problem in Germany but that are directly linked to consumption patterns in Germany ("virtual land imports")?

In order to find regionally adapted answers to this question, analyses are required of existing laws and policies including a gap analysis compared to SDG requirements. These will indicate whether or not new provisions or revisions of existing provisions are necessary.

4.1 Implementing land degradation neutrality under the SDGs – Overcoming existing challenges

There are several challenges which must be overcome in order to promote land degradation neutrality.[33] Thus far, there is no formally accepted definition of LDNW, yet it can be understood an as approach to reaching a balance between the future degree of land degradation and the restoration of degraded land.[34] A working definition of land degradation neutrality (LDN) states that it is: "*a state whereby the amount of healthy and productive land resources, necessary to support vital ecosystem services, remains stable or increases within specified temporal and spatial scales*."[35]

The UNCCD has noted that neutralizing land degradation would entail "*a global shift in land stewardship such that degradation of new areas is avoided, and unavoidable degradation is offset by restoring an equal amount of already degraded land in the same time and in the same ecosystem*."[36] The UNCCD also decided to set up an Intergovernmental Working Group (IWG) to "*establish a science-based definition of land degradation neutrality in arid, semi-arid and dry sub-humid areas*."[37]

The IWG released a draft final report in June 2015 with the proposed definition for consideration by COP12 in October.[38] Issues under debate are whether or not to restrict the definition to the 'affected areas' under the Convention and to 'arid, semi-arid and dry sub-humid areas'.

While the IWG has offered a global definition of land degradation neutrality, it has also recognised that as a SDG target it will be implemented at the national level. Also, its overarching "*objective is to maintain or even improve the amount of healthy and productive land resources over time and in line with national sustainable development priorities*".[39] This suggests that the definition of 'land degradation neutrality' varies with the different contexts of each country and their existing levels of healthy land resources as well as what is considered appropriate for their sustainable development.[40]

In addition to needing a more clearly defined understanding of LDN (in order to be able to define and measure the problem in a scientifically and legally meaningful way),[41] practical implementation necessitates clear indicators to measure land degradation. Suggestions as to the minimum requirements of these indicators have been made, including requirements such as being relevant, quantifiable, consistent and globally comparable.[42] From debates under the UNCCD it is, however, obvious that determining such indicators is already a contentious issue. This is due, among others to the concern about potential impacts on the national economic situation or sovereignty.[43]

33 In the past, especially under the UNCCD regime, suggestions have been developed as to the means and requirements to neutralise land degradation. See UNCCD Secretariat, Zero Net Land Degradation: A Sustainable Development Goal for Rio+20 (2012).

34 K. Ehlers, Soils, Food Security and Sustainable Land Management. Soils and Land in the Post-2015 Development Agenda (2015). This proposal is effectively the same as the ZNLD target mentioned above (Fn. 26).

35 UNCCD Intergovernmental Working Group (IWG), Advance Draft of the Report of the IWG on the follow-up to the outcomes of the United Nations Conference on Sustainable Development (Rio+20), (2015).

36 UNCCD, Global conference steps up action to move to a land-degradation neutral world, 2012, http://www.unccd.int/en/media-center/MediaNews/Pages/highlightdetail.aspx?HighlightID=145, emphasis added; S. Welton, M. Biasutti, M. B. Gerrard, Legal and Scientific Integrity in Advancing a Land Degradation Neutral World, Columbia Journal of Environmental Law (2015), http://www.columbiaenvironmentallaw.org/articles/legal-and-scientific-integrity-in-advancing-a-land-degradation-neutral-world.

37 UNCCD Decision 8/COP.11, Follow-up to the outcomes of the United Nations Conference on Sustainable Development (Rio+20), para. 1; see, for example, L. Gnacadja, New challenges in science and policies to Combat Desertification, JoAE 112 (2015) 1-4.

38 See IWG, Advance Draft of the Report of the IWG on the follow-up to the outcomes of the United Nations Conference on Sustainable Development (Rio+20) (2015), http://www.unccd.int/Lists/SiteDocumentLibrary/Rio+20/IWG%20on%20rio%2020/ADVANCE%20DRAFT%20IWG%20Report_01_June_2015.pdf.

