

CLIMATE AND SOCIAL JUSTICE

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*The views expressed in these articles are of the authors and may not necessarily represent the position of the Association.
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The International Review of Contemporary Law is a digital legal journal published by IADL. It does not follow the mainstream, but instead analyzes legal questions in their cultural, economical, political and social context.

The IADL International Review of Contemporary Law (IADL Review) is an online journal published three to four times a year by the International Association of Democratic Lawyers (IADL). A majority of the Editorial Board members participating in an IADL Review meeting decides on article acceptance. The IADL Editorial Board collectively decides on article acceptance. Authors are not included in Editorial Board communications. Authors must follow academic rules, and articles should not exceed 5.000 words. A short biography and an abstract should accompany the article, and submissions must be sent to review@iadllaw.net.

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Cover: *Human Steps - Plastic Feet*, by Bordalo II | 2021 | Photography by Miguel Portelinha

Introduction

Miguel Régio de Almeida

On the 16th of September, 2025, the Human Rights Council of the United Nations officially considered that the State of Israel is conducting genocide in Palestine¹ – the last stage of its ongoing practice of plain colonialism since the 1947 *Nakba*. In the same day, faithful to the Green Capitalism agenda and speaking 1 year after the *Draghi Report*,² the President of the Commission of the European Union, Ursula von der Leyen, stated that its Member States have to further increase their competitiveness, exploring their own natural resources, '[f]rom copper and cobalt mining in Finland, to lithium processing in Portugal, to battery recycling in Italy' - notwithstanding the deep impact to the ecosystem and local earthlings. In these days of the Capitalocene, the accumulation of wealth strives not only from expropriation, but also from plain dispossession, following the path that David Harvey has depicted. Day after day, governed by a few, the whole of Humanity is pushed to the rupture of the metabolic rift with Nature, as Marx predicted and John Bellamy Foster famously later recalled.

The present issue of the *International Review of Contemporary Law*, dedicated to the theme *Climate and Social Justice*, reflects precisely such *ZeitGeist*. Taking benefits from an intersectional approach, the reader can see how colonialism and ecocide go hand in hand: how environmental problems initiated decades ago have evolved ever more dangerously and how new challenges are emerging due to Climate Change. The reader will also learn new lessons that can help us all shape the World of tomorrow, with the conscience that a Common Planet demands a Common Good – and a common struggle.

In *El caso de Vieques y Puerto Rico bajo la Carta de la ONU (Parte I & Parte II)*, Dinorah La Luz relates how the military intervention in Puerto Rico is not only a case of current neocolonialism, but also one with deep ecological impact.

Differently, and especially aggravated by Climate Change, in *Access to Water in a Changing World: How to Protect the Environment and to Tackle Water Poverty - The Case of Iberia*, Rui Cortes sheds light into one of the key-problems that already plagues Portuguese and Spanish relations and will definitely haunt both populations in the near Future – a common problem, with a common solution.

Taking a step back in time but with a clear eye in the current times – and namely with the 'lithium processing' mentioned above at the political stage –, João Carlos Gralheiro teach us about a traditional (but not entirely exclusive) Portuguese legal regime regarding *Common Land and the Environment*, describing how Common Property has been regulated in that country, been attacked by the Central Government and defended by local populations.

Also with the Common Good in eyesight, Christine Altenbuchner and Robert Diendorfer enlighten us about *Climate Resilience and Social Justice in Agri-Food Value Chains: The Role of Female Actors and Regulation for Transformation*, providing a clear example of how intersectionality is needed not only in theory, but also in action, in order to face the ever growing ecological challenges.

Finally, Hans Geisslhofer provides us with an alternative vision for the carbon market, focusing in its counter-hegemonic potential, in his *Compensation climatique pour les paysans/paysannes du Sud : une vision réaliste?*

As we all know, Law can definitely be a tool of social change, not only of repression. To quote the physicist expert in Climate Change, Luís Fazendeiro,³ the ‘human experience is richer, more diverse and more unpredictable than any mere ideology or technocratic management scheme can determine. Ultimately, each of us is born on this Earth, lives for a few brief moments and departs, giving way to others. It is this chain of living beings, human and otherwise, in which all links are intrinsically connected, that must be protected at all costs! Everything else is madness.’ We are still in need of a new common sense to face the actual cultural hegemony – but we also believe that this present issue of the *Review* is another step in such direction.

PS: A special word of appreciation is due to Bordalo II and Patrick Chappatte, for allowing us to share their work, highlighting the connections between Art and Law – in the present case, between Art, Climate and Social Justice.

¹ See A /HRC/60/CRP.3, available at <<https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/sessions-regular/session60/advance-version/a-hrc-60-crp-3.pdf>> [Accessed 20 September 2025].

² See ‘Opening keynote speech by President von der Leyen at the ‘One Year After the Draghi Report’ Conference’, available at <https://ec.europa.eu/commission/presscorner/detail/en/speech_25_2102> [Accessed 20 September 2025].

³ Luís Fazendeiro, *Sobre a mudança. Justiça Climática e Transição Ecológica no Século XXI*, Outro Modo, Portugal, 2023, p. 274 (the translation is ours).



Geneva summit on plastic pollution fails

© Chappatte in *Le Temps*, Geneva (August 19, 2025) | www.chappatte.com

El caso de Vieques y Puerto Rico bajo la Carta de la ONU (Parte I & II)

Dinorah La Luz

Parte I

Luego de la Segunda Guerra Mundial, muchos de los países en vías de desarrollo, colonias de las potencias de la época, alcanzaron su independencia. La Asamblea General de la recién creada ONU, bajo la presión de las nuevas naciones, aprobó resoluciones como la Res. 1514(XV) o la “Declaración sobre la concesión de la independencia a los países y pueblos coloniales”. Esta resolución establece que el coloniaje es una violación de derechos humanos y que todos los pueblos tienen el derecho inalienable a la libertad, al ejercicio de la soberanía y a la libre determinación. En esa época se aprobaron también una serie de resoluciones, entre estas, una resolución para dejar de transmitir información a la ONU, esto es, la Resolución 1541(XV) que incluye unos principios rectores para determinar si existe o no la obligación de transmitir la información que se solicita en el inciso (e) del Artículo 73 de la Carta de la ONU. La Resolución 1541(XV) enumera las condiciones bajo las cuales se entiende que un territorio ha alcanzado un grado de gobierno propio que amerite que el país o Potencia Administradora tenga que informar o no a la Asamblea General. Gautier y Arguelles opinan que la Res. 748(VIII) no son formas de descolonizar sino formas para dejar de transmitir información.¹

Los Estados Unidos se ampararon en la Resolución 1541(XV), en la Resolución 748(VIII)² y en un plebiscito celebrado en Puerto Rico en 1967, para hacerle creer a la ONU que la situación colonial de Puerto Rico se había resuelto. El gobierno estadounidense sostuvo en 1953 que, con la creación del Estado Libre Asociado (ELA), ya no era necesario rendir informes al Comité Especial de Descolonización ni a otros organismos parte de la ONU. Por tal razón, la ONU sacó a Puerto Rico de la lista de territorios en la década del 1950. Posteriormente, en 1972, la ONU se vio forzada a volver a pasar juicio sobre el caso de Puerto Rico, aunque sin incluirlo en la lista de territorios, gracias a la presión ejercida por las organizaciones no gubernamentales (ONGs), los grupos independentistas y las denuncias de países progresistas sobre la situación colonial de Puerto Rico. La isla continuaba y aún continúa bajo los poderes plenarios del Congreso de los Estados Unidos.

Algunos países miembros de la ONU y del Comité de Descolonización lograron un consenso para la aprobación de más de 30 resoluciones para mantener el caso de Puerto Rico bajo revisión, a pesar de la oposición de los Estados Unidos. Posteriormente, hubo un cambio en la política de los Estados Unidos de América al admitir en un informe de Casa Blanca que el caso de Puerto Rico no estaba resuelto aún, evidenciando así el engaño a la comunidad internacional.

El caso de Puerto Rico se mantiene bajo la observación del Relator Especial y del Comité de Descolonización. Este es uno de los procedimientos que, tradicionalmente, se utilizan en el caso de Puerto Rico (que incluye a Vieques y a Culebra), utilizando el sistema bajo la Carta de la Organización de Naciones Unidas.

El caso de Vieques, una de las islas contiguas a la Isla Grande (Puerto Rico), es de particular interés. Si bien desde 2013 se comenzó a dismantlar la base militar en la cual la Marina de Estados Unidos, el Comando Sur y la OTAN, realizaban prácticas con balas vivas, quedan las bombas sin explotar, los tóxicos como el uranio reducido y las condiciones de salud sin resolver. Se detuvieron

los bombardeos debido a la desobediencia civil y a las protestas de todo el pueblo, pero queda el daño irreparable a la salud y al ambiente, sin poder obtener la compensación y reparaciones a cientos de personas. Este tema ambiental y los tratados que se aplican se trata más ampliamente en la Parte 2.

La militarización de Puerto Rico, Vieques y Culebra (islas municipios) no sólo acarrea violaciones a los derechos humanos, así como también cuestionamientos sobre falta de soberanía de la Isla y sobre los recursos. Al no tener representación en el Congreso de los Estados Unidos, ni mucho menos ante los organismos internacionales ni regionales, se recurrió al foro internacional con otros mecanismos disponibles a las ONGs. No poder tener una representación sobre las conversaciones regionales (en especial, en las islas del Caribe) sobre el medioambiente, en especial, sobre los efectos del cambio climático es algo que pone en peligro la propiedad, la salud y la vida misma.

En la primera parte de este ensayo se presentan los procedimientos y remedios que se utilizaron ante la anterior Comisión de Derechos Humanos (hoy, Consejo de Derechos Humanos de la ONU) para presentar las violaciones en Vieques, conforme a los instrumentos internacionales que obligan a los Estados Unidos,³ además de los procedimientos que se continúan utilizando bajo el Comité de Descolonización en la ONU de Nueva York.

Es necesario organizar la metodología para ilustrar los procedimientos utilizados, bajo dos grandes grupos:

(1) el sistema bajo la Carta de la ONU, esto es, el Consejo de Derechos Humanos, Procedimientos Especiales como grupos de trabajo, relatores especiales, expertos independientes, los procesos de revisión periódica universal, Investigaciones Independientes y aquellos incluidos en los sistemas regionales. El sistema bajo la Carta incluye también las decisiones, resoluciones y declaraciones de los órganos principales como la Asamblea General, y bajo ésta las del Consejo Económico y Social (ECOSOC), y de los organismos y agencias que responden a ambos.

Este sistema se trata en la Parte I bajo la Revista de IADL dedicada a la Carta de la ONU.

(2) el sistema bajo los tratados internacionales (tratados y mecanismos). El sistema bajo los tratados incluye los convenios de aplicación universal y multilaterales, además de los tratados temáticos (aplicados a los conflictos armados, mujeres, etc., y de sus respectivos comités.

Este sistema se trata en la Parte 2 bajo la Revista de IADL dedicada al ambiente.

Los instrumentos y los foros internacionales ratificados por los Estados Unidos incluyen- bajo el sistema de la Carta de la ONU- los siguientes.

La propia Carta de la ONU que dispone en su artículo 55 una serie de derechos fundamentales, entre los cuales se encuentran la autodeterminación de los pueblos, la igualdad de derechos sin distinción, las condiciones socioeconómicas y de salubridad adecuadas, y un aumento en el nivel de vida y de desarrollo. El artículo 56 obliga a los Estados Miembros de la ONU al cumplimiento de estos derechos establecidos.

La Carta de la ONU contiene un sistema de peticiones individuales (incluso para las ONGs) en el art. 87(b) del Consejo de Administración Fiduciaria. Como fuentes de información bajo este Consejo, se utilizan los informes anuales bajo la autoridad administradora, las misiones a los países y las peticiones individuales. Es bajo esta disposición que el Caso de Puerto Rico continúa bajo

observación.

Si bien el Consejo de Administración Fiduciaria cumplió su mandato, debido a que los 11 territorios que estaban bajo administración (según las disposiciones de los Capítulos XII y XIII de la Carta de la ONU), alcanzaron su independencia o se integraron con otros, dicho Consejo continúa existiendo como órgano de la ONU.

Distintas ONGs puertorriqueñas de derechos humanos recurren todos los años al Comité de Descolonización de la ONU en busca de apoyo internacional al problema colonial de Puerto Rico. En el 2000, luego de más de 60 años y más de 30 resoluciones, el Comité de Descolonización emitió una resolución,⁴ aprobada por unanimidad en su onceava (11va.) sesión del 12 de julio de ese año, condenando los bombardeos y lo que representaban en términos del peligro para la salud de la población y del ambiente en Vieques. Además, hizo un llamado a los Estados Unidos a que resuelva el problema de autodeterminación⁵ de Puerto Rico.⁶ Posteriormente, este Comité ha continuado denunciando las violaciones de derechos humanos de los viequeses y de Puerto Rico. El relator especial del Comité de Descolonización recopila la información sobre Puerto Rico mayormente mediante las entrevistas con las ONGs.

Decisiones, declaraciones y resoluciones

Además de todos instrumentos internacionales, las Decisiones, las Declaraciones y las Resoluciones pueden ser útiles a la hora de obligar a los Estados a cumplir con sus obligaciones, cuando se examina la manera en que votaron, o si no se opusieron durante la votación (formaría parte de la conducta del país o del *opinio juris*).

Una Decisión⁷ importante fue la de la Asamblea General 52/417 de 10 de dic. de 1997. Esta Decisión urge a los Estados que tienen colonias bajo su administración a que dismantelen las bases militares, y que no interfieran con el derecho de los pueblos a decidir libremente su condición política. Es, en este marco, que se presentaron las violaciones a los derechos humanos en Vieques y en Puerto Rico ante la ONU. Estados Unidos no sólo instaló aproximadamente 16 bases militares en todo Puerto Rico, así como también ha dejado los desperdicios tóxicos en el suelo con total impunidad.

Declaración de Viena de 1993 de la Conferencia Mundial de Derechos Humanos y su Programa de Acción.

Los delegados de los Estados Unidos estuvieron presentes y no objetaron, sino que se comprometieron al cumplimiento de los derechos humanos. En esta Declaración también se señaló el derecho al desarrollo y a la igualdad de oportunidades.⁸

Resoluciones de la Asamblea General de la ONU.

En cuanto a las resoluciones de la Asamblea General, es necesario verificar las votaciones: si son votaciones unánimes no hay duda de que serían parte del derecho consuetudinario y, por tanto, obligatorias. También es mandatorio el cumplimiento de los derechos fundamentales.

Desde la década de 1960, específicamente en la votación de la Resolución 2105(XX) del 20 de diciembre de 1965, se califica la práctica del 'apartheid' y el discrimen racial, y la continuación del colonialismo como una amenaza contra la paz. Estados Unidos votó 'en contra'.⁹

La Resolución 1514(XV) de 14 dic. 1960.

Esta Resolución es fundamental e invocada por los países que solicitan independencia (soberanía externa) y las poblaciones indígenas que solicitan autonomía (internamente). La Resolución 1514(XV) obtuvo la siguiente votación cuando se sometió: a favor: 89, en contra: 0; abstenciones: 9; Estados Unidos se abstuvo. Dos resoluciones adicionales¹⁰ de esa década del 1960, fueron la Resolución 2023(XX), la cual solicita la remoción de bases militares en territorios coloniales, y EE. UU. le votó en contra;¹¹ y, la Resolución 1803 (XVII) del 14 diciembre de 1962, que trata sobre la soberanía permanente de los recursos naturales. La votación de la Resolución 1803 (XVII) fue: a favor: 87; en contra: 2, abstenciones: 12. Estados Unidos votó: "a favor". Esta Resolución, en uno de sus "Considerando" reconoce el derecho inalienable de todos los estados a disponer libremente de sus riquezas y recursos naturales "conforme a sus intereses nacionales y respetando la soberanía económica de los Estados". Declara también que debe ejercitarse la soberanía permanente de todas las poblaciones y naciones tomando en cuenta el bienestar de la población. (Trad. ntra.)

La Resolución 41/128 de 4 dic. de 1986,¹² o la *Declaración sobre el Derecho al Desarrollo* obtuvo una votación de: 146- a Favor; abstenciones: 8, no votaron: 4, de un total de: 159. Estados Unidos fue el único país que votó en contra. Esta Declaración sobre el Derecho al Desarrollo, en su artículo 1, incisos (1) y (2) señala el desarrollo como derecho inalienable y reafirma el derecho a la autodeterminación y a la soberanía de sus riquezas y recursos naturales, según lo dispone el Convenio Político y el Convenio sobre Derechos Económicos y Sociales. A pesar de ser un tratado fundamental no ha sido ratificado por los Estados Unidos.¹³

En 1997, en conmemoración del aniversario del día en que se abrió para adhesión el Tratado de Tlatelolco en 1967, se adoptó sin votación la Resolución de la Asamblea General 52/45.¹⁴ Esta resolución revive la "Consolidación del Régimen Establecido por el Tratado de Prohibición de Armas Nucleares en Latinoamérica y el Caribe" o Tratado de Tlatelolco. En esa fecha también entró en vigor oficialmente el 14 de febrero de 1997 dicho Tratado, al alcanzar las 32 firmas requeridas en la región de América Latina y del Caribe. El Tratado propulsa unas "zonas libres de armas nucleares" y que se trabaje para el desarme de los países que las tengan (en obvia referencia a los Estados Unidos).

Conclusión y recomendaciones.

Ámbito Internacional

El procedimiento que se utilizó ante el sistema de la ONU en Ginebra para presentar la petición a favor de los viequenses ante el Alto Comisionado de Derechos Humanos fue el Procedimiento 1503, vigente en el 2000.¹⁵ Además, se expuso públicamente las violaciones de la Marina en Vieques ante la comunidad internacional en las sesiones de la Sub-Comisión y de la Comisión [hoy Consejo] de Derechos Humanos por 4 años consecutivos, con la colaboración de los compañeros de la Asociación Americana de Juristas y otras ONGs en Ginebra. Se realizaron ponencias presenciales, se cabildeó con las agencias y organismos especializados de la ONU en Ginebra (como la OMS, OIT, etc.), se hicieron presentaciones con vídeos y entrevistas ante la prensa internacional, además de colaborar con otras ONGs (con base en Ginebra) para la inclusión del Caso de Puerto Rico y Vieques en las ponencias de las otras organizaciones.

Estas denuncias se realizaron en conjunto con el trabajo de años que han realizados varios compañeros y distintas ONGs en la ONU de Nueva York ante el Comité de Descolonización. Además de esto, efectuaron la coordinación y cabildeo a varios países miembros del Comité, los

compañeros y compañeras como Rafael Anglada, Wilma Reverón, Vanessa Ramos y otros, como el Partido Independentista Puertorriqueño y el Movimiento Nacional Hostosiano y su brazo operativo internacional. Estos continúan en colaboración con otras organizaciones para mantener el caso de Puerto Rico y Vieques en agenda ante el Comité de Descolonización en Nueva York y la posible inclusión en la agenda del caso de Puerto Rico en la Asamblea General de la ONU.

¹ Carmen Gautier Mayoral y María del Pilar Arguelles, *PUERTO RICO Y LA ONU*, Editorial Edil, Inc., 1978, p. 50.

² Res. 748(VIII) de 1953 “Reconociendo a Puerto Rico como país autónomo no dependiente, con gobierno propio, asociado a los Estados Unidos y con status internacional”. Puerto Rico no tiene estatus internacional y continúa bajo los poderes plenarios del Congreso de los Estados Unidos.

³ Se han omitido la legislación de Puerto Rico y la de Estados Unidos de América, además de los tratados bilaterales.

⁴ A/AC.109/2000/24.

⁵ En ésta, al igual que las anteriores resoluciones, se insta a EE. UU. a que propicie las condiciones necesarias para la plena aplicación de la Res. 1514 (XV). La Resolución del 12 de julio de 2000, basó su análisis en la información provista en el Informe del Relator Especial del Comité Especial, el Sr. Faryssal Mekdad (A/Ac.109/2001/L.3). El Informe del Relator señala que debido a las prácticas militares de la Marina por más de 50 años, el acceso a la población de los recursos ha quedado restringido “con las correspondientes consecuencias para la salud [...], el medio ambiente y el desarrollo económico”. *Id.*, a la pág. 12. El Relator también reafirmó la necesidad de que EE. UU. devolviera la tierra ocupada al pueblo de Puerto Rico, pusiera fin a la persecución de los manifestantes pacíficos y respete el derecho a la salud y al desarrollo de los puertorriqueños.

⁶ Desde el 1972 se renovó el lapso en que el caso de Puerto Rico seguiría bajo observación y consideración del Comité.

⁷ No hubo votación por ser una Decisión de la Asamblea General.

⁸ Información sobre la no objeción de EE. UU. provista por la Profa. Esther Vicente, quien estuviera presente en la misma. Véase, para el texto, World Conference on Human Rights, Vienna Declaration and Programme of Action 1993 (UN Pub. 1995). Consulta personal Profa. Esther Vicente.

⁹ El resto de la votación fue: a favor: 74, en contra 6 (incluyendo el voto de EE. UU.); abstenciones: 27; ausentes: 10.

¹⁰ La Resolución 39/11 de 12 dic. de 1984, reafirma y declara el derecho de los pueblos a la paz, la cual también está garantizada en la Carta de la ONU. Esta resolución obtuvo la siguiente votación: a favor: 92, en contra: 0, abstenciones: 34, ausentes: 33. EE. UU. fue parte de los que se abstuvieron.

¹¹ La votación fue: a favor: 90, en contra: 11, abstenciones: 10. Estados Unidos votó "en contra".

¹² Annex, UN GAOR Supp. (No. 53), a la pág. 86, UN Doc. A/41/53 (1986).

¹³ Véase, los distintos Informes de los Grupos de Trabajo sobre el Derecho al Desarrollo de la Comisión de Derechos Humanos, en especial el Informe del Alto Comisionado (“Report of the United Nations High Commissioner for Human Rights and Follow-up to the World Conference on Human Rights, Report of the High Commissioner submitted pursuant to General Assembly resolution 48/141”, E/CN.4/2001/16, 26 febrero 2001.

¹⁴ Informe A/52/607 del 7 de dic. 1997.

¹⁵ Para los requisitos en las comunicaciones a los organismos de la ONU, véase, *Dinah Shelton, International Human Rights, Recueil des Cours, University of San Diego School of Law, 1994.*

Parte 2

El caso de Puerto Rico tiene varias vertientes. En la Parte I se discutió las estrategias que se han utilizado para la denuncia de las violaciones de derechos humanos en este caso de Puerto Rico y Vieques. En esta Parte 2 se discuten las violaciones y las estrategias utilizadas bajo el sistema de los tratados, y las denuncias hechas ante la ONU de Ginebra, mayormente.

Bajo el sistema de los tratados multilaterales y de los temáticos se encuentran:

La *Declaración Universal de Derechos Humanos* (DUDH) de 1948 al ser derecho consuetudinario aplica a todos los Estados Miembros de la ONU. Si bien es una declaración, es oponible a todos los Estados Miembros de la ONU.

El procedimiento anterior para obtener remedio bajo la Declaración Universal era el Procedimiento 1503, el cual se utilizó para someter las violaciones de derechos humanos en Vieques, garantizados en la Declaración Universal, y para suplementar información adicional al Alto Comisionado de Derechos Humanos de la ONU. Aunque el 1503 no estaba propiamente bajo el sistema de tratados, sino que se consideraba un procedimiento del Consejo Económico-Social (ECOSOC), y de las comisiones y subcomisiones del ECOSOC, se pudo utilizar en casos como los de Puerto Rico que no tiene representación internacional.

El Convenio de Derechos Civiles y Políticos (en adelante, Convenio Político) fue ratificado por Estados Unidos el 8 de junio de 1992. Bajo este Convenio, EE. UU. hizo una declaración, permitida por el artículo 41, a obligarse a recibir las querellas o peticiones,¹ pero de otros Estados solamente. El sistema de peticiones individuales está autorizado por el Protocolo Adicional al Convenio de Derechos Civiles y Políticos, sin embargo, EE. UU. no ha adoptado el Protocolo.

La entidad que supervisa el cumplimiento del tratado de Derechos Políticos es el Comité de Derechos Humanos,² el cual supervisa el cumplimiento mediante informes sometidos por los Estados Partes.

La anterior Comisión (hoy Consejo) de Derechos Humanos (CDH) también está encargada de recibir las querellas y comunicaciones individuales y determinar si son violaciones graves o sistemáticas (*gross violations*) a los derechos humanos. Su rama subsidiaria- la Sub-Comisión de Derechos Humanos (hoy de Minorías)- realiza estudios mediante expertos independientes y somete recomendaciones al Consejo.

En el caso de Vieques, se consideró lo suficientemente *grave* para cualificar bajo el criterio de lesa humanidad (porque hay violaciones en casi todos los aspectos de los derechos humanos). Un grupo de abogados de la Asociación Americana de Juristas sometieron la petición al Alto Comisionado, argumentando violaciones graves a la Declaración Universal y a los tratados aceptados por Estados Unidos.

Convenio para la Eliminación de Todas las Formas de Discrimen Racial (en adelante CERD, por sus siglas en inglés), fue ratificado por EE. UU. el 21 de octubre de 1994.

Siguiendo con su costumbre de no aceptar la jurisdicción internacional para peticiones individuales, Estados Unidos no hizo declaración respecto al artículo 14 (que trata de la competencia del Comité sobre las peticiones individuales), lo cual significa que no admite peticiones individuales. Más aún, se pronunció en una reserva sobre el artículo 22, indicando que no reconoce la competencia del Corte Internacional de Justicia (CIJ), a menos que se le requiera el consentimiento específico a ser demandado para cada caso en particular.

El CERD lo supervisa el Comité para la Eliminación del Discrimen Racial. Aunque no acepte peticiones individuales queda obligado a rendir informes periódicos. Los informes, aunque Estados Unidos no refleja la realidad ni se compromete a terminar con los problemas de discrimen, sigue siendo un mecanismo de denuncia que han utilizado varias organizaciones en los Estados Unidos.

En las comisiones preparatorias de las Américas, celebradas en Santiago de Chile, para la Conferencia Mundial contra el Racismo que se celebró luego en Durban,³ algunos gobiernos, entre ellos Estados Unidos, objetaron el lenguaje de que el racismo fuera catalogado como un crimen de lesa humanidad. Si bien no se logró este objetivo, se pudo incluir el término de “racismo ambiental” en esta Conferencia.

Estados Unidos practica el “racismo ambiental”, no sólo contra Puerto Rico, sino contra la población indígena desde Alaska y Hawái, hasta las comunidades latinas en la frontera con México, las cuales son las comunidades más desventajadas.

Convenio contra la Tortura y Otros Tratos o Castigos Crueles, Inhumanos o Degradantes (en adelante, Convenio contra la Tortura o CAT, por sus siglas en inglés). Fue ratificado por Estados Unidos el 21 de oct. de 1994. Estados Unidos emitió su primer informe ante este Comité en 1999.⁴

El Convenio contra la Tortura es supervisado por su propio Comité (Comité contra la Tortura). Bajo este tratado, Estados Unidos reconoció el artículo 21 contra los Estados, pero no adoptó el art. 22 de las peticiones individuales.

Según Meiklejohn Civil Liberties Institute (MCLI), una ONG de California, que recopiló información para el Comité contra la Tortura, y basándose en fuentes internacionales interpretativas, indicó que se considera trato cruel e inhumano que se experimente con ciudadanos americanos como se ha hecho,⁵ que se echen desperdicios nucleares en las comunidades de bajos ingresos⁶ y que el gobierno no provea seguridad para los desperdicios nucleares y tóxicos que deposita en las comunidades.⁷

El profesor Carlos Villán Durán, coincidiendo con el exjuez de la Corte Interamericana de Derechos Humanos, Antônio A. Cançado Trindade, comentaron que la violación al derecho a la alimentación y al agua potable, priva a la persona de su derecho a la vida y va en contra a su integridad física y dignidad humana.⁸

El Convenio sobre Prevención y Castigo del Crimen de Genocidio (en adelante, Convenio contra el Genocidio)- fue ratificado el 25 de noviembre de 1988 por los Estados Unidos.

El artículo 2 sobre genocidio se ha interpretado, por ejemplo, si hay la intención de destruir, mediante daño físico o mental serio, y deliberadamente infligir daño a un grupo en particular se configuran los elementos de intención requeridos para cometer genocidio.

En este caso de Vieques, cabe argumentar que el tiempo transcurrido que los viequeses estuvieron sufriendo los bombardeos, y están sufriendo por no tener la atención médica adecuada no sólo por falta de recursos sino, más bien, debido a la negación y desinformación de la Marina de los Estados Unidos sobre las sustancias tóxicas almacenadas y depositadas en el suelo y por los accidentes ocurridos,⁹ pudiera inferirse razonablemente la intención requerida.

Este Convenio contra el Genocidio no tiene Comité que supervise su cumplimiento. Los casos sobre genocidio se interponen directamente ante la Corte Internacional de Justicia. El Estado contra quien se lleve el caso tiene que haber aceptado la jurisdicción de la Corte y prestar el consentimiento a ser demandado.¹⁰ Estados Unidos no acepta la jurisdicción de la Corte ni mucho menos presta el consentimiento de antemano.

No aceptar la jurisdicción de esta Corte ni la jurisdicción de la Corte Penal Internacional recién creada, no significa que no se pueda juzgar por crímenes de lesa humanidad, por genocidio o por tortura, al menos en teoría. Por desgracia, y aunque el concepto de “jurisdicción universal” está bastante desarrollado, los Estados Miembros de la ONU, en particular los del Consejo de Seguridad, han echado por la borda lo poco que se había logrado en el campo de los derechos humanos, puesto que se han llegado a convalidar las violaciones graves en distintas partes del mundo.

Otros instrumentos internacionales ratificados por Estados Unidos.

Estados Unidos ratificó el *Protocolo de 1967 sobre Refugiados (Protocol Relating to the Status of Refugees, 1967)*, ratificado el 1 de noviembre de 1968, aunque no incluye el desplazamiento interno como opción cuando es por violaciones de derechos humanos o desastres creados por el ser humano, a menos que sean movimientos en masa y que estos reclamen su derecho. En 1992, la anterior Comisión de Derechos Humanos¹¹ había nombrado a un representante para los Desplazados Internamente y se redactaron unos principios generales que, aunque en el presente no sean mandatorios, pueden llegar a serlo.

A mediados del siglo pasado, el gobierno estadounidense se apropió forzosamente de alrededor de 26,000 a 33,000 cuerdas en Vieques y Puerto Rico para uso militar, desplazando a miles de familias. Se expropiaron los terrenos sin justa compensación para el uso de la Marina, lo cual constituye un desplazamiento interno forzoso, considerando que fue planificado para despoblar la Isla. En la actualidad, estas tierras junto con la parte Este de Puerto Rico y un arsenal de municiones en la parte Oeste de Puerto Rico, constituyen el complejo de Roosevelt Roads, una de las bases más extensas que posee el gobierno de los Estados Unidos fuera de los Estados Unidos continentales.¹²

Convenciones sobre el Derecho del Mar.

Estados Unidos se comprometió en la Primera Conferencia sobre Derecho Marítimo en Ginebra en 1958, con 4 Convenciones sobre el medio ambiente, las cuales ratificó en 1961¹³ y, posteriormente, convirtió en legislación. Gran parte de los tratadistas sobre el tema consideran que el Principio 21 de la Declaración de Estocolmo de 1972, reconocida como derecho consuetudinario, se encuentra incluida en la sección 601 del *Restatement of the Foreign Relations Law of the United States*.¹⁴

Agencias y organismos de la ONU.

Constitución de la Organización Mundial de la Salud de 1946 (OMS) y Enmiendas posteriores. Estados Unidos era miembro de la OMS y ratificó algunas de las enmiendas en distintas fechas desde finales de la década del 1940 a mediados de la década del 1990. No obstante, en 2025, Estados Unidos (junto con Argentina)¹⁵ abandonaron la OMS.

La OMS, como agencia especializada de la ONU, está autorizada a solicitar Opiniones Consultivas¹⁶ a la Corte Internacional de Justicia, a inspeccionar y asegurarse de que los Estados cumplen o hagan esfuerzos por cumplir con la eliminación de la contaminación del aire y del agua.¹⁷

El artículo 2 de la Constitución de la OMS especifica las funciones de la organización para alcanzar el objetivo del "nivel más alto posible de buena salud".¹⁸

Del 14 al 22 de mayo de 2001, se celebró la quincuagésima cuarta (54ta.) Asamblea Mundial de la Salud de la OMS. Esta asamblea incluyó el tema de los efectos del uranio empobrecido en la salud, y catalogó el uranio empobrecido como "un elemento potencialmente tóxico desde el punto de vista químico y radiológico. Cuando el alcance y la naturaleza de la contaminación sean tales que exista una posibilidad razonable de que *cantidades importantes lleguen a las fuentes de agua y a la cadena alimentaria, habrá que vigilar los alimentos y las aguas subterráneas, e implantar medidas apropiadas para cualquier tipo de contaminación por metales pesados*".¹⁹ (Énfasis suplido). Se añade en este mismo artículo que la OMS recomienda operaciones de limpieza en las zonas de impacto y debe acordonar las zonas que tengan concentraciones elevadas de uranio empobrecido. La población expuesta deberá medir los efectos químicos de acuerdo con los límites dispuestos en

las Normas Básicas Internacionales de Seguridad. El límite de ingestión de compuestos de uranio empobrecido soluble tolerable es de 0.5 ug/kg [*microgramos por kilogramo*] de peso corporal.²⁰ En Vieques se sobrepasa esa cantidad tolerable, según el biólogo Mario Pérez. Todos estos metales pesados, incluyendo el U238, siguen contaminando el suelo y la cadena alimenticia que afecta a los viequenses.