39 UNCCD, Land degradation neutrality, FAQs, http://www.unccd.int/en/programmes/RioConventions/RioPlus20/Pages/LDNFAQ.aspx.

40 Similarly, it has been argued that soil governance to enhance the synergies and reduce possible trade-offs in ecosystem services from soil use over time and in different locations is to be a socially constructed concept that varies based on the local, regional and national context. Implementation thus involves political and societal choices or normative judgments as to what to prioritise, or other considerations. J. Weigelt, et al., Pathways Towards Sustainable Soil and Land Governance: Discussing the Contribution of the Global Soil Week. IASS Working Paper (2013), p.8.

41 S. Welton et al., *supra* note 37.

42 K. Ehlers, *supra* note 35.

43 RTCC, USA and Brazil block talks at UN desertification summit, http://www.rtcc.org/2013/09/26/usa-and-brazil-block-talks-at-un-desertification-summit/.

4.2 Example legal instruments for uptake at the national level

Despite the fact that the concept of 'land degradation neutrality' still lacks a common definition and indicators, it is already possible to outline some general categories of legal instruments that can contribute to the implementation of land degradation neutrality. Building on a recent report for the German Federal Environment Agency, selected potential instruments for incorporation into national legislative frameworks are listed below.[44]

- Permitting schemes could be adopted for activities potentially harmful to soil, e.g. for handling wastes setting up industrial installations, converting wetlands to other uses, etc.[45];
- A baseline report could be required documenting the status of soil and groundwater before a potentially harmful activity is started, combined with the obligation to remediate negative effects after the cessation of the operation, so as to achieve the former status of soils and groundwater;
- Conservation compliance measures could be made mandatory in exchange for government payments, e.g. for agricultural production;
- Land use planning could be instituted for urban/rural designated uses as well as protected areas;
- Land/soil of specific values could be given special protection status;
- Areas which are already degraded could be prioritised for primary use;
- Offsetting for potential degradation could be required during the planning phase, requiring already degraded land elsewhere to be restored in exchange for the ability to degrade that parcel;
- An obligation could be created to remediate existing land degradation (e.g., brownfields);
- Funding mechanisms could be instituted to provide support for private actors to manage land using sustainable practices or remediating degradation, e.g. through cost-sharing, low-interest loans, or partial reimbursement by the government, and innovative economic instruments;
- A procedural mechanism could be introduced requiring consideration of environmental impacts during decision-making processes, i.e. EIA and SEA;
- Land/soil and water quality standards could be set, requiring land-based modifications to reduce non-point source pollution levels.

5 International obligations to combat land degradation neutrality

Another avenue for strengthening the focus on and possibly the implementation of land degradation neutrality is the incorporation of international obligations into one or multiple conventions. Within existing instruments of international environmental law, soil is "*poorly catered for*".[46] There is no coherent land (use) policy, nor an instrument that deals specifically and exclusively with land (degradation) on a global basis and accounts for the global relevance.[47] Three UN Conventions are land-relevant to varying degrees: the three 'Rio Conventions' adopted at the 1992 UN Conference on Environment and Development in Rio, the UNFCCC, the CBD and the UNCCD.[48]

The UNFCCC aims at "*prevent[ing] dangerous anthropogenic interference with the climate system*" (Art. 2 UNFCCC). It has a number of provisions that are of relevance for the prevention of land degradation, such as Art. 3(3) UNFCCC requiring parties to "*anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects*" on all relevant sinks and reservoirs of greenhouse gases, which include land, soil and forests; however, these rules are not focused on land as such but tailored to the context of mitigating and adapting to climate change.[49] Integrating the LDNW target into the UNFCCC as a coordinated approach fits within the purview of the convention due to the extremely large role that terrestrial carbon plays in the climate cycle and the need for land-based adaptation measures globally.[50]

The CBD has three main objectives: "*the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources*" (Art. 1 CBD). Like the UNFCCC, it has provisions of (indirect) relevance for land and land degradation. Art. 6 CBD, for example, contains rules on "*general*

44 For an in-depth analysis of the three case study countries (Germany/EU, US, and Brazil) and the national instruments identified, see Altvater et al. (2015), *supra* note 1.