Si tomamos el historial anterior de incumplimiento en la limpieza de áreas contaminadas por la infantería de Marina en otras partes del mundo como Panamá, y en el mismo Puerto Rico, el panorama no es nada alentador. Mucho menos esperanzador es la salida de Estados Unidos de la OMS.

De igual manera, habrá que ver qué efectos tendrá en la Organización Panamericana de la Salud que es la llamada- como parte de la OMS- a actuar en esta región latinoamericana.

Puerto Rico es observador en la Organización Panamericana, y a instancias del Colegio de Médicos de Puerto Rico durante esos años (2000-2001), nuestro gobierno solicitó a esta Organización que se investigara la situación de la salud en Vieques. Esto no rindió los frutos esperados puesto que no se investigó.

Convenios firmados pero no ratificados por Estados Unidos.

El Convenio de Basilea (*Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*), entró en vigor en 1992. Estados Unidos lo firmó en 1990, pero no lo ha ratificado,²¹ por tanto, tampoco lo adoptó en su legislación. Este Convenio incluye el problema del depósito de tóxicos en países en vías de desarrollo; sin embargo, no incluye los radioactivos ni los que están cubiertos por otros tratados o declaraciones.²²

Bajo el mandato del Relator Especial sobre este tema, se puede recibir información directamente de las ONGs para: (1) investigar efectos, (2) investigar tráfico y depósito de tóxicos, (3) hacer recomendaciones revisadas por la Comisión [Consejo] de Derechos Humanos, (4) producir una lista de violadores (Estados y corporaciones) y hacerla pública, (5) censo de víctimas (lesionadas o muertas) como resultado del depósito de tóxicos. Así es que, las ONGs pueden proveer los hechos y la relación causal.²³

Los tratadistas y profesores Dinah Shelton y Alexander Kiss consideran que las disposiciones incluidas en el Convenio de Basilea son parte del derecho consuetudinario debido a que están contenidas en los principios del derecho internacional ya plasmados en el Principio 21 de la Declaración de Estocolmo de 1972.²⁴ Añaden que la repetición de las mismas normas en un sinnúmero de instrumentos internacionales puede considerarse como el comienzo o cristalización de un derecho consuetudinario nuevo. Además, varios instrumentos internacionales han declarado que la Parte XII del Tratado del Derecho del Mar²⁵ y su protección del ambiente, es ya parte del derecho consuetudinario.²⁶

Según el biólogo y ambientalista puertorriqueño, Mario Pérez, la mayoría de los tóxicos encontrados en Vieques, están incluidos en esta lista de tóxicos que provee el Convenio de Basilea.²⁷

Convenio sobre la Diversidad Biológica, firmado por Estados Unidos el 6 de abril de 1993, pero no lo ha ratificado aún. Posiblemente, no lo ha hecho porque sería reconocer los derechos de los países productores a que tengan la porción de los beneficios derivada del uso de sus recursos, a la cual

tienen derecho. El propósito del Convenio es salvar las especies en peligro de extinción y salvar sus hábitats de la destrucción.²⁸

Programas sobre el ambiente auspiciados por la ONU.

Agenda 21 fue el Programa de Acción en la Conferencia sobre el Ambiente y Desarrollo, celebrada en Río de Janeiro en 1992.²⁹ De esa Conferencia surgió la Comisión sobre el Desarrollo Sustentable. Una de las metas de esta es ayudar a los países en vías de desarrollo a que tuvieran programas para el desarrollo rural y de agricultura. En el 2000, se celebró la segunda sesión para la implantación de la Agenda 21, la cual integró la planificación y administración de los recursos de la tierra con los económicos y de crecimiento económico.³⁰

A Puerto Rico no se le permite participar en estas comisiones por su condición política, a pesar de que podría beneficiarnos el intercambio. En la Sesión Quincuagésima séptima (57ma.) de la Asamblea General celebrada de septiembre a diciembre de 2002, se discutieron los temas económicos relacionados con el ambiente y el desarrollo sustentable, en especial sobre la implantación de la *Conferencia Global sobre el Desarrollo Sustentable, Países de las Islas Menores y Países en Desarrollo y del Caribe*, en la cual se fomentó una visión integrada del área del Caribe con sus problemas específicos de desastres naturales, mareas altas, cambios en el clima y sus efectos, recursos marinos, la biodiversidad típica del área del Caribe y su vulnerabilidad, entre otros.³¹ Puerto Rico quedó excluido.

Sistema regional interamericano.

El sistema interamericano tiene más flexibilidad para las comunicaciones pues admite las comunicaciones y querellas más fácilmente no sólo de las víctimas y sus representantes, sino también de las ONGs que las representan.

Tanto en el sistema interamericano,³² como en el internacional, hay que agotar los remedios internos previo a interponer cualquier petición o enviar cualquier comunicación, lo cual en este caso de Vieques se hizo. No obstante, la Comisión Interamericana no acogió el recurso presentado por las ONGs de Vieques.

En el sistema interamericano podrían solicitarse (y se hizo en la mayoría de los casos):

- (1) una misión especial³³
- (2) medidas de precaución para evitar el daño irreparable³⁴
- (3) investigación en el sitio ("on-site")³⁵
- (4) una comisión especial³⁶
- (5) vista general;³⁷ vista sobre la petición;³⁸ y, vistas privadas, a menos que las partes decidan que sean públicas;³⁹
- (6) si no se llega a un acuerdo amistoso, se prepara un informe con determinaciones de hechos y conclusiones⁴⁰ y se da a la publicidad mediante el Informe Anual o por cualquier otro método.⁴¹

Tratados, Declaraciones en Organismos Regionales.⁴²

Los tratados principales y las declaraciones adoptadas por Estados Unidos en el sistema interamericano son:

- (i) la Carta de la Organización de Estados Americanos (OEA) de 1948; y,
- (ii) la Declaración Americana de los Derechos y Deberes del Hombre

Los organismos encargados de Velar por su cumplimiento en el sistema interamericano son:

- (i) la Comisión Interamericana de Derechos Humanos (CIDH); y,
- (ii) la Corte Interamericana de Derechos Humanos.

La Carta de la OEA - se adoptó en 1948 por los países miembros, mediante el Pacto de Bogotá, enmendado por el Protocolo de Buenos Aires de 1967.⁴³ El artículo 3(k) sobre derechos fundamentales y el artículo 16 sobre las obligaciones hacia los derechos humanos, obligan a los miembros de la OEA. El artículo 3, en su inciso (L) trata sobre los derechos fundamentales sin distinción, y en su inciso (m), sobre el cumplimiento con los valores culturales del continente y los “más elevados propósitos de la civilización”.

Existen comentaristas que sostienen que, aunque Estados Unidos no haya ratificado la Convención Americana, por ser miembro de la OEA queda obligado; aunque, no por eso consienta a la jurisdicción de la Corte.

La Comisión Interamericana de Derechos Humanos (en adelante, Comisión Interamericana o CIDH) ha indicado que los países que no han ratificado la Convención Americana, de todos modos, están obligados al cumplimiento de los derechos fundamentales contenidos en la Declaración Americana, mediante el artículo XXIV que incluye el derecho de petición individual.⁴⁴

Esté obligado mediante la *Convención Americana* o mediante la *Carta de la OEA*, Estados Unidos tendría que cumplir con el respeto a los derechos humanos. Además, ya que el sistema interamericano se orienta más a las peticiones individuales, la declaración específica de que adopta el artículo 45 sobre querrelas contra otros estados no impide que acepte la regla general de recibir las peticiones individuales.⁴⁵

Un tratado importante para el ambiente en la región latinoamericana, aunque no firmado ni ratificado por los Estados Unidos, es el *Tratado de Escazú*. El 4 de marzo de 2018 en Costa Rica, se abrió para la firma un Acuerdo Regional sobre el Acceso a la Información, Participación Pública y Justicia en Asuntos Ambientales, conocido como el Acuerdo de Escazú.⁴⁶ Este Acuerdo es un gran paso de avance para la región caribeña y latinoamericana porque dispone para un acceso público a la información, participación eficaz de comunidades (mediante consultas), la defensa de los derechos humanos y dispone para la protección de los defensores de derechos humanos.⁴⁷ Queda por verse si cuando lo implanten en las legislaciones de cada país, la participación pública se garantizará en todas las etapas de los procesos administrativos, en las aprobaciones y en el acceso a la información.

Acciones concertadas para hacer valer los derechos humanos.

Muchos puertorriqueños sacrificaron su seguridad para realizar la desobediencia civil junto con el

apoyo de distintas ONGs, grupos no afiliados, personas particulares y partidos políticos dentro y fuera de Puerto Rico, todo esto, con el propósito de detener los bombardeos en Vieques, lo cual se logró.

Para lograr la descontaminación total se puede seguir suplementando la información a través de los procedimientos especiales de los relatores que se implantaron relativamente recientemente bajo el Consejo de Derechos Humanos, además de continuar solicitando remedios como, por ejemplo:

- (a) que se exija que el gobierno y la Marina de los Estados Unidos provean información sobre la contaminación, sobre todo sobre el uranio reducido;
- (b) el gobierno de los Estados Unidos acepte responsabilidad e indemnice a las personas que sufren aún de enfermedades terminales en Vieques, Culebra y Puerto Rico, a causa de la contaminación por tóxicos dejados por la Marina y por otras prácticas militares;
- (c) los Relatores Especiales (ad-hoc)⁴⁸ puedan hacer inspecciones in situ;
- (d) mediante los procedimientos especiales, como el Relator bajo el Comité de Descolonización, que se mantenga el caso de Puerto Rico bajo observación.

Compensación debida a los viequeses y a los puertorriqueños.

En cuanto a acciones a largo plazo, se debe ejercer presión para que se dismantelen las restantes bases militares para dedicarlas al uso y desarrollo sustentable de los puertorriqueños.

Se debe, además, aplicar como remedio adecuado en ley, el concepto de responsabilidad absoluta o estricta o el principio de quien cause el daño paga (*Polluter Pays Principle*), ya sea causado por compañías multinacionales o cualesquiera de los gobiernos que haya contaminado de tal manera el ambiente y haya causado daño irreparable.

Si bien los seguros por responsabilidad pública se hacen cargo de que sea casi inoperantes las compensaciones, un Código Penal lo suficientemente estricto, con multas lo suficientemente altas y pena de cárcel serviría de disuasivo.

Se ha comprobado en el Reino Unido- que es miembro de la Organización Internacional Marítima- que se han reducido los delitos ambientales al imponer multas altas para que funcionen como medida preventiva.⁴⁹

Puerto Rico necesita que se implante lo que nuestra Constitución ordena: que por política pública se protejan nuestros recursos naturales.⁵⁰ Hay que resolver la condición política para que nuestra Legislatura tenga más poderes soberanos a la hora de crear un Código Ambiental, que incluya tanto sanciones penales como multas. Mediante las multas se podría crear un fondo de compensación a víctimas aparte de otros remedios civiles, pagados por los que contaminan el ambiente. Las sanciones deben aplicar tanto al gobierno federal como al gobierno de Puerto Rico. Aunque exista la legislación federal como, por ejemplo, la Federal Facilities Compliance Act de 1992, diseñada para evitar que las agencias federales contaminen el ambiente,⁵¹ las administraciones estadounidenses se han dedicado a hacerla inoperante.

La Ley federal de Aguas Limpias (*Clean Water Act*),⁵² una de las tantas leyes federales disponibles para la protección del ambiente, requiere que la Marina de Estados Unidos obtenga un permiso

(NPDES-National Pollutant Discharge Elimination) concedido por la EPA (Environmental Protection Agency), el cual a su vez contar con la autorización de la Junta de Calidad Ambiental de Puerto Rico (JCA) para descargar contaminantes y lanzar bombas tanto intencional como accidentalmente. En 1979, ante Tribunal de Apelaciones federal del Primer Circuito, el juez Torruellas, aunque reconoció que a la Marina le faltaba dicho permiso, no decretó la paralización y permitió que se continuaran los bombardeos en Vieques. El Tribunal Supremo de Estados Unidos confirmó esta decisión. Durante los enjuiciamientos de los desobedientes civiles, a finales del 2002 y principios del 2003, la Marina no contaba aún con los permisos necesarios de la JCA. La controversia sobre el permiso reapareció ante el Tribunal federal del Distrito de Puerto Rico, argumentado por los abogados de los desobedientes civiles. El argumento indicaba que era ilegal imponer las 'zonas de peligro' donde fueron arrestados los pescadores (desobedientes civiles). No prosperó el planteamiento probando una vez más la futilidad del agotamiento de recursos internos y la poca independencia judicial del tribunal federal.

Otras recomendaciones.

El derecho comparado y los ejemplos de Suecia y , en cuanto a cómo han enfrentado el problema ambiental, resultan útiles. La negligencia civil en Suecia incluye un fondo de compensación cuando es responsabilidad absoluta y no se puede determinar quién la causó. En Polonia, se adjudican multas en casos accidentales y se enjuicia criminalmente a los que contaminan el ambiente de forma sistemática.

Desgraciadamente, cada vez que en Puerto Rico el gobierno federal y las multinacionales causan daños extensos al ecosistema, pagan cantidades ínfimas y no hay proporcionalidad entre el daño causado y la multa. Más bien cumplen porque la ley federal ("Water Pollution Control Act") les prohibiría seguir realizando contratos con el gobierno federal.⁵³ Uno de los principios que casi los exime es el de "diligencia debida", el cual casi los exime de toda culpa o negligencia.

En 2014, el Grupo de Trabajo del Consejo de Derechos Humanos de las Naciones Unidas, encargado de desarrollar un "instrumento internacional jurídicamente vinculante para regular las actividades de las empresas transnacionales y otras empresas con respecto a los Derechos Humanos", de conformidad con la resolución 26/9 del Consejo de Derechos Humanos adoptada el 26 de junio de 2014, tuvo posteriormente la 5ta Sesión del Grupo de Trabajo Intergubernamental (OEIGWG), de las Naciones Unidas (ONU) sobre el tratado de "Corporaciones Transnacionales y Otras Empresas Comerciales con Respecto a los Derechos Humanos" (del 14 al 18 de octubre de 2019).

En octubre de 2020 se celebró la 6ta. sesión, presidida por Ecuador, en la cual participaron países opuestos (China, Estados Unidos, India) a un primer borrador, al igual que países a favor (Panamá, Egipto, por ejemplo) y más de 250 organizaciones no gubernamentales (ONGs) de todo el mundo (bajo la coordinación de CETIM y otras ONGs importantes como la Asociación Americana de Juristas). Se continúa trabajando con borradores subsiguientes y la Asociación Americana de Juristas ha estado activa en estas iniciativas.

Después de 21 años aún existen bombas que requieren detonación, existen residuos de químicos, metales pesados como mercurio, uranio reducido y plomo. Si bien el Presidente de los Estados Unidos anterior, Joe Biden, firmó una Orden Ejecutiva Núm. 14008, en la que se comprometía a "dirigir el 40% de inversiones federales a comunidades desfavorecidas y con altos índices de contaminación" y la inversión incluiría atacar los distintos problemas del cambio climático, energía

limpia, vivienda asequibles y sostenibles, además de la reducción de la contaminación entre otras, por otro lado, se asignaron \$73 millones en fondos para la militarización en Puerto Rico.

Se espera que esta nueva administración del presidente Donald Trump detenga la asignación de fondos o, peor aún, detenga todo el proceso de descontaminación⁵⁴ para Vieques y el Superfondo de Culebra.⁵⁵

¹ Los tres cuerpos autorizados a recibir peticiones individuales son: el Comité de Derechos Humanos del Convenio Político, el Comité contra la Tortura (CAT, por sus siglas en inglés) y el Comité para la Eliminación del Discrimen Racial (CERD, por sus siglas en inglés). No obstante, los Estados Parte en estas Convenciones tienen que expresar específicamente que reconocen la competencia de dichos Comités.

² Autorizado por su artículo 28.

³ De allí surgió la Declaración y el Programa de Acción de Durban del 31 agosto al 8 de septiembre 2001, que propuso medidas concretas para combatir el racismo, la discriminación racial, la xenofobia y las formas conexas de intolerancia. <https://un.org>

⁴ U.S. Department of State, Initial Report of the U.S.A. to the U.N., Committee Against Torture, Submitted by the U.S.A. to the Committee Against Torture, Oct. 15, 1999.

⁵ CAT arts. 2.3, 6, 7.

⁶ CAT arts. 2,5 y ICCPR arts. 1, 2.1, 24, 27.

⁷ CERD arts. 2 y 5; ICCPR arts. 1, 2.1, 24, 27.

⁸ Carlos Villán Durán, *The Right to Food and Drinking Water in International Law: New Developments*; Liber Amicorum to Antônio Cançado Trindade (2002) (mimeog.), y las fuentes allí citadas.

⁹ Aún no se sabe quién fue el piloto que mató a David Sanes.

¹⁰ Véase, *The International Court of Justice*, The Hague Publ., a la pág. 31 y ss. (3d ed. 1986).

¹¹ Mediante Resolución 1995/57.