45 The first two example schemes may help combat the soil threat of contamination, and permitting for converting wetlands may help prevent decline of organic matter as well as address climate change by preventing large greenhouse gas emissions.

46 B. Boer/I. Hannam, *supra* note 6.

47 U. R. Fritsche, U. Eppler, D. Heyen, L. Iriarte, T. Kaphengst, S. Laaks, A. Lutzenberger, F. Wolff, S. Wunder, Resource-Efficient Land Use – towards a Global Sustainable Land Use Standard (GLOBALANDS) (2015), https://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/texte_82_2015_resource_efficient_land_use.pdf.

48 For details on the land-related references of the three Rio Conventions, see, for example, H. Ginzky, Bodenschutz weltweit – Konzeptionelle Überlegungen für ein internationales Regime, ZUR, Heft 4, 199-208 (2015) (203; 207).

49 See Altvater et al. *supra* note 1, p. 94; further examples are Art. (4)(1)(d) UNFCCC, which requires all parties to promote sustainable management of sinks and reservoirs, or Art. (4)(1)(e) UNFCCC, which requires all parties to develop plans for the "*protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods*".

50 H. Victoria, S. Banwart, H. Black, et al., The Benefits of Soil Carbon: Managing soils for multiple economic, societal and environmental benefits. UNEP Year Book (2012).

measures for conservation and sustainable use" but with regards to biodiversity rather than land.[51] Soil biodiversity is greatly affected by land degradation, as degradation destroys the rich diversity of microorganisms that contribute to soil organic matter, soil quality and productivity (e.g. improved soil structure, nutrient availability).[52] The CBD's two protocols, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, are not of direct significance for land degradation. However, many of the Aichi Biodiversity Targets for improving implementation of the CBD may contribute to land degradation neutrality, e.g., Target 7 which is aimed at sustainable management of areas under agriculture and forestry by 2020, thereby conserving biodiversity and preventing degradation, as well as Target 14 which aims toward ecosystem restoration by 2020.

The UNCCD, in contrast, directly encompasses combatting land degradation as part of the definition of desertification within the objective of the convention and has well-defined references to and implications for land use and land degradation.[53] Its objective is "*to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, […] with a view to contributing to the achievement of sustainable development in affected areas*", with combating desertification defined in part as "(i) prevention and/or reduction of land degradation; (ii) rehabilitation of partly degraded land; and (iii) reclamation of desertified land".[54] As mentioned, it also provides, in fact, a legal definition of 'land degradation' in Art. 1(f).[55]

However, despite its explicit references to land degradation, its greatest shortcoming in view of the land degradation neutrality target is that the UNCCD only addresses a fraction of the soil-related threats. This is because it focuses on desertification and is tailored to particular regions, i.e. 'affected areas' with drylands (as of 1994), and especially Africa.[56]

Protocol on land degradation neutrality under the UNCCD or the CBD?

Overall, it can be held that there are considerable gaps when it comes to having a legal instrument addressing all soil threats and the necessary means to achieve the land degradation neutral world target. Thus, it does not come as a surprise that this legal void has triggered debates on the adoption of an entirely new protocol, for example under the UNCCD[57] or the CBD[58], tailored to LDNW requirements, partly including detailed analyses of the potential requirements.[59] Such a protocol would "*make sure that governments promote and support sustainable land-use for the benefit of humankind*".[60] Lessons can be learnt from existing programmes aiming at 'zero net' degradation of other natural resources. Existing examples include the 'zero net deforestation by 2020', a target proposed by WWF and supported by 67 countries' delegates to the CBD in 2008[61], or the 'no net loss' wetlands policy embraced by the US government.[62] Such targets allow for modest future losses to meet development needs provided they can be 'offset' by restoration benefits.[63]

With regard to a potential new protocol on the LDNW target under the UNCCD, the issue under debate (as mentioned above) is whether such a protocol would be applicable to all countries (beyond those designated 'affected country parties' under the Convention). Developed countries carry obligations for funding and technology transfer upon which the affected country parties depend for fulfilment of their obligations. The suggestion for increased obligations integrated into the Convention in its current form has met with criticism regarding the scope of such an approach. Above all, namely that the obligations would be limited to the drylands Parties which are currently required to submit National Action Plans (NAPs). It has been argued that to expand LDNW obligations to the developed countries would go beyond the legal scope of the requirements for such country parties. However, with the introduction of a protocol, which acts as a binding

51 See Altvater et al. *supra* note 1, p. 94; another example is Art. 7, which aims at "*identify[ing] components of biological diversity important for its conservation and sustainable use*".

52 See V. Grubinger, Soil Organic Matter: The Living, the Dead, and the Very Dead, University of Vermont Extension Factsheet, http://www.uvm.edu/vtvegandberry/factsheets/soilorganicmatter.html.

53 Such as Art. 16 (Information collection, analysis and exchange), aimed to ensure systematic observation of land degradation.

54 Articles 1(b) and 2(1).

55 See section 3 above.

56 See F. Linz/I. Lobos Alva, Boden und Land in der internationalen Nachhaltigkeitspolitik – von der globalen Agenda zur lokalen Umsetzung, ZUR, Heft 4, 195-199 (2015) (197); it should be noted, however, that the UNCCD has initiated some steps that implicitly expand its mandate beyond the drylands, see P. Chasek, U. Safriel, S. Shikongo, V. Futran Fuhrman, Operationalizing Zero Net Land Degradation: The next stage in international efforts to combat desertification?, JoAE 112 (2015) 5-13(6).

57 See for details UNCCD, LDNW Expert Meeting (2013), www.unccd.int/en/programmes/RioConventions/RioPlus20/Pages/LDNW-Expert-Meeting.aspx; see I. Heuser, Legal options for integrating land and soil issues in the UNCCD, Deputy Chair of Specialist Group on Sustainable Soils and Desertification of IUCN World Commission on Environmental Law.

58 See for details F. Wolff/T. Kaphengst, Discussion Paper 'Exploring options for strengthening sustainable land use within the UN Convention on Biological Diversity', http://www.ecologic.eu/globalands/download.

59 See, for example, H. Ginzky, *supra* note 49 (206-208).

60 I. Stavi/R.Lal, Achieving Zero Net Land Degradation: Challenges and opportunities, JoAE 112, 44-51 (2015) (48; 50).

61 WWF, Zero Net Deforestation by 2020, Briefing Paper, http://awsassets.panda.org.

62 Welton et al., *supra* note 37.

63 A. Tal, The implications of environmental trading mechanisms on a future Zero Net Land Degradation protocol, JoAE, 112, 25-32 (2015); Tal analyses potential requirements, including financial mechanisms to ensure the implementation of land restoration measures, clear parameters for assessing land degradation, detailed plans with quantified objectives to be submitted to the relevant authorities, and soil rehabilitation efforts establishing the feasibility of the offset programme.

'new' legal convention under the umbrella of the former agreement, the signatory and ratifying parties could choose to set the scope to include developed and developing countries alike to fulfil obligations related to the LDNW target.[64]

Thematically, it makes the most sense to incorporate the LDNW target under the UNCCD rather than the other Rio Conventions. However, the UNCCD has also not been extremely effective with often weak obligations for the Parties. An example is the 10-Year Strategy, which was adopted to strengthen implementation of the Convention and more effectively halt the ongoing land degradation and desertification as intended. An Intersessional Working Group conducted a mid-term evaluation of the progress in implementing the Strategy in 2013, which found that only slight progress had been made toward effectively achieving the objectives by that point in time.[65] Thus, even if the UNCCD Parties did manage to adopt a protocol on land degradation neutrality, the issue remains how clear, targeted, ambitious, measurable, etc. its provisions would be. Therefore, even while thematically the UNCCD might be theoretically the first choice for strengthening sustainable land use within a UN Convention, the practically more promising way seems to be working through the CBD[66], even if this is a rather mid-term to long-term perspective.

6 Conclusions: The way forward to achieve land degradation neutrality

This article has highlighted the need to urgently address land degradation and the possibility to do so under both the SDGs and the UN's Rio Conventions in particular. The process to adopt the SDGs ended in September 2015 with the UN summit, and the primary provision which aims to affect the stringency with which land degradation is addressed is the LDNW language within target 15.3. There is a direct need for countries to examine their national legislative and policy frameworks for contribution to, ineffectiveness or gaps in addressing land degradation. Land degradation may also be addressed by countries which identify that problem as preventing the accomplishment of other SDGs within their territory.