¹² César Ayala, *Del latifundio azucarero al latifundio militar: las expropiaciones de la Marina de Guerra de los Estados Unidos en la década de 1940 en Vieques, Puerto Rico*, p. 1. <https://www.sscnet.ucla.edu>

¹³ La Tercera Convención celebrada en 1982, en Montego Bay trató sobre el mismo tema del derecho marítimo. Hubo una Segunda Conferencia en la cual se emitió un Final Act y unas 9 resoluciones.

Los 4 convenios ratificados de la Primera Conferencia en 1958 en Ginebra son: (a) Convention on the Continental Shelf, ratificada: 12 abr. 1961; (b) Convention on the High Seas, ratificada 12 abr. 1961; (c) Convention on the Territorial Sea and the Contiguous Zone, ratificada el 12 de abril de 1961; (d) Convention on Fishing and Conservation of the Living Resources of the High Seas, ratificada el 12 de abr. de 1961.

¹⁴ Kiss & Shelton, *INTERNATIONAL ENVIRONMENTAL LAW*, nota 106, a la pág. 349; Kummer, Katharina, *INTERNATIONAL MANAGEMENT OF HAZARDOUS WASTES*, 215 (1995).

¹⁵ Otros países como Italia y Brasil (bajo el gobierno de Bolsonaro) amenazaron con abandonar la OMS. Claudia Vaquero Reina, El efecto que tiene la salida de Estados Unidos o Argentina de la OMS: de la imagen a la financiación, *GACETA MÉDICA*, 7 de febrero de 2025, [<https://gacetamedica.com/politica/hay-paises-que-han-dejado-la-oms-antes-que-eeuu-y-argentina-el-efecto-de-estos-movimientos/#:~:text=Pa%C3%ADses%20que%20han%20abandonado%20la%20OMS&text=En%20enero%20de%202025%2C%20la,casos%20han%20sido%20poco%20corrientes>].

¹⁶ La OMS sometió una Opinión Consultiva a la Corte Internacional sobre las armas nucleares, en la cual la competencia de la OMS para hacer tales consultas se convalidó. Véase, *The Case Against the Bomb: Marshall Islands, Samoa, and Solomon Islands before the ICJ in Advisory Proceedings on the Legality of the Threat or Use of Nuclear Weapons: Question Posed by the G.A. and the WHO*. También la ICJ decidió por unanimidad que, las armas nucleares eran ilegales a menos que se utilizaran conforme al derecho internacional humanitario. Véase, también, Fagan Ginger, *Ann, Nuclear Weapons Are Illegal* (MCLI, 1998).

¹⁷ La Constitución de la OMS fue ratificada por EE. UU. el 21 junio 1948 según algunas fuentes. Las enmiendas a los arts. 24 y 25 de la Constitución de OMS son de 23 marzo 1967, de 17 de mayo de 1976 y de 12 mayo de 1986; aceptados por EE. UU. en 19 mayo 1975, 11 nov. 1982 y 1 mayo 1990, respectivamente. Las enmiendas a los arts. 34 y 55 de 22 mayo 1973- fueron aceptadas en 19 mayo 1975. La Enmienda al art. 74 de 18 mayo 1978- fue aceptada por EE. UU. el 10 dic. 1980. Las enmiendas no contienen cambios en sustancia, sino sólo cambios procesales. Otra de las fuentes consultadas indica que Estados Unidos aparece como miembro de la OMS desde enero de 1994; véase, *International Organizations in Geneva*, Public Affairs Office, U.S. Mission, Geneva 1994-5).

¹⁸ Rostow, Nicolas, *"The WHO, the ICJ, and Nuclear Weapons,"* 20 *YALE J. OF INT'L L.* 151 (1995).

¹⁹ Vanessa Ramos, "Asamblea ONU- Ratifica Plan de la Organización Mundial de la Salud", *CLARIDAD*, 1 al 7 de junio

de 2001; citando el Informe “Depleted Uranium in Kosovo-Post Conflict Environmental Assessment” (UNEP, 2001).

²⁰ *Id.*

²¹ Véase, *Handbook of Environmental Law* (UNEP Pub. 1998).

²² Otras declaraciones antecedentes incluyen: la de Estocolmo de 1972, Nairobi 1982, Río (Agenda 21) de 1992; y, recientemente, la Declaración de Washington para la Protección del Mar contra Actividades que Generen Desperdicios, 1995 (trad. ntra.) (“Washington Declaration on Protection of the Marine Environment from Land-Based Activities, 1995”).

²³ Véase, Res. 1995/81 adoptada por la Comisión de Derechos Humanos el 8 de marzo de 1995 (“Adverse Effects of the Illicit Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights.”)

²⁴ Kiss & Shelton, *INTERNATIONAL ENVIRONMENTAL LAW* 546 (2d ed. 2000).

²⁵ UNCLOS, por sus siglas en inglés.

²⁶ *Id.*, Supl. 1994, a la pág. 55.

²⁷ “International Register of Potentially Toxic Chemicals”, en *HANDBOOK OF ENVIRONMENTAL LAW* (1998) (UNEP Publ., 1998).

²⁸ *Global Biodiversity* (UNEP/Gems Environmental Library, No. 11 (1993).

²⁹ Agenda 21, UNCED, UN Doc. A/Conf. 151/26 (1992).

³⁰ J. Tornberg, *The UN Commission on Sustainable Development*, XVII N.Y. L. SCH. J. OF HUM. RTS., Pt. 3, (Summer, 2001).

³¹ UN Activities, 33 *ENVIRONMENTAL POL’Y & L.*, No.1, a la pág. 25 (2003).

³² *Se tiene que presentar la petición dentro de 6 meses a partir de la sentencia o decisión final en los tribunales (por el agotamiento de los recursos). Otra consideración es que el término de 6 meses no aplicaría si el daño es continuo como lo es en Vieques.*

³³ *Art. 28, id.*

³⁴ *Art. 29(2), id.*

³⁵ *Art. 44, id.; y, art. 55 para Estados no miembros.*

³⁶ *Art. 55, Reglamento CIDH.*

³⁷ *Art. 68, id.*

³⁸ *Art. 43, id.*

³⁹ *Art. 70, id.*

⁴⁰ *Art. 46, id.*

⁴¹ Para texto del Reglamento de la CIDH, véase, Buergenthal & Shelton, *supra*, a las págs. 653 y ss.

⁴² Se omitieron los Casos de la Corte Internacional de Justicia y demás foros-

(1) ICJ: (a) sobre la autodeterminación (por ej. el caso de Namibia); (b) Opinión Consultiva sobre las reservas en los tratados (por ej. el de genocidio como no válidas); (2) En arbitraje: *Trail Smelter Cases* de EE.UU. contra Canadá sobre la contaminación que afectaba a la industria maderera de los EE.UU. en la frontera con Canadá; (3) Acuerdos trilaterales entre EE.UU., Canadá y México sobre la contaminación (y desalinización) de los ríos; y, (4) legislación federal como parte del *opinio juris*. El *opinio juris* se compone de la práctica de los estados y sus declaraciones o afirmaciones, tanto en el ámbito internacional como en el local y, como consecuencia, la legislación, las opiniones de los tribunales y las declaraciones u órdenes del presidente. Todo esto como parte de la formación del derecho consuetudinario que opera cuando no hay convenio sobre el tema y se quiere obligar a algún Estado a cumplir o, cuando hay un tratado sobre el tema y el Estado a quien se le quiere obligar está renuente a obligarse aun cuando su práctica y declaraciones en la comunidad internacional sean consecuentes con las normas de derecho internacional de los países civilizados.

⁴³ Véase, Rafael Nieto Navia, *Introducción al sistema interamericano de protección a los derechos humanos* (1988).

⁴⁴ Uno de los informes de la Comisión Interamericana de Derechos Humanos que confirma esta posición es el Informe Núm. 51/96, (Report) Haitian Interdiction, Caso 10.675 (EE. UU.) a la pág. 937 y ss.; y el Informe No. 57/97, William Andrews [sobre la pena de muerte], Caso 11. 139 (EE. UU.) a la pág. 1067 y ss., en 1 *INTER-AM. YRBK. ON HUM. RTS.* (1997, 1999).

⁴⁵ Véase, Thomas Buergenthal, *The American and European Conventions on Human Rights: Similarities and Differences*, 30 *AM. U. L. REV.* 1, 159-162 (1980), en Thomas Buergenthal, T. & Dinah Shelton, *PROTECTING HUMAN RIGHTS IN THE AMERICAS- CASES AND MATERIALS*, a la pág. 92-93 (4ta rev. ed. 1995).

⁴⁶ Firmaron 24 países, entrando en vigor el 22 de abril de 2021. Los firmantes depositan las ratificaciones en la ONU de Nueva York. Fue ratificado por Antigua y Barbuda, Argentina, Belice, Bolivia, Chile, Colombia, Dominica, Ecuador, Granada, Guyana, México, Nicaragua, Panamá, San Vicente y las Granadinas, San Cristóbal y las Nieves, Santa Lucía y Uruguay. Véase, CEPAL, Acuerdo Regional sobre el Acceso a la Información, la Participación Pública y el Acceso a la Justicia en Asuntos Ambientales en América Latina y el Caribe, [<https://www.cepal.org/es/acuerdodeescazu/texto>]

⁴⁷ Eco House, “Acuerdo de Escazú en Argentina”, You Tube, 9/7/20.

⁴⁸ Los Relatores son expertos independientes que investigan y estudian las situaciones de derechos humanos e informan a la Comisión de Derechos Humanos (CDH) o a la Asamblea General. Aparte del mandato de los Relatores y los Grupos de Trabajo se encuentran unos Representantes. Estos surgen por mandatos y porque se ha solicitado al Secretario-General para que prepare informes sobre ciertos temas o para que nombre un representante (esto también puede ser por temas o por situaciones en el país- "situation-based"). Para efectuar estos mandatos sobre Relatores y demás personal, se encuentra la Unidad de Procedimientos Especiales (Special Procedures Branch) dentro del Centro de Derechos Humanos (UN Centre for Human Rights) Esta Unidad de Procedimientos Especiales, mediante su director (Chief) se reporta al Ayudante del Sec.-Gen. y al Alto Comisionado (Assistant Secretary-General for Human Rights and the High Commissioner for Human Rights). Los cuerpos legislativos a los que esta unidad se reporta son: la Comisión [Consejo] de Derechos Humanos, ECOSOC y la Asamblea General.

⁴⁹ Jaro Mayda, "Protección penal internacional del ambiente: una perspectiva global.", 60 Rev. Jur. UPR 1119, 1127, No. 4 (1991).

⁵⁰ El Artículo VI, Sección 19, de la Constitución dispone, como política pública, la más eficaz conservación de los recursos naturales, así como el mayor desarrollo y aprovechamiento de los mismos para el beneficio general de la comunidad. Const. PR, 1 L.P.R.A.

⁵¹ Firmada por el Pres. George W. Bush, autoriza a EPA, mediante la Secc. 3008(a), iniciará las acciones administrativas para implantar dicha ley y que el gobierno estadounidense cumpla y que también la aplique a cualquier otra persona (natural o jurídica). Véase, EPA, Federal Facility Compliance Act. Statement by the President, The White House, Office of the Press Secretary, October 19, 1992.

⁵² Hay disponibles "citizen suits" o reclamaciones ciudadanas para hacer valer las disposiciones de esta ley federal, véase, 33 USC Secs. 1365 y ss.).

⁵³ Véase, Mayda, supra, a las págs. 1127 y ss.

⁵⁴ La descontaminación se hacía con detonaciones al descubierto lo que también producía que estos tóxicos se esparcieran por el aire. Un estudio que contradujo el de la Marina de EE. UU. Fue realizado por el Departamento de Ciencias Ambientales de la Universidad de Aarhus en Dinamarca, publicado por Global Security. En dicho estudio se confluó que el cáncer era mayor en los viequenses que en el resto del país (al compararse con Puerto Rico). Véase, Maricelis Acevedo Irizarry, Limpieza de terrenos contaminados en Vieques, Puerto Rico, en la mira de Casa Blanca y el Congreso, <https://eldiariony.com/tema/vieques/>.

⁵⁵ Al momento de la publicación de este artículo, el Presidente de los Estados Unidos, Donald Trump, activó la base militar de Roosevelt Roads, y como parte del complejo militar, las prácticas militares en Vieques. Esto se realiza con el visto bueno del Gobierno de Puerto Rico y la gobernadora republicana, Jennifer González. La intención es, sino atacar, por lo menos, intimidar al Presidente Nicolás Maduro de Venezuela.

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Access to Water in a Changing World: How to Protect the Environment and to Tackle Water Poverty - The Case of Iberia

Rui Manuel Vitor Cortes

Abstract

Focusing on the Iberian Peninsula, the article highlights the larger consequences for biodiversity and food security due to climate change and water poverty, while analysing the current (unsustainable) water governance in face of European directives and drought policies of EU member states. Following such analysis and delving on the tensions arising from water consumption and disruption between Portugal and Spain, it concludes with a proposal: a set of principles and guidelines concerning the rights to water and sanitation.

1. Climate change in the Mediterranean Region and consequences for biodiversity and food security

Surface temperature in the Mediterranean region is now 1.5°C above the pre-industrial level, with a corresponding increase in high-temperature extreme events. Droughts have become more frequent and intense, especially in the north Mediterranean. The sea surface has warmed by 0.29°C–0.44°C per decade since the early 1980s, with stronger trends in the eastern basin (report CCP4, Ali et al., 2022). Manning et al. (2019) analyzed the co-occurrence of long-duration meteorological droughts with extremely high summertime temperatures in Europe during 1950–2013. These authors found that such compound events are becoming hotter, more likely and longer in Southeastern Europe. Similarly, Vicente-Serrano et al. (2012) have concluded that between 1961 and 2011, the frequency and severity of hydrological drought events in the Iberian Peninsula increased, due to temperature rise and consequent positive trends in atmospheric evaporative demand.

Following this increased drought severity, forest and vegetation systems, which depend heavily on soil water, displayed a decrease in productivity. The Mediterranean region is a hot-spot for biodiversity, but 15–23% of Natura 2000 sites are projected to change towards more arid ecosystem types (Barredo et al., 2016). Biodiversity and ecosystem services would be exposed to degradation, especially because wetland reduction, which could affect 19–32% of localities under a 1.5°C–2°C GWL (48–73% under higher warming), particularly in Spain, Portugal, Morocco and Algeria, according to Lefebvre et al. (2019). A matter of high concern is the substantial shrinking of freshwater ecosystem habitats (reaching the highest expression in the Mediterranean islands). Increased aridity impacts forest ecosystems (Ali et al., 2022), since increasing heat waves, combined with drought and land use change, reduce fuel moisture, thereby increasing fire risk, extending the duration of fire seasons and increasing the likelihood of large, severe fires (Lozano, 2017).

Drought management and climate adaptation are increasingly linked. In spite that drought periods are a natural feature, having occurred historically across Europe, climate change is powering the increasing frequency and severity of droughts, especially in Europe. Several droughts, with significant economic impacts, have hit large parts of the EU in the past decades, e.g. in 1994-1996 in the Mediterranean, 2003 in Central Europe, 2010-2012 and most recently 2018-2020 in Western

and Central Europe and in 2022 in Iberian Peninsula, where most of the losses affect agriculture, the energy sector and the public water supply. If climate change were to increase average global temperatures by 3°C, droughts would occur twice as often and the absolute annual drought losses in Europe would rise to EUR 40 billion/year, with the most severe impacts in the Mediterranean Region, according to the numbers provided by the CCP4 Report from Ari et al. (2022).

Desertification is extending in the Mediterranean basin, generally due to unsustainable land use (Peñuelas et al., 2017). Increasing drought is projected to exacerbate desertification in North Africa and, under high warming, also in southern Spain. In some areas, sclerophyllous vegetation could even replace deciduous forests (Guiot and Cramer, 2016).

River runoff and low flows are expected to decrease (possibly by 12-15% or more) in most locations in Iberia, due to reduced precipitation, whereas groundwater recharge is projected to decrease due to reduced inflow (Yeste et al. 2021), which coupled with new areas for agriculture in poor soils will drive to the mentioned effect of desertification. Nevertheless, climate change will reduce crop yields in many of these new areas, mainly due to higher temperatures affecting crop phenology and the shortening of crop growing season. In spite of the lack of water, additional irrigation will be needed for most crops, which may increase by 25% in the northern and twofold in the southeastern Mediterranean, with arid southern areas at risk of insufficient water resources by 2100 (Saadi et al., 2015; Fader et al., 2016). Another aspect that will increase water over-exploitation is the use of supplemental irrigation for winter, like in wheat areas, which could become more common in the northern Mediterranean.

Other problem is the seawater intrusion, causing additional risks in coastal aquifers, with severe impacts on agricultural productivity, also affecting human supply (this aspect is strongly observed in southern Portugal and Spain). Overall, reduced crop yields combined with other factors such as rapid population growth and urbanization, increasing competition for water and changing lifestyles, will likely impact food security, particularly in North Africa and the Middle East. Besides agriculture's growing needs, tourism imposes, additionally, more water stress in Iberia. Claro et al. (2024), based on a large set of publications, concluded that future Mediterranean water reserves may not meet agricultural water demands, due to reduced reservoir inflows and higher irrigation demands under future climate change and socioeconomic scenarios.

The cultivation of olive trees and grapevines, two of the dominant crops in the Mediterranean basin, could even become unsustainable, with the suitable climate conditions for their cultivation shifting to northern regions, according to Santillán et al. (2020).

2. Do European Directives may change the unsustainable water governance?

The average WEI+ values (acronym for Water Exploitation Index plus, a metric used to assess water scarcity by measuring the ratio of water used to the available renewable freshwater resources, quantifying how much of the available water is being consumed), indicate that the countries with the largest values were, by this order, Cyprus, Spain, Greece, Italy, Malta, and Portugal (Ari et al., 2022). Several other European countries have local hotspots of increased WEI+ values. But in this paper our focus is on the Mediterranean countries.

Moreover, technological advances and the accessibility of pumping techniques have led to mass-scale exploitation of aquifers, particularly in arid and semi-arid countries. However, excessive and uncontrolled groundwater exploitation has often led to aquifers depletion and pollution, with significant social and environmental impacts that must be considered when assessing economic

efficiency. Today, however, the impact of widespread contamination shows a dramatic increase, especially non-point pollution (nitrates and phosphates) transported to streams and aquifers from irrigated crops. Besides, water quantity, it's necessary to consider water quality to achieve the goals of the EU Water Framework Directive (WFD). This Directive deepens the commitment to conservation beyond the polluter-pays principle. But this principle is insufficient. Developing new approaches to preventing pollution at source is essential: it is much cheaper to avoid pollution or contamination than to decontaminate.

As a consequence of the water deficit, the common governmental policy in all Mediterranean countries has been to protect the capitalist investments in agriculture and to promote the increase of river regulation, artificializing these ecosystems with huge ecological consequences.

Therefore, a relevant document on this topic, approved by the European Parliament in 2024 is the so-called European Biodiversity Strategy (EU Regulation 2024/1991 of the European Parliament and of the Council of 24 June 2024), which also gives a clear focus on restoration. The ambitious objective is to restore the natural course of European rivers by at least 25,000 km by 2030. Therefore, it seeks to reduce the fragmentation of watercourses, increasing longitudinal and lateral connectivity, not only to obtain Good Ecological Status but also to restore habitats and species. Thus, this strategy seeks to transform artificial watercourses into natural rivers, which means systems that support the connectivity of water, sediments, nutrients, materials and organisms within the river system and their interaction with the surrounding landscapes. Particularly important is Article 9 of that Regulation, which states that Member States must carry out a mapping of artificial barriers to surface water connectivity where the obsolete barriers should be removed, decreasing the fragmentation.

The implementation of this Strategy faces considerable obstacles. Some right-wing European governments didn't approve this document, whereas other countries, like Portugal, in spite of subscribing the Strategy, contradictory state all the priority to increasing water storage (new dams, water transfer...) with the propose to intensify olive and almond crops in the driest regions.

3. Drought policies in EU Member States

Drought (risk) management plans in the EU are based on administrative governance tools for the implementation of a drought policy based on the risk reduction approach after indicators and thresholds establishing onset, ending, and severity levels of the exceptional circumstances (prolonged drought). These plans also include measures to be taken in each drought phase to prevent deterioration of water status and to mitigate negative drought effects.

In most of the systems, the primary priorities are assigned to critical infrastructures (like dykes, and hospitals), drinking water (which is sometimes aggregated as/to domestic or urban water uses – which might include smaller industries; as well as livestock holding) and in some Member States to the environment. Some States include other/complementary criteria for assigning water use priorities for specific activities. This is the case of agriculture, where a ranking is established for the type of crops. For example, in Portugal, irrigation agriculture of permanent crops such as olive or fruit trees appears much higher in the ranking than other annual crops. Regarding the priority ranking of the environment/ecosystems, namely the so-called ecological flows, to maintain aquatic life, the situation is very different across the EU, since most of the Mediterranean countries reduce ecological minimum flows during droughts, which may seriously impact biodiversity and water quality (Schmidt et al., 2023).

Mediterranean countries, like Spain, establish a preference for drought scenarios, which the following ranking defines by this order: 1. water supply for the population, including the necessary supply for industries with low water consumption located in population centers and connected to the municipal network; 2. irrigation and agricultural uses; 3. industrial uses to produce electricity; 4. other industrial uses not included in the previous sections; 5. aquaculture; 6. recreational uses; 7. navigation and aquatic transport; 8. other uses. The order of priorities that may be established specifically in the River Basin Management Plans, always respect the supremacy of urban water supply. Portugal adopts a similar ranking: 1. urban supply; 2. livestock and permanent crops; 3. ecological flows; 4. energy peak production; 5. industry; 6. other crops (temporary); 7. other uses. Preference is given to uses that “ensure an economically more sustainable, rational and balanced water use (Schmidt et al., 2023).

Like it was previously mentioned ecological flows are considered a previous restriction, but are scheduled below urban water supply and may be reduced during droughts, unless Natura 2000 or Ramsar sites are affected: During a prolonged drought they must ensure only a minimum of 25% of the maximum useful potential habitat, in comparison to the normal 50-80% habitat range. In spite that is considered a flow reduction in a drought situation, such flow is even strongly contested by the Spanish farmers, especially in the international rivers flowing to Portugal (see also chapter 5).

4. Public supply and the application of tariffs to moderate consumption

Water taxes exist theoretically to moderate consumption and to finance water resources management. The WFD advocates the recovery of the costs of water services, including environmental and resource costs, but there is a water paradox that shows the difficulty of complying with this principle: the price of water is rarely equal to its value and rarely covers its costs (Grafton et al., 2020). The Spanish case can be considered paradigmatic of this paradox since the economic regime of water management is insufficient to recover the cost of water services. As San Martín & Liraz-Irribá (2022) demonstrate, there are countless water subsidies in Spain, however, none of them are adequately identified and justified as an exception to the cost recovery, under the WFD principles, which is mandatory. This is illustrated by the users of the water diversions in Spain (like the Tagus-Segura transfer), where the taxes are far from the costs of such infrastructures. Thus, in this country, the economic regime of water management is highly insufficient, generating very low-cost recovery levels. In addition, considering the Consumer Price Index (CPI), tax rates have fallen in real terms by 32%-33% in the last decade, having grown much less than the real CPI of water supply and purification services (San Martín Liraz-Irribá (2022)). These authors conclude that it could even be said that the users of the transferred waters are highly favored compared with Spanish taxpayers, since prices move very far away from cost recovery (through subsidies) transformed into an increase in income for the agribusiness at the expense of the common taxpayers.

Similarly, in Portugal, the taxes are extremely low for agriculture and a substantial part is not taxed. Since there is a widespread lack of measurement in this country, the average tax of water abstraction for agriculture was around 0.00035 €/m³ in 2021, a value that do not allow a proper conservation of water resources. Even if the WFD considers the application of appropriate tariffs to guarantee the recovery of costs, the fact the municipalities adopt a political price in urban water supply, where the regulatory entity has a limited competency (the municipalities directly manage the systems), consequently do not contribute to improving the efficiency. The same applies to the low tariff values in the agriculture sector, especially the fact that fees and tariffs are not according to the irrigated area. Therefore, the estimated consumption does not encourage the adoption of

techniques that allow the more efficient use of water. Concluding, the taxpayers support the agribusiness and the profits of national and international corporations, which do not provide an adequate water management.

According to the World Water Forum (2012), water demand management measures should be cost effective and they should provide a better allocation of financial resources for very expensive (and environmentally disruptive) structures, like the construction of dams, water transfer, or desalination in regions that are facing water shortages. The economic assessment of ecosystem services provided by the aquatic ecosystems, namely ponds, streams, wetlands or lakes, can also be useful to ensure that achieving the water requirements of ecosystems is recognized as a priority. This underlines the importance of developing cost-benefit or cost-efficiency analyses that compare several water management options (supply-side measures and water demand management measures), by internalizing the cost of the social and environmental impacts of the different options. This could promote Nature Base Solutions and river restoration instead of a continuous artificialization of the ecosystems to ensure the profits of agri-business.

5. Drought raises tensions between bordering countries. The case of Spain and Portugal

The total area of the Peninsula is of 581.000 Km², 89.300 Km² of which corresponds to Portugal. Two-thirds of this area is included in the international river basins, about 64% of the total Portuguese continental territory. Portugal has approximately 40% of the total volume from the waters flowing from Spain, which means a significant dependence from this country. Nevertheless, we can say that each Portuguese has, on average, the double of the water than his Spanish neighbor. Thus, it is obvious that water scarcity is much higher in Spain (Sereno, 2021) and this fact shows that water represents an important political issue, which implicates constant negotiations between both countries.

In September 2022, during a long-lasting drought, Spain announced that, in these circumstances, it could not fully honor the Albufeira Convention (AC), a treaty on water transfers to neighboring Portugal (these transfers are not exactly ecological flows, but they represent just a political agreement to protect economic activities). Extreme drought left Spanish reservoirs at a third of their average capacity that year, a situation not seen since 1995. Portuguese farmers found the decision difficult to accept, while environmentalists say it creates a significant ecological risk. Facing this unprecedented drought, the Portuguese government recommended for 43 municipalities to temporarily increase water prices for their main consumers. The country's average family consumes 10 m³ per month and the most vulnerable families were affected (Sereno, 2021). Protests against water restrictions were shared by the population in both countries.: at the same time, thousands of farmers protested in Madrid in 2022 over Spain's plan to reduce the amount of water taken from the Tagus River to irrigate agricultural land in the country's southeast. Anyway, such demonstrations, related to water distribution, are frequent in this country, especially when the water deficit rises.

But what is the importance of AC? It is necessary to go back to history: Spain as Portugal were dictatorships up to 1978 and 1974, respectively, thus the considerable isolation from the International Community, as well as reciprocally. Therefore, we could say that the two Iberian neighbors share a sort of "parallel history lived with backs turned to each other". Like Sereno (2021) points out, despite the scarce bilateral cooperation, where the freshwater resources constituted an exception, since both are the most youth democracies of Western Europe and they entered together in the EU, this fact contributed to give a new impetus to bilateral relations. Such new relations led to the Albufeira Convention, which was signed by Portugal and Spain on the

November, 30, 1998 and entered into force on the 2nd of February 2000. This Convention is based on the principles enclosed in International Law, especially the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, but also the European Law, especially the Water Framework Directive (WFD). This agreement (AC) intends to create the basis of a cooperation to protect and to take advantage of water use in the shared basins. The AC establishes the regime of flows that Spain should release at the border at Portugal. The fixation of these flows was made, considering the specificity of each basin (since they differ hydrologically).

Nowadays, the problems related to the shortage of resources and cyclical droughts in the Iberian Peninsula put new constraints on the AC: on one side, the Portuguese farmers and the environment NGOs want higher flows, and fewer exceptions (foreseen in the Convention when the hydrological year is exceptionally dry), on the other side, Spanish farmers demand for higher water retention in their reservoirs and lower releases, as well as additional storage structures. Moreover, the over-exploitation of the aquifers and their contamination reflects also the intensification of agriculture and new tourism demands. In 2008 the regime of flow was altered to make it more demanding. This review was made because Portugal demanded that the flow quantifications were fixed quarterly instead of annually.

These dramatic drought events and inherent social and political conflicts, as well as the impoverishment of the ecosystems lead to the creation of New Water Culture Foundation (FNCA), in the Iberian Peninsula (linking water associations between Portugal and Spain). This organization looks thus for a proactive citizen participation and interdisciplinary approaches. The Foundation represents, not only the environmental NGOs, but also the citizens affected by large-scale hydraulic works, users and consumers' organizations, unions, and neighborhood associations etc., and looks for a close cooperation in the shared catchments. Considering the mentioned protests, this organization also attempts to decrease the regional conflicts related to water distribution, at a regional and national level, particularly between the two Iberian countries, looking to integrate the studies, actions and policies towards a sustainable water use in both countries.

6. The disruption of water use: the interbasin water-transfer schemes in Iberia

Water transfer between “donor” and “recipient” basins or rivers, provide, theoretically, an engineering solution for reconciling the conflict between water demand and availability, especially to provide water for intensive agriculture. In the context of climate change, which brings great uncertainties to water resource distribution, interbasin water transfer intends to play an increasingly important role in the global water-food-energy nexus. However, the transfer of water resources changes, simultaneously, the hydrological regime and the characteristics of local water bodies, affecting biotic communities accordingly (Yan et al., 2023). Besides, it may create important regional social conflicts, which may even rise to the level of political clashes between neighboring countries. However, in spite of these problems, such transfers are more and more demanded by the agrarians in face of the expansion of irrigation and water scarcity in the Mediterranean catchment, increased by the succession of drought events.

The most important interbasin water-transfer scheme in Iberia is the Tagus-Segura Transfer, from the Iberian System in Central Spain to the Mediterranean Levante Zone, which has been operating since 1979, and has caused severe impacts in both river basins, including increasing water deficit in the donor basin (middle Tagus). This is because the water demand in the receiving basin has increased in 24 years a total of 500 million m³, due to the irrigation and tourism sectors. The identified impacts (WWF, 2003) are multiple: a) habitat destruction is the result of the increase of

irrigated land and tourist activities, which have led to multiple environmental impacts that were summarized from Sereno (2021):

a) Destruction of thousands of hectares of protected natural areas; b) black water market and uncontrolled water use: more than 100 million m³ of transferred water simply “disappeared” to supply illegal tourist resorts and golf courses; c) chemical contamination and the deterioration of the river ecosystem: the Tagus R. dries all summer long in the middle section, since the legal minimum flow of 6m³/s is not respected; d) increased social imbalance as the benefits of the transfer are mainly directed towards big agri-business and multinational Real Estate Funds or venture capital companies, marginalizing traditional farmers; e) illegal immigration and exploitation of immigrants increase, especially in the recipient region (Múrcia), reaching here the highest level of immigration in Spain. In conclusion, this model of water transfer is completely unsustainable, like Pellicer-Martínez and Martínez-Paz (2018) showed. These authors mention that water resources in the Tagus Basin are forecasted to suffer a 40% decrease in the RCP4.5 scenario and a 47% decrease in the RCP8.5 scenario. Not only this affects the Tagus Basin’s natural regulation, but it also affects water resources in the neighboring Segura Basin, due to the limitation in water transfers from the Tagus. It is estimated that flows between the Tagus and the Segura could suffer a 70% to 79% reduction in both RCP scenarios when compared to a scenario without climate change.

Water governance in Portugal has also largely turned to the issues of drought and agriculture. It is planned to develop a plan for the efficient storage and distribution of water for agriculture (National Irrigation Plan), in conjunction with other planning and management instruments that are currently in force, such as the Strategic Plan for Water Supply and Wastewater and Rainwater Management (PENSAARP 2030), and the so-called Strategy Water that Unifies, presented by the actual government in March of 2025. The priority established in this Plan is devoted to the increase of the water storage capacity of the existing infrastructures but also it implies the construction of 15 big dams, the creation of new water sources, namely abstraction infrastructures and a desalination unit in the Algarve. Of course, water transferences between river basins are also projected, such as from Tagus R. to Alqueva reservoir (the largest artificial lake in Europe), and from here to the south (Sado and Mira basins and to the Algarve). After all, all the water policy is essentially directed towards the satisfaction of the important lobbies linked to agribusiness organizations and the international investment funds in this sector, even if water efficiency is also considered.

We may illustrate this situation, in parallel with the increase in financialization of the actual “modern” agriculture, based on irrigation, and the consequent social changes, with a case study: the mentioned Alqueva reservoir, that we may consider the largest artificial lake in Europe, created for irrigation in the South Portugal, which exhibits the highest water deficits. The previous Mediterranean landscape, with extensive rainfed agriculture and grassland with cork trees, changed quickly along the last 3 decades towards a monoculture landscape, with a dominance of olive and almond groves, driving into more homogeneous and less diverse habitat. It was the decisive role of foreign capital investment in the expansion of intensive and super-intensive olive groves (Rodrigo, 2023). This author reveals that, in order to allow the mobilization of financial resources, many of the current intensive and super intensive olive grove producers, located in Alqueva, have created partnerships with venture capital funds. Traditional farmers have thus been replaced by a labor force that tends to be poorly paid, precarious, seasonal and with access to (very) deficient living and working conditions, often illegal and hired by employment agencies located in Eastern Europe and Asian countries (especially Nepal and Thailand) (Silveira et al., 2018). This intensification of agriculture was done at the expense of the reduction in number of the small properties (Silveira et al., 2018), towards the progressive concentration in larger farms, followed always by the

agricultural intensification model. The price/cost of irrigation water has been largely subsidized, which, it should be emphasized, corresponds to a public investment since it depends on the effort of taxpayers (this aspect was already previously mentioned in chapter 4). Besides, the olive groves of Alqueva still benefit from EU support Common Agricultural Policy. In this way, while resident small farmers are being pushed out, they have been replaced by a reduced number of owners which benefit from low-cost water. This situation has led to exponential land prices, according to the market rules, since the speculation on the valued of the infrastructure land has largely increased, moved according to the wishes of the international venture capital companies.