Additionally, as countries must implement this target on a national level, the question now becomes what the target means and how we measure successful accomplishment of it. Existing indicators on land should be utilised with appropriate regard for differing country contexts. The ensuing debate within the UNCCD about whether the definition should be restricted to drylands or include all countries in the assessment of their drivers of and policies and laws addressing land degradation should be resolved in favour of the broadest solution. Additionally, climate change may drastically alter the extent to which land degradation advances in different parts of the world, so an inclusive definition which allows for flexibility in the countries' responses according to their individual contexts would be the most appropriate.

Similar to the UNCCD's COP11 in Windhoek, Namibia, the COP12 in Ankara offers an opportunity for the Parties to operationalise the LDNW target within the Convention. Given the extremely unlikely possibility of a completely new international convention being adopted for land and soil when the international community already has a convention focused on land and soil, albeit with the specific focus on degradation and desertification (which coincides quite well with the land degradation neutrality concept), it would be necessary to house the LDNW concept within one or multiple international conventions. The Rio Conventions offer the most appropriate set of conventions into which the target would fit and increase synergies. The UNCCD makes the most sense thematically as the main convention which should incorporate this target, and adoption of a protocol would be the best option to make a separate legally-binding agreement as to the ratifying Parties' obligations. However, given the low effectiveness of the convention, a multi-convention integrated approach, with a strong role of the CBD would likely be the most effective option to increase action at the international level.

Implementation of the land degradation neutrality SDG on the national level would benefit from a comprehensive, coherent set of international obligations. Not only would such an approach increase the focus on land degradation neutrality simply by having more obligations by which the Parties must abide, but it would also potentially increase the consistency of attention and urgency with which the countries address land degradation. Land degradation levels, drivers and impacts vary based on the country context, but if degradation can be avoided by attentive preventative action as much as possible, that would be a much better approach than waiting for severe land degradation to occur and then trying to address the problem by restoring what has been lost and preventing even more from occurring.

64 See Altvater et al., *supra* note 1.

65 UNCCD, Mid-term evaluation of the 10-year strategic plan and framework to enhance the implementation of the Convention (2008-2018), Report of the Intersessional Working Group, ICCD/COP(11)/21 (2013).

66 See F. Wolff/T. Kaphengst, *supra* note 59.

elni membership

If you want to join the Environmental Law Network International, please use the membership form on our website: http://www.elni.org or send this form to the elni Coordinating Bureau, c/o IESAR, FH Bingen, Berlinstr. 109, 55411 Bingen, Germany, fax: +49-6721-409 110, mail: Roller@fh-bingen.de.

DECLARATION OF MEMBERSHIP

"Yes, I hereby wish to join the Environmental Law Network International."

There is no membership fee. The PDF-version of elni Review is included.

If you want to receive the print version of the elni Review the fee is €52 per annum for commercial users and €21 per annum for private users and libraries.

Please indicate, whether you want to receive the elni Review as print version or PDF-version.
Please transfer the amount to our account at **Nassauische Sparkasse** – Account no.**: 146 060 611, BLZ 510 500 15,** IBAN: DE50 5105 0015 0146 0606 11; SWIFT NASSDE55.

Name:_____

Organisation:_____

Profession:_____

Street:_____

City:_____

Imprint

Editors: Regine Barth, Nicola Below, Claudia Schreider (née Fricke), Martin Führ, Gerhard Roller, Julian Schenten, Silvia Schütte

Editors in charge of the current issue:
Gerhard Roller and Julian Schenten

Editor in charge of the forthcoming issue:
Martin Führ (fuehr@sofia-darmstadt.de)

The Editors would like to thank **Vanessa Cook** (Öko-Institut) for proofreading the *elni Review*.

We invite authors to submit manuscripts to the Editors as files by email using an IBM-compatible word processing system.

The *elni Review* is the double-blind peer reviewed journal of the Environmental Law Network International. It is distributed once or twice a year at the following prices: commercial users (consultants, law firms, government administrations): € 52; private users, students, libraries: € 30. Non-members can order single issues at a fee of € 20 incl. packaging. The Environmental Law Network International also welcomes an exchange of articles as a way of payment.
The *elni Review* is published with financial and organisational support from Öko-Institut e.V., and the Universities of Applied Sciences in Darmstadt and Bingen.