Obviously, the aquatic and terrestrial ecosystems were strongly disrupted. Some authors, referring to the intensive and super-intensive olive groves located in the Alentejo, mention the high energy consumption, simultaneously with the high loads of fertilizers (NPK) and pesticides. Indeed, although most of the region's intensive olive groves incorporate herbaceous vegetation cover, it is possible to find more and more plantations, largely intensive, where herbaceous vegetation is removed and chemical fertilizers are used indiscriminately, with environmental impacts on biodiversity and higher rates of long-term soil degradation (Sousa et al., 2022). These authors concluded the existence of rising levels of water eutrophication, caused by the increasing concentration of nitrates, phosphates and potassium in plots with high densities of olive trees, where important rates of soil erosion are also observed, reaching levels that can trigger non-point contamination of water resources due to surface and groundwater runoff.

Fernández-Lobato et al. (2021) demonstrated that the carbon footprint and carbon balance are negative, particularly in traditional irrigated and intensive olive groves. Concerning soil conservation, Beaufoy (2001) identifies the "modern olive grove" as one of the main causes of soil loss and desertification. In Spain, it is estimated that, in the Andalusia region, the average annual loss of soil in olive groves is 62t/ha/year, with minimum values in the least affected areas about 36t/ha/year while, in the most critical plots, erosion may reach till 92t/ha/year (Neves, Pires and Roxo (2013).

7. Poorness and the importance of preserving water in a changing world

Despite the EU's relatively favorable position in global terms, water poverty is still an issue in the EU, with millions of people lacking access to safe and affordable water and sanitation. Approximately 9.8 million EU citizens do not have safe drinking water, while 9.4 million can only access basic water services outside their premises. Moreover, around 450,000 people have no access to basic drinking water services, and 6.7 million lack proper sanitary facilities (European Economic and Social Committee, 2023).

Vulnerable groups, such as Roma, migrants, homeless people and those living in poverty, are particularly affected. In addition, water stress affects approximately 30% of the EU population, with southern Europe facing severe water stress issues. The affordability of water and sanitation services is also a growing concern, especially with the possible increase in energy prices and goods, a consequence of Trump's policy.

In the Mediterranean, water resources are unevenly distributed over space and time. Water shortage and drought situations are frequent, and have a particular impact in Southern and Eastern countries. The number of people living in countries in a situation of water scarcity, with less than 1000 m³/capita/year of renewable water resources, could reach 250 million inhabitants in 2025, 80 million of whom would be facing extreme shortage conditions with less than 500 m³/capita/year. Water demand across all Mediterranean countries doubled in the second half of the 20th century to

reach 280 km³/year in 2007. It may increase by more 20%, essentially in the Southern and Eastern countries, where agriculture accounts for nearly 65% of this total water demand. These are numbers provided by the World Wildlife Fund _WWF (2003) and the World Water Forum (2012), but later reports show even a higher scarcity in 2023 and 2024, the years with the highest temperatures observed in Europe.

In some countries (Egypt, Israel, Jordan, Libya, Malta, Syria and the Palestinian territories), water withdrawals approach or even exceed the limit threshold of renewable resources. Water demand is increasingly met by an unsustainable water production relying on fossil water withdrawals and over-exploitation of renewable water. The prevailing national strategies still focus on extending water supply and pursuing abstraction, using and constantly deteriorating natural resources, causing a serious threat in the long term, a scenario amplified by climate change.

Computation of water footprints provides a measurement of water use on a national scale, and serves as an indicator for the level of water consumption associated with human activity, an important tool to help water management policies. Such data should include the amount of green water (rainfall) and blue water (water in the biota), used in the production of agricultural products, and grey (polluted) water generated by agricultural, domestic and industrial uses. Calculating the water footprint could also be used to measure “virtual water” exports and imports between two countries as a function of trade volumes between them.

The constant growth of irrigation and intensive agriculture under the capitalist rules are in contradiction with climate scenarios, therefore, it is necessary to adopt a different attitude. Like Bindi et al, (2011) and Claro et al. (2024) point out, a multidisciplinary approach is required: Green infrastructures and efficiency measures should be applied to the agri-food production chain, such as the use of smart irrigation systems, preservation of coastal wetlands to act as natural barriers to flooding and erosion and to regulate water flow, construction of small land dams for capturing water runoff to create ponds, plantation of forests to protect the soil and improve groundwater recharge, and rainwater harvesting. With the same purpose, Rocha et al. (2020) stress that the farmers should also change the crop species for less demanding water plants, a better attention to sowing date, cultivar and fertilization, as well as they need to improve a better disease control and a higher efficiency of the irrigation networks, besides the use of satellite imagery and drones to monitor water stress and plants condition, not forgetting an improvement of land-use policies.

Further, a comprehensive adaptation to the amount of agricultural water available in the future also requires anticipating and considering the potential climate changes and weather conditions. This is essential not only to project the damages that extreme atmospheric events can cause to crops, but also to forecast the amount of water that will reach the soil through precipitation and then be absorbed by it and by the crops, since the main objective should be to improve the soil-water balance.

8. Rights to water and sanitation

As a corollary of the previous analysis, we present a set of basic principles (and advice) that should be adopted to preserve and improve access to water and sanitation to protect the most vulnerable populations:

- In the long term, the solution must be centered upon the root of the problem: recovering the Good Ecological Status of water ecosystems under the rules of WFD; this is also essential to decrease the water prices for vulnerable populations to avoid

expensive chemical treatment.

- In the short and medium term, we must provide the necessary resources to guarantee access to drinking water for all: pressurized systems, chlorination, sanitation and safe sewage collection and disposal.
- Shared catchments by different nations should have common management to avoid political conflicts.
- It is necessary to develop a democratic governance of water that guarantees human rights and environmental sustainability, assuming transparency and participation of citizens.
- In cases of overexploitation, it is necessary to establish public control over these water bodies to ensure sustainability and the priority of drinking water supply.
- Considering the allocation of public water rights, it is necessary to establish that these rights will be exercised in proportion to the actual water availability, or to promote a process of review of concessionary rights, through a transparent process.
- To avoid the marginalization of vulnerable users It should be highly regulated the private appropriation of water (water commodification).
- It is not possible to guarantee access to water in any scenario of climate change with the continuous intensification of agriculture, because of its impacts on water quantity and quality, especially in the Mediterranean areas.

References

- Ali, E., W. Cramer, J. Carnicer, E. Georgopoulou, N.J.M. Hilmi, G. Le Cozannet, and P. Lionello, 2022: Cross-Chapter Paper 4: Mediterranean Region. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegria, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2233–2272, doi:10.1017/9781009325844.021.
- Barredo, J.I., G. Caudullo and A. Dosio, 2016: Mediterranean Habitat Loss Under Future Climate Conditions: Assessing Impacts on The Natura 2000 Protected Area Network. *Appl. Geogr.*, 75, 83–92, doi:10.1016/j.apgeog.2016.08.003.
- Beaufoy, Guy, 2001: EU Policies for olive Farming Unsustainable on all Counts, BirdLife International European Community, Brussels, Belgium, 20 pp.
- Bindi, M.; Olesen, J.E.; 2011: The Responses of Agriculture in Europe to Climate Change. *Reg. Environ. Chang.*, 11, 151–158.
- Claro, A.M.; Fonseca, A.; Fraga, H.; Santos, J.A. Future, 2024: Agricultural Water Availability in Mediterranean Countries under Climate Change: A Systematic Review. *Water* 2024, 16, 2484. <https://doi.org/10.3390/w16172484>.
- European Economic and Social Committee, 2023. *On-line*. Reference SOC/763-EESC-2023.
- Fader, M., et al., 2016: Mediterranean Irrigation Under Climate Change: More Efficient Irrigation Needed to Compensate for Increases in Irrigation Water Requirements. *Hydrol. Earth Syst. Sci.*, 20(2), 953–973, doi:10.5194/hess-20-953-2016.
- Fernández-Lobato, L.; García-Ruiz, R.; Jurado, F., Vera, D.;2021): Life Cycle Assessment, C Footprint and Carbon Balance of Virgin Olive Oils Production From Traditional and Intensive Olive Groves in Southern Spain, *Journal of Environmental Management*, 293, 14 p.
- Grafton, R. Q., Chu, L., and Wyrwoll, P.; 2020. The Paradox of Water Pricing: Dichotomies, Dilemmas, and Decisions. *Oxford Review of Economic Policy*, 36(1), 86–107. <https://doi.org/10.1093/oxrep/grz030>.
- Guiot, J. and W. Cramer, 2016: Climate change: the 2015 Paris Agreement thresholds and Mediterranean basin ecosystems. *Science*, 354(6311), 465–468, doi:10.1126/science.aah5015.
- Hanlu Yan, Yuqing Lin, Qiuwen Chen, Jianyun Zhang, Shufeng He, Tao Feng, Zhiyuan Wang, Cheng Chen, Jue Din, 2023: A Review of the Eco-Environmental Impacts of the South-to-North Water Diversion: Implications for Interbasin Water Transfers, *Engineering*, 30, 161-169. <https://doi.org/10.1016/j.eng.2023.05.012>.
- Lefebvre, G., et al., 2019: Predicting the vulnerability of seasonally-flooded wetlands to climate change across the Mediterranean Basin. *Sci. Total Environ.*, 692, 546–555, doi:10.1016/j.scitotenv.2019.07.263.
- Lozano, O.M., et al., 2017: Assessing Climate Change Impacts on Wildfire Exposure in Mediterranean Areas. *Risk*

Anal., 37(10), 1898–1916, doi:10.1111/risa.12739.

Manning, C.; Widmann, M.; Bevacqua, E.; Van Loon, A.F.; Maraun, D.; Vrac, M. 2019: Increased Probability of Compound Long Duration Dry and Hot Events in Europe during Summer (1950–2013). *Environ. Res. Lett.* 2019, 14, 094006.

Neves, Bruno; Pires, Iva Miranda e Roxo, Maria José; 2013: Culturas Intensivas e Superintensivas e a Suscetibilidade à Desertificação: O Caso Do Olival No Alentejo, em: IX Congresso da Geografia Portuguesa – Geografia: Espaço, Natureza, Sociedade e Ciência, Évora, Universidade de Évora e Associação Portuguesa de Geógrafos, 44-51.

Pellicer-Martínez, F.; Martínez-Paz, J.M. 2018: Climate Change Effects on the Hydrology of the Headwaters of the Tagus River: Implications for the Management of the Tagus–Segura Transfer. *Hydrol. Earth Syst. Sci.*, 22, 6473–6491.

Peñuelas, J., et al., 2017: Impacts of global change on Mediterranean forests and their services. *Forests*, 8(12), 463, doi:10.3390/f8120463.

Rocha, J.; Carvalho-Santos, C.; Diogo, P.; Beça, P.; Keizer, J.J.; Nunes, 2020. J.P: Impacts of Climate Change on Reservoir Water Availability, Quality and Irrigation Needs in a Water Scarce Mediterranean Region (Southern Portugal). *Sci. Total Environ.*, 736, 139477.

Rodrigo, I, 2023: O Alentejo de Alqueva: Quem Paga e Quem Beneficia. *Vida Rural*.

Saadi, S., et al., 2015: Climate Change and Mediterranean Agriculture: Impacts on Winter Wheat and Tomato Crop Evapotranspiration, Irrigation Requirements and Yield. *Agric. Water Manag.*, 147, 103–115, doi:10.1016/j.agwat.2014.05.008.

San-Martín, E & Larraz-Iribas, B., 2022: Es Cara el Agua del Traspase Tajo-Segura? Recuperación de Costes, Subvenciones y Tarifas. Technical Report. <http://dx.doi.org/10.13140/RG.2.2.18052.30089/2>.

Santillán, D.; Garrote, L.; Iglesias, A.; Sotes, V., 2020: Climate Change Risks and Adaptation: New Indicators for Mediterranean Viticulture. *Mitig. Adapt. Strateg. Glob. Chang.* 2020.

Sereno, A., 2021: Climate Change in Albufeira Convention. UNECE Group in Charge of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes

Schmidt, G. et al., 2023: Stock-Taking Analysis and Outlook Of Drought Policies, Planning and Management in EU Member States. Final report under contract “Technical and scientific support to the European Drought Observatory (EDO) for Resilience and Adaptation - Lot 2: In-depth assessment of drought management plans and a report on climate adaptation actions against drought in different sectors” (ENV/2021/OP/0009) for the European Commission, Directorate-General for Environment.

Silveira, A.; Ferrão, J.; Muñoz-Rojas, J.; Pinto-Correia, T.; Guimarães, M.; Schmidt, L., 2018: The Sustainability of Agricultural Intensification in the Early 21st Century: Insights from the Olive Oil Production in Alentejo (Southern Portugal)”, em: *Changing Societies: Legacies and Challenges*, Imprensa de Ciências Sociais, Lisbon, Portugal, 247-275, ISBN 978-972-671-505-4.

Vicente-Serrano, S.M.; Zouber, A.; Lasanta, T.; Pueyo, Y. Dryness, 2012: Is Accelerating Degradation of Vulnerable Shrublands in Semiarid Mediterranean Environments. *Ecol. Monogr.*, 82, 407–428.

Vicente-Serrano, S.M.; Lopez-Moreno, J.-I.; Beguería, S.; Lorenzo-Lacruz, J.; Sanchez-Lorenzo, A.; García-Ruiz, J.M.; Azorin Molina, C.; Morán-Tejeda, E.; Revuelto, J.; Trigo, R.; et al. 2014: Evidence of Increasing Drought Severity Caused by Temperature Rise in Southern Europe. *Environ. Res. Lett.*, 9, 044001.

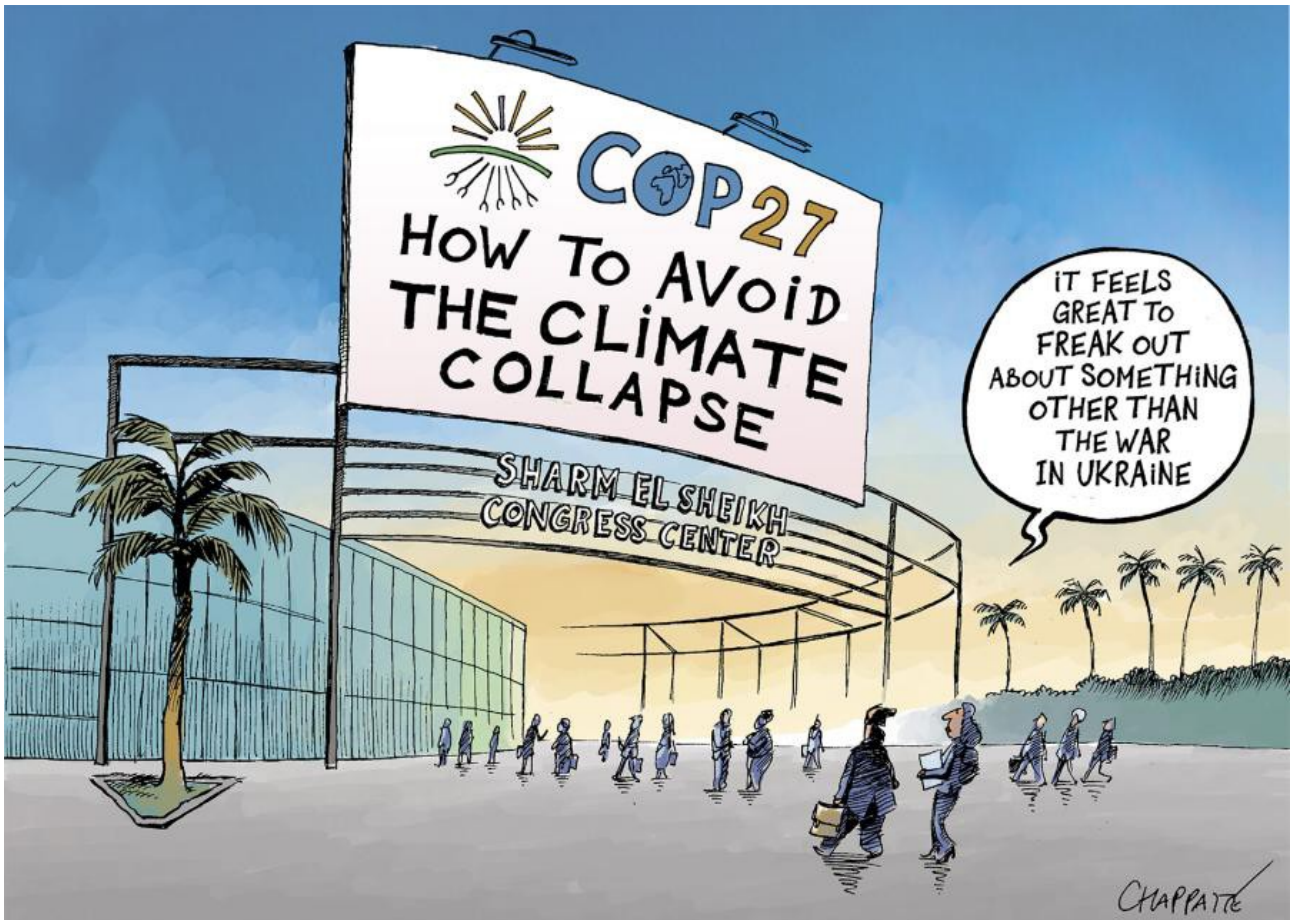
WWF, 2003. <https://www.wwf.eu/?7035/Water-transfers-are-increasing-the-water-crisis>

World Water Forum (WW) Priority WDM. Report relating to target n°1

Yeste, P., et al., 2021: Projected Hydrologic Changes Over the North of the Iberian Peninsula Using a Euro-CORDEX Multi-Model Ensemble. *Sci. Total Environ.*, 777, 146126, doi:10.1016/j.scitotenv.2021.146126.