Öko-Institut e.V.
Institut für angewandte Ökologie
Institute for Applied Ecology

The Öko-Institut (Institut für angewandte Ökologie - Institute for Applied Ecology, a registered non-profit-association) was founded in 1977. Its founding was closely connected to the conflict over the building of the nuclear power plant in Wyhl (on the Rhine near the city of Freiburg, the seat of the Institute). The objective of the Institute was and is environmental research independent of government and industry, for the benefit of society. The results of our research are made available of the public.
The institute's mission is to analyse and evaluate current and future environmental problems, to point out risks, and to develop and implement problem-solving strategies and measures. In doing so, the Öko-Institut follows the guiding principle of sustainable development.
The institute's activities are organized in Divisions - Chemistry, Energy & Climate Protection, Genetic Engineering, Sustainable Products & Material Flows, Nuclear Engineering & Plant Safety, and Environmental Law.

The Environmental Law Division of the Öko-Institut:
The Environmental Law Division covers a broad spectrum of environmental law elaborating scientific studies for public and private clients, consulting governments and public authorities, participating in law drafting processes and mediating stakeholder dialogues. Lawyers of the Division work on international, EU and national environmental law, concentrating on waste management, emission control, energy and climate protection, nuclear, aviation and planning law.

Contact

Freiburg Head Office:
P.O. Box 17 71
D-79017 Freiburg
Phone +49 (0)761-4 52 95-0
Fax +49 (0)761-4 52 95 88

Darmstadt Office:
Rheinstrasse 95
D-64295 Darmstadt
Phone +49 (0)6151-81 91-0
Fax +49 (0)6151-81 91 33

Berlin Office:
Schicklerstraße 5-7
D-10179 Berlin
Phone +49(0)30-40 50 85-0
Fax +49(0)30-40 50 85-388

www.oeko.de

I·E·S·A·R
Institute for Environmental Studies and Applied Research
FH Bingen

The University of Applied Sciences in Bingen was founded in 1897. It is a practiceorientated academic institution and runs courses in electrical engineering, computer science for engineering, mechanical engineering, business management for engineering, process engineering, biotechnology, agriculture, international agricultural trade and in environmental engineering.

The *Institute for Environmental Studies and Applied Research* (I.E.S.A.R.) was founded in 2003 as an integrated institution of the University of Applied Sciences of Bingen. I.E.S.A.R carries out applied research projects and advisory services mainly in the areas of environmental law and economy, environmental management and international cooperation for development at the University of Applied Sciences and presents itself as an interdisciplinary institution.

The Institute fulfils its assignments particularly by:
- Undertaking projects in develop-ing countries
- Realization of seminars in the areas of environment and development
- Research for European Institutions
- Advisory service for companies and know-how-transfer

Main areas of research

- **European environmental policy**
  - Research on implementation of European law
  - Effectiveness of legal and economic instruments
  - European governance
- **Environmental advice in developing countries**
  - Advice for legislation and institution development
  - Know-how-transfer
- **Companies and environment**
  - Environmental management
  - Risk management

Contact

Prof. Dr. jur. Gerhard Roller
University of Applied Sciences
Berlinstrasse 109
D-55411 Bingen/Germany
Phone +49(0)6721-409-363
Fax +49(0)6721-409-110
roller@fh-bingen.de

www.fh-bingen.de

sofia

The Society for Institutional Analysis was established in 1998. It is located at the University of Applied Sciences in Darmstadt and the University of Göttingen, both Germany.
The sofia research group aims to support regulatory choice at every level of public legislative bodies (EC, national or regional). It also analyses and improves the strategy of public and private organizations.
The sofia team is multidisciplinary: Lawyers and economists are collaborating with engineers as well as social and natural scientists. The theoretical basis is the interdisciplinary behaviour model of homo oeconomicus institutionalis, considering the formal (e.g. laws and contracts) and informal (e.g. rules of fairness) institutional context of individual behaviour.

The areas of research cover
- Product policy/REACh
- Land use strategies
- Role of standardization bodies
- Biodiversity and nature conversation
- Water and energy management
- Electronic public participation
- Economic opportunities deriving from environmental legislation
- Self responsibility

sofia is working on behalf of the
- VolkswagenStiftung
- German Federal Ministry of Education and Research
- Hessian Ministry of Economics
- German Institute for Standardization (DIN)
- German Federal Environmental Agency (UBA)
- German Federal Agency for Na-ture Conservation (BfN)
- Federal Ministry of Consumer Protection, Food and Agriculture

Contact

Darmstadt Office:
Prof. Dr. Martin Führ - sofia
University of Applied Sciences
Haardtring 100
D-64295 Darmstadt/Germany
Phone +49(0)6151-16-8734/35/31
Fax +49(0)6151-16-8925
fuehr@sofia-darmstadt.de

www.h-da.de

Göttingen Office:
Prof. Dr. Kilian Bizer - sofia
University of Göttingen
Platz der Göttinger Sieben 3
D-37073 Göttingen/Germany
Phone +49(0)551-39-4602
Fax +49(0)551-39-19558
bizer@sofia-darmstadt.de

www.sofia-research.com

elni

In many countries lawyers are working on aspects of environmental law, often as part of environmental initiatives and organisations or as legislators. However, they generally have limited contact with other lawyers abroad, in spite of the fact that such contact and communication is vital for the successful and effective implementation of environmental law.

Therefore, a group of lawyers from various countries decided to initiate the Environmental Law Network International (elni) in 1990 to promote international communication and cooperation worldwide. elni is a registered non-profit association under German Law.

elni coordinates a number of different activities in order to facilitate the communication and connections of those interested in environmental law around the world.

Coordinating Bureau

Three organisations currently share the organisational work of the network: Öko-Institut, IESAR at the University of Applied Sciences in Bingen and sofia, the Society for Institutional Analysis, located at the University of Darmstadt. The person of contact is Prof. Dr. Roller at IESAR, Bingen.

elni Review

The elni Review is a bi-annual, English language law review. It publishes articles on environmental law, focussing on European and international environmental law as well as recent developments in the EU Member States. elni encourages its members to submit articles to the elni Review in order to support and further the exchange and sharing of experiences with other members.

The first issue of the elni Review was published in 2001. It replaced the elni Newsletter, which was released in 1995 for the first time.

The elni Review is published by Öko-Institut (the Institute for Applied Ecology), IESAR (the Institute for Environmental Studies and Applied Research, hosted by the University of Applied Sciences in Bingen) and sofia (the Society for Institutional Analysis, located at the University of Darmstadt).

elni Conferences and Fora

elni conferences and fora are a core element of the network. They provide scientific input and the possibility for discussion on a relevant subject of environmental law and policy for international experts. The aim is to gather together scientists, policy makers and young researches, providing them with the opportunity to exchange views and information as well as to develop new perspectives.

The aim of the elni fora initiative is to bring together, on a convivial basis and in a seminar-sized group, environmental lawyers living or working in the Brussels area, who are interested in sharing and discussing views on specific topics related to environmental law and policies.

Publications series

elni publishes a series of books entitled "Publications of the Environmental Law Network International". Each volume contains papers by various authors on a particular theme in environmental law and in some cases is based on the proceedings of the annual conference.

elni Website: elni.org

The elni website www.elni.org contains news about the network. The members have the opportunity to submit information on interesting events and recent studies on environmental law issues. An index of articles provides an overview of the elni Review publications. Past issues are downloadable online free of charge.

elni Board of Directors

- Martin Führ - Society for Institutional Analysis (sofia), Darmstadt, Germany;
- Jerzy Jendroska - Centrum Prawa Ekologicznego (CPE), Wroclaw, Poland;
- Isabelle Larmuseau - Vlaamse Vereniging voor Omgevingsrecht (VVOR), Ghent, Belgium;
- Marga Robesin - Stichting Natuur en Milieu, Utrecht, The Netherlands;
- Gerhard Roller - Institute for Environmental Studies and Applied Research (I.E.S.A.R.), Bingen, Germany.
- Delphine Missonne

elni, c/o Institute for Environmental Studies and Applied Research
FH Bingen, Berliner Straße 109, 55411 Bingen/Germany

www.elni.org