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Common Land and the Environment

João Carlos Gralheiro

Abstract

The present article provides a detailed legal framework of the Portuguese Common Land regime, the centuries-old organization model of 'Baldios'. This specific type of communal property – neither Private or Public – has faced different economic, political and legal challenges over the centuries, having earned special recognition following the Portuguese 1974 Revolution, and recently with the Law 75/2017, of august 17th. Nowadays, the specific link of Baldios with environmental issues and capitalist appetites make these communal property regime of special importance and inspiration to Comparative Law.

I. Legal framework

The highest point of [the Portuguese] legal system is the Constitution of the Portuguese Republic, under which not only laws must be legislated but also interpreted and applied.

Thus, in relation to *baldios* [common land], the existence of community property is expressly recognized in our *Grundnorm*, in Article 82, no. 4, point b): “The cooperative and social sector specifically includes the community means of production, owned and managed by local communities.” The protection of the maintenance of this type of production property is enshrined in Article 288, point f), which stipulates: “constitutional revision laws must respect the coexistence of the public sector, private sector, and cooperative and social sector ownership of means of production.”

Regarding the environment, its defense, promotion, and conservation, we have Article 9, point d), which imposes, as a fundamental task of the State, the obligation to 'promote the well-being and quality of life of the people (...), as well as the realization of environmental rights (...); e): “(...) defend nature and the environment, preserve natural resources, and ensure proper land use planning”; as well as Article 66, no. 1, which states that 'everyone has the right to a human, healthy, and ecologically balanced living environment and the duty to defend it', with the State being responsible under no. 2: 'to prevent and control pollution and its effects and harmful forms of erosion' (point a)); 'to plan and promote land use planning, (...)' (point b)); 'to create and develop natural reserves and parks, as well as classify and protect landscapes and sites to ensure nature conservation (...)' (point c)); 'to promote the rational use of natural resources, safeguarding their renewal capacity and ecological stability, respecting the principle of intergenerational solidarity' (point d)); 'to promote, (...) the environmental quality of settlements and urban life, (...)' (point e)); 'to promote the integration of environmental objectives into various sectoral policies' (point f)); 'to promote environmental education and respect for environmental values' (point g)); 'to ensure that fiscal policy aligns development with environmental protection and quality of life' (point h)). Additionally, Article 64, no. 2, point b) states that 'the right to health protection is realized by creating environmental conditions that guarantee, specifically, the protection of childhood, youth, and old age (...).'

Under the "umbrella" of this legal-constitutional framework, the ordinary legislator has published an intricate and complex normative framework, of which the following stand out:

- Regarding the *baldios*, Law 75/2017, of August 17 (Law on *Baldios*: LB);
- Concerning the environment, Law 19/2014, of April 14, with the current wording (Environmental Policy Framework Law: LBPA).

Common land, in accordance with the provisions of the LB, refers to areas of the national territory that, because they are 'owned and managed by local communities' (Article 2, point a)), constitute, 'as a rule, the common land of the co-owners, namely for purposes of grazing livestock, collecting firewood and brushwood, crops, hunting, electricity production, and all their current and future economic potential, under the law and local customs and practices' (Article 3, no. 1). Furthermore, depending on a decision by the assembly of *compartes* ["co-managers"], they may also 'constitute a *logradouro* ["common space"] for cultural and social purposes of interest to the population of the area of residence' (no. 2). Article 6, no. 1 stipulates that 'local communities can acquire real property by any legally recognized means, which can be integrated into the subset of community assets'; no. 3 states that 'common land is outside legal trade and cannot, in whole or in part, be appropriated by third parties in any form or title, including adverse possession [*usucapio*],' and it is 'not subject to seizure or lien, nor can it be mortgaged or encumbered, except for the constitution of servitudes under general legal terms (...)' (no. 2). 'Acts or legal transactions of appropriation or seizure by third parties, involving common land, as well as its subsequent transfer,' are considered 'null under general legal terms, except in cases expressly provided for in this law' (no. 4), and those that are not 'are, under the law, voidable at any time' (no. 5). According to Article 7, the holders of common land are its *compartes* [co-managers] (no. 1), with the co-managers' universe being 'integrated by citizens' ('natural persons': Article 2, point b)) 'residing in the area where the corresponding properties are located, respecting the uses and customs recognized by the local community, and the assembly of *compartes* [co-managers] may also grant this status to non-resident citizens' (no. 2), provided they are 'owners, under any title, of agricultural and forestry areas and engage in agricultural, forestry, or pastoral activities, or have social and ancestral ties to the local community, and adhere to the local customs and practices' (no. 5). The *compartes* [co-managers], 'for the exercise of acts of representation, disposition, management, and supervision related to the corresponding properties,' 'organize themselves in an assembly of *compartes* [co-managers], as well as in a board of directors and a supervisory committee, elected by the assembly and with the powers provided for in this law' (Article 17, no. 1).

Referring to the LBPA [Environmental Policy Framework Law], it is worth noting the provisions of Article 5, no. 1: 'Everyone has the right to a healthy environment and quality of life, as established constitutionally and internationally,' with Article 2, no. 1 stating the 'objectives of environmental policy': 'Environmental policy aims to realize environmental rights through the promotion of sustainable development, supported by proper environmental management, particularly of ecosystems and natural resources, contributing to the development of a low-carbon society and a 'green economy,' rational and efficient in the use of natural resources, ensuring the well-being and progressive improvement of citizens' quality of life.'

Articles 3 and 4 add the 'material principles of the environment' and the principles of public environmental policies,' respectively. Article 3: 'Public action on environmental matters is subject to, among others, the following principles: a) Sustainable development, which requires meeting the needs of the present without compromising those of future generations; b) Intra- and intergenerational responsibility; c) Prevention and precaution; d) Polluter-pays principle; e) User-pays principle; f) Responsibility; g) Restoration.' Article 4: 'Public environmental policies are also subject to, among others, the following principles: a) Cross-cutting and integration; b) International

cooperation; c) Knowledge and science; d) Environmental education; e) Information and participation.'

Additionally, Articles 10 and 11 address the 'natural environmental components' and the 'components related to human behaviors,' respectively. Article 10: 'Environmental policy addresses natural environmental components such as air, water, sea, biodiversity, soil, and subsoil, landscapes, and recognizes and values the importance of natural resources and the goods and services of ecosystems.' Article 11: 'Environmental policy also addresses components related to human behavior, including climate change, waste, noise, and chemical products.'

Due to their relevance to the topic under analysis, the following decrees are also noteworthy: Decrees of 24/12/1901, 24/12/1903, and 11/07/1905, which established the Forest Regime, and Law 1971, of 15/07/1938, which subjected *baldios* to that Regime. Moreover, in its current wording, the following regulations are also relevant: DL 175/88, of 17/05 (Regulating fast-growing forest species planting); Law-Decree 327/90, of 22/10 (Regulating the occupation of land affected by forest fires); Law 33/96, of 17/08 (Framework Law on Forest Policy); Law-Decree 127/2005, of 05/08 (Establishing the regime for creating Forest Intervention Zones and the principles governing their establishment, functioning, and dissolution); Law-Decree 124/2006, of 28/06 (Establishing measures and actions to be developed within the National Forest Fire Defense System); Law 58/2007, of 04/09 (Approving the National Territorial Planning Policy Program); Law Decree 166/2008, of 22/08 (Legal Regime of the National Ecological Reserve); Law Decree 16/2009, of 14/01 (Legal Regime of Forest Management, Planning, and Intervention Plans); Law Decree 73/2009, of 31/03 (Legal Regime of the National Agricultural Reserve); Law Decree 96/2013, of 19/07 (Legal Regime for afforestation and reforestation actions with forest species on mainland Portugal); Law 31/2014, of 30/05 (Framework Law on Public Land, Territorial Planning, and Urbanism); Law-Decree 80/2015, of 14/05 (Legal Regime of Territorial Management Instruments); and Law Decree 82/2021, of 13/10 (Defining the Integrated Management System for Rural Fires on the Mainland).

II. The *Baldios*

Having made this overview of the normative framework, let us now address the relationship between *Baldios* and the Environment.

Talking about *Baldios* requires us to begin by historically framing this type of property.¹

Thus, we might not be far from the truth if we assert that the origin of community property is to be found in the mists of time, as a moment of property assertion in the lives of settled peoples. It is from it that private property was concretized: in land that belonged to everyone, as everyone could use it, some built houses for themselves and their families.

With the creation and complexity of family and social relations and the appearance of organizational structures that would give rise to the emergence and evolution of cities and the State, up to the present day, the issue of land ownership became the subject of various typologies, from the original community property to the subsequent private and, later, public ownership.

In this historical evolution, private and public property gradually occupied the space of communal property, from which the communities that used and enjoyed it were dispossessed.

Thus, with the construction of settlements, from small villages to large cities, the land began to be

occupied with buildings, streets, and other public spaces, lands designated for agricultural, forestry, or silvopastoral exploitation, and other private or public purposes. The territorial space that was not occupied, because it was located outside the limits of such territorial occupation, typically (but not exclusively) in mountain areas, remained available for local communities to continue using and enjoying it communally.

In the emancipatory struggles of the people, these spaces for communal use and enjoyment became indispensable, as they allowed the emergence and strengthening of family economies that helped the people (the 'common folk,' in the words of Fernão Lopes) in their liberation from the feudal yoke, since it was there that they would gather stones to build the walls of their homes and livestock pens; wood to construct those homes and pens; brushwood to create the 'bedding' for livestock and later use as fertilizer (manure) during planting; it was there that they grazed their cattle, collected firewood to heat their homes and prepare food, and used roots to make charcoal for various purposes, both domestic and industrial.

In this communal use, there was, as it were, an 'invisible hand' that regulated the needs of the local communities versus the potentialities that nature offered, allowing for the existence of an environmental/ecological balance: what the local communities took from communal property was compatible with its natural regeneration capacity, especially given the low land occupancy rates and the vast extent of this type of property (for example, in Portugal, in 1911, there were around 6,000,000 inhabitants – see the 5th General Census of Population – and 3.822.000 hectares of *baldio*.²

The 'appetite' of the state powers for communal property has always been great. As Aristotle put it: 'What is common to all is what is most neglected,'³ or as Alexandro Herculano stated: 'The existence of municipal *baldios* and common pastures is one of the greatest obstacles to the progress of agriculture';⁴ Garrett Hardin: 'Freedom in a *baldio* leads to ruin for all.'⁵ Therefore, the struggle of the people to preserve communal property has always been a constant.⁶

With the Industrial Revolution and the need for wood to fuel machines and/or trains – a product that was abundant in areas designated for communal use and enjoyment – this 'appetite' became 'voracious.'

Moreover, at the dawn of the 20th century, the systemic crisis of capitalism led to the First World War, with all the consequences that followed for the people, particularly with regard to fuel rationing.

The demand for firewood, arising from these circumstances, caused the forests in the mountain areas (where the land was in the possession of local communities) to be 'devoured,' to the point where these mountains became partially bare of trees ('bald'), a situation that generated various environmental problems: without trees, the soils lost the structures that held them together, which would cause landslides during heavy rains, and these lands would be carried into the beds of watercourses, silting them and causing floods.

It is within this complex situational framework that the dictatorial *Estado Novo* [New State] regime imposed the Forest Regime, arguing that it was necessary to end this state of affairs, which, if allowed to persist, would cause even climatic changes.

Thus, after the publication of the Economic Reconstruction Law (Law 1914, of 24/05/1935), based on which the Forest Settlement Law (Law 1971, of 15/06/1938) was approved, which in turn

established the application of the Forest Settlement Plan (from 1939 to 1968),⁷ the Forest Services 'entered' the mountains, particularly those in the north and center of Portugal, swarming them with intensive and continuous planting of resinous trees (pine), and initially prohibiting, and later supervising, the access of the commoners to their *baldios*.

'It is generally known how important *baldios* are to the people of some regions. It is observed that the existence of vast common land areas coincides with the predominance of small agricultural holdings. It is noted that of the 44 municipalities where the common land area exceeds 10% of the total area, in 10, the average area of rustic properties (excluding common land) is less than 0,2 hectares; in 14, it is between 0,2 and 0,3 hectares; in 11, it is between 0,3 and 0,4 hectares; in 5, it is between 0,4 and 0,5 hectares, and only in 4 municipalities does it exceed half a hectare (numbers from 1949). It is clear how indispensable *baldios* are for maintaining small farmers.'⁸

Since it was from these lands that the mountain dwellers derived their main subsistence income for their families, being dispossessed/expropriated from them, they were deprived of this source of income and had to sell their flocks at a loss, losing their natural fertilizers, and therefore abandoning their agricultural holdings. To face the hunger that began to spread through their homes, they were forced to emigrate.

'Emigrating is the most significant decision in the life of a small farmer. It means breaking with everything that is dear to them: the land they cultivated, the region where they were born, and their family. Such a decision is only made 'after having fought fiercely for economic independence'⁹ and when the situation becomes unsustainable.' 'Although there are multiple causes that contribute to emigration, one fundamental cause stands out in Portuguese emigration: it is the defeat of small-scale agriculture, its ruin, its decomposition, and the proletarianization of the small farmer.'¹⁰

The mountains became full of pines, it is true, but no less true is that they became empty of people and their livestock, as the brushwood stopped being cut and ceased to serve as food for the animals, allowing it to grow unchecked.

As a consequence of this forced human and animal depopulation, the territorial occupation mosaic underwent profound and structural changes. What had once been a mosaic composed of vast areas of small private properties — both agricultural and silvicultural land — associated with more or less extensive areas of *baldios*, also used for silvopastoral purposes, was replaced by continuous expanses of pine and brushland, abandoned and without any form of use or management.

III. 'The man with the red beard'

Fire, as a natural or even human phenomenon (used as a method for pasture renewal), has always existed (and will continue to exist). In the time of that first territorial mosaic, it is possible that fires were even more frequent than they are today, but, with few exceptions (as the fire that occurred in Sernada do Vouga in the 1960s), the scale of rural fires (in terms of burnt area, days of fire, and their consequences) was smaller than today's.

In fact, whether of natural or human origin (negligent or even deliberate: either as a protest by the locals against the Forest Regime in earlier times, or as the work of terrorist hands, particularly against the democratic regime born in April 1974), after about 30 to 40 years of growth of the pine trees planted under the Forest Services' orders, and the brush that had grown on these lands, the "man with the red beard" (an interesting image of fire that was given to me by a witness in a case where I was the lawyer), did what he knows how to do in an increasingly hot and dry climate: he

destroyed hectares and hectares of land, taking everything in his path—pine forests, sowing lands, houses, warehouses, agricultural machinery, industrial pavilions, animal lives, and, worst of all, human lives.

Hectares of pine forests were destroyed, and in their place, we began to see our mountains filled with eucalyptus trees,¹¹ naturally in areas where it is financially profitable. Eucalyptus trees, alien species: *after the implementation of the forest plan was completed, the expansion of eucalyptus began, marking a strategic shift in forestry policy, now less focused on protection and production in public communal areas, and more committed to increasing wood resources for the industrial sector.*¹² When it's not eucalyptus, due to the abandonment of land management, the territory is taken over by brush and/or invasive plants.

And 'the man with the red beard' has been growing stronger year after year, thus becoming more destructive.

Regarding this, I cannot fail to mention the reflections of Jaime Gralheiro and Paulo Varela Gomes.¹³ The former, in his speech during the centennial celebration of the Forest Regime in December 2001 in Coimbra, said: *There is no doubt that the submission of much of the baldios to the Forest Regime brought enormous advantages to the country. However, it also brought great losses, such as the expulsion of livestock from the mountains and the consequent desertification of the mountainous interior. Furthermore, due to the irrational manner in which afforestation was carried out, it created all the conditions for the country to begin burning every summer. For this lack of foresight, I hold the Forest Services responsible, because one didn't need great technical capacity to realize that if this afforestation continued in this manner, sooner or later, such fires would be inevitable.*

The latter, in his column published in the *Público* newspaper on August 11, 2005, wrote: *In Portugal, two types of territory burn: first, the timber forest, the large forested areas of pine and eucalyptus. The forest burns because temperatures keep rising and because, as everyone knows, it is dirty and poorly managed. It wasn't always like this: this type of forest began to grow in the last 50 years, with the progressive destruction of traditional agriculture, that is, with the expropriation of small farmers, who were first forced to turn to the forest due to the ruin of agriculture, and then lost everything in the fires and disappeared from the social map of the country.*

The horizontal spread of rural fires depends on the fuel available on the ground: fine material – grasses and other brush. Not long ago, in Portuguese television, landscape architect Henrique Pereira dos Santos stated that instead of fighting fires by drowning them (the technique of attacking fires through water discharge, particularly from aerial means), fires should be starved. What he meant by this was that forest cleaning holds the key to safeguarding its future. To achieve this goal, he argued that instead of fining those who don't clean their land, financial support policies should be promoted for those who do.

In an aging and impoverished society, the stimulus must be positive, not negative.

In the recent fires in Portugal, in terms of trees, the fire burned everything in its path. In the Pine Forest of Leiria (2017), it was pines; in the Natural Park of Serra da Estrela (2022), it was resinous trees (pine) and deciduous trees; in the Natural Park of Montesinho and Vila Pouca de Aguiar, it was oak; in Sever do Vouga and Albergaria-a-Velha (2024), it was eucalyptus and blueberries; in S. Pedro do Sul, Castro Daire, and Viseu (2024), it was pines and eucalyptus.

Because we were talking about Natural Parks, I must mention what happened in the Natural Park of Serra da Estrela in 2022, where a local community, during the winter/spring period, and at the request of shepherds, tried to clean their *baldios* to renew the pastures for grazing. They were prevented from doing so by the park management, which fined them €12.000, arguing that this action went against the 'dynamics of vegetation.' We saw what happened: when summer came, the vegetation followed its natural dynamics, serving as fuel and spreading the fire that broke out there, destroying more than 22.000 hectares, and only being stopped in the area that had been cleaned by that community.

Those who are on the ground, who know it, are the local communities, and they are, therefore, the ones who will best know how to possess and manage their *baldios*. This communal possession and management were returned to them by Law-Decrees 39/76 and 40/76 of January 19 [1976] and have been maintained through all subsequent Laws on *Baldios* (Law 68/1993, of September 4; amended by Law 72/2014, of September 2; and Law 75/2017, of August 17). Therefore, the interference of national parks in the possession and management of *baldios* by the rightful owners constitutes a clear and direct violation of the Law on *Baldios*.

IV. Recent appetites

Recently, what has been observed is the occupation of part of the national *baldio* territory with reservoirs, wind farms, and photovoltaic parks. More recently, there has been pressure on local communities for the installation of mining operations (e.g., lithium mining).

Regarding this first type of occupation, it is usually preceded by the expropriation of the common land that will be submerged or used for dam activities. The remaining part may then be subject to special protective rules regarding the dams and reservoirs, which impose administrative servitudes, typically limiting the full and unrestricted exercise of the local communities' right to the possession and management of their *baldio*.

As for the other types of occupation, they occur through the 'exploitative cession' figure regulated in Article 36 of Law 75/2017, of August 17.

As for the wind farms, aside from the visual impact they cause, the public is well aware of the issues they present in terms of the discomfort caused by the noise from the blades' movement and the wind hitting them. The Lisbon Court of Appeals has already ruled on this issue, condemning a company operating one of these parks to stop the operation of one of the towers and to pay compensation to neighbors, as it was determined that the noise violated the personality rights of those affected.¹⁴

In regard to photovoltaic parks, the concerns relate to the impact on the landscape caused by the occupation of land with solar panels, along with the fact that productive land (agricultural and/or forestry) is transformed into unproductive land in this segment of primary activity. This could have repercussions not only in terms of the increasing loss of our food autonomy in such an uncertain time, but also in terms of carbon capture and sequestration: without agricultural activity in those territories, they won't produce the food we need; and without agricultural or forestry activity in those areas, there won't be vegetation or trees to capture the carbon polluting the atmosphere and return oxygen to us through photosynthesis.

As for mining operations, the issues revolve around the visual impacts they may cause if they are open-pit mines, and the maintenance and quality of aquifers that may exist underground in areas

where these operations might be installed. These aquifers are vital not only for human and animal water consumption, but also for the irrigation of agricultural operations.

For each of these situations, they could represent violations of the Law on *Baldios*, especially when their implementation results in the obstruction of '[t]raditional uses by the landholders' (Article 10, no. 1, point b)).

Since carbon capture and sequestration was mentioned, I must also highlight a new 'niche' of profitability now opening to local communities, through the exploitation of their *baldios* via silviculture: the planting or sowing of trees with high carbon-capturing capabilities.

To avoid repeating past mistakes and aiming for the construction of a resilient forest, particularly one resistant to fires in the context of climate change, it will be necessary to consider, in the land-use mosaics to be implemented, factors such as location, configuration, size, access, and clearances. It will need to be defined which areas will be seeded or planted with trees, and what species will be used, as well as those areas where no vegetation will exist.

This reflection concludes with a brief 'provocative' reference to another topic where *Baldios* and the Environment are elements of the equation: the sale, for a fee, of limited areas of *baldio* that border urban areas and are necessary for the expansion of their urban perimeter (Article 40 of the Law on *Baldios*), within the framework of the *Community Land Trust*¹⁵: the right to ownership of the *baldio* remains with the Local Community, while the surface rights (whether perpetual or temporary) of plots of this land can be transferred to private individuals (economically disadvantaged persons) so they can build their homes on it. These constructions would be associated with concepts such as ecologically sustainable housing and controlled costs/low costs. This new concept merits careful study and reflection by the local communities.

Note on translation: IRCL was responsible for translating and editing this article; some words in italics (e.g. *baldios*, *compartes*, *logradouro*), after being translated, were kept in Portuguese due to their specificity.

¹ See João Carlos Gralheiro, *Dos Baldios até à Lei 75/2017, de 17 de agosto*, 2023, 3rd edition (Edições Esgotadas), p. 23-35.

² Adriano J. Carvalho, *O Regime Florestal em Serpins, Exposição Crítica*, 1911 (Imprensa da Universidade de Coimbra).

³ *Política*, 1261b, 33-36, *apud* Fernando Araújo, *A Tragédia dos Baldios e dos Anti-Baldios*, 2008 (Almedina), p. 11.

⁴ *Opúsculos, Breves Reflexões sobre alguns pontos de Economia Agrária*, VII (Tavares, Cardoso & Irmãos, Editores).

⁵ *A Tragédia dos Comuns (Baldios)*, *Science* (13/12/1968), 162 (3859), p. 1243-1248.

⁶ See Aquilino Ribeiro, *Quando os lobos uivam*, 1958 (Bertrand Editora) p. 38: 'the *serra* [mountain] has belonged to the *serranos* [mountaineers] since the world is a world, inherited from fathers to sons, whoever comes to take it away from us, with us will have to deal with' (IRCL translation) .

⁷ António Bento Gonçalves, IV Simpósio Luso-Brasileiro de Cartografia Histórica (Oporto, November 9 to 12, 2011).

⁸ Álvaro Cunhal, *A Questão Agrária em Portugal* (Civilização Brasileira), p. 337-338.

⁹ Vladimir Ilyich Ulianov (Lenin), *A questão agrária e os críticos de Marx*, ch. VII.

¹⁰ Álvaro Cunhal, *A Questão Agrária...*, *op. cit.*, p. 277 and 281.

¹¹ The phenomenon of the 'eucalyptisation' of the country, before reaching the pine forests and scrubland targeted by rural fires, began, for example, in the Alentejo, with the conversion of bread lands (cereal crops) into eucalyptus plantations, as this became more profitable than the previous crop, which was progressively abandoned.

¹² See Francisco Castro Rego e Yryna Skulska, in *Florestas e Legislação: Que Futuro?*, 2019 (Instituto Jurídico, Faculdade de Direito da Universidade de Coimbra), p. 79.

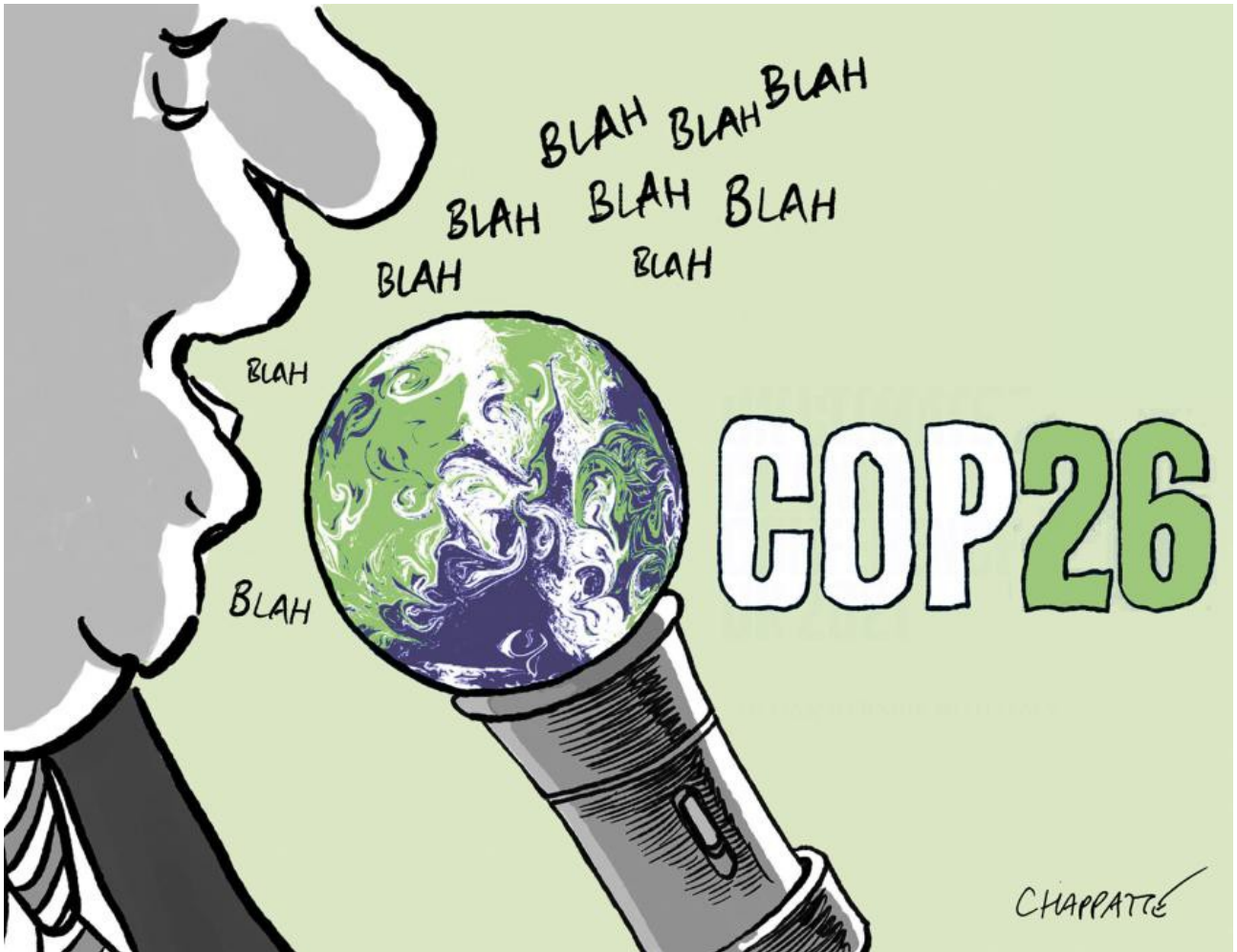
¹³ See João Carlos Gralheiro, *Regime Florestal vs Terrenos Baldios, Que Futuro?*, 2022 (Edições Esgotadas), p. 61-62.

¹⁴ See judgement of 11/09/2012, delivered by magistrate Afonso Henrique, in Case no. 2209/08.0TBTVD.L1-1.

¹⁵ In English in the original text (N.T.).

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Climate Resilience and Social Justice in Agri-Food Value Chains: The Role of Female Actors and Regulation for Transformation

Christine Altenbuchner and Robert Diendorfer

Abstract

The resilience of agri-food supply chains is a critical factor in ensuring food security and sustainability in the face of climate change and socio-economic challenges. However, these systems are increasingly vulnerable to environmental degradation, unequal power dynamics, and social disparities. This article explores the intersection of climate resilience and social justice in agri-food value chains, with a particular focus on the role of female actors and the regulatory frameworks that enable transformation. Drawing on existing research and theoretical frameworks, the article highlights the importance of gender-transformative approaches, participatory methods, and innovative scaling strategies in fostering resilience and equity in agri-food systems. By integrating concepts such as the Proximity Framework and resilience thinking, this study provides insights into how agri-food value chains can adapt to climate-related shocks while addressing systemic inequalities.

Introduction

Agri-food supply chains are essential components of the global food system, connecting producers, processors, distributors, and consumers. These systems are increasingly exposed to climate-related shocks, such as extreme weather events, and gradual stressors, such as changing precipitation patterns and rising temperatures.¹ The impacts of these disruptions are not evenly distributed; they disproportionately affect marginalized groups, including smallholder farmers and women, who often lack the resources and institutional support needed to adapt.²

Resilience in agri-food supply chains is defined as the ability of these systems to withstand, adapt to, and recover from disruptions while maintaining their essential functions.³ However, resilience alone is insufficient if it perpetuates existing inequalities or unsustainable practices. Instead, resilience must be linked to transformative change that addresses the root causes of vulnerability and promotes equity and sustainability.⁴ This article examines how the integration of resilience thinking, gender-transformative approaches, and regulatory frameworks can foster climate resilience and social justice in agri-food value chains.

Resilience in Agri-Food Value Chains

Resilience in agri-food supply chains builds on the concept of social-ecological systems, which emphasizes the interconnectedness of human and natural systems.⁵ Resilience encompasses three key features: buffer capacity, self-organization, and the capacity for learning and adaptation.⁶ These features enable systems to absorb shocks, reorganize, and continue functioning in the face of disruptions. However, resilience is not inherently positive; it can also reinforce undesirable systems, such as those characterized by environmental degradation or social inequality.⁷ In the context of agri-food value chains, resilience must be closely tied to transformation, enabling systems to

effectively respond to changing conditions. Transformation involves fundamental changes in the structures, processes, and relationships that underpin a system, enabling it to adapt to new conditions and challenges.⁸ For example, shifting from long, globalized value chains to shorter, localized ones can enhance resilience by reducing transportation times and vulnerabilities to external shocks.⁹ Similarly, fostering collaborative relationships among value chain actors can improve information sharing, joint problem-solving, and collective decision-making, all of which contribute to resilience.¹⁰

Proximity and Resilience: How Do Value Chain Actors Interact?

The Proximity Framework, developed by Edelman et al. (2022),¹¹ provides a nuanced perspective on resilience by emphasizing the importance of spatial and relational proximity. Spatial proximity refers to the physical closeness of actors within a value chain, while relational proximity focuses on the strength of social and organizational ties. Both forms of proximity play a critical role in shaping the resilience of agri-food value chains. For instance, local sourcing and distribution networks can enhance adaptability by reducing dependencies on global markets and minimizing exposure to external shocks. Relational proximity, on the other hand, fosters trust, collaboration, and mutual support among value chain actors, enabling them to respond more effectively to disruptions.

The Proximity Framework also highlights the importance of governance structures and institutional arrangements in building resilience. Adaptive governance, which emphasizes flexibility, inclusivity, and collaboration, is particularly important for managing complex systems such as agri-food value chains.¹² By fostering spatial and relational proximity, adaptive governance can create the conditions for transformative change in agri-food systems.

Vulnerabilities in Agri-Food Value Chains and The Role of Female Actors for Resilience

Agri-food value chains are highly vulnerable to climate-related shocks and socio-economic disruptions. Studies have shown that long, globalized value chains are particularly susceptible to external shocks, such as extreme weather events, trade disruptions, and pandemics.¹³ These vulnerabilities are exacerbated by unequal power dynamics within value chains, which often marginalize smallholder farmers and other vulnerable groups.¹⁴ For example, power asymmetries between producers and buyers can lead to exploitative practices, such as low prices and unfair contract terms, which undermine the resilience of farming communities.¹⁵

Women play a pivotal role in agri-food value chains, particularly in smallholder farming systems. However, their contributions are often undervalued and overlooked, leading to systemic inequalities that limit their participation and decision-making power.¹⁶ Research has shown that empowering women can have transformative effects on agri-food systems, enhancing resilience, productivity, and sustainability.¹⁷ For instance, women-led cooperatives in the cocoa sector have demonstrated the potential for collective action to improve market access, reduce vulnerabilities, and increase value retention for producers.¹⁸

Gender-Transformative Approaches

Gender-transformative approaches aim to address the root causes of gender inequality by challenging entrenched norms, power dynamics, and institutional barriers.¹⁹ These approaches go beyond surface-level changes to promote lasting shifts in gender relations, making them essential

for achieving social justice in agri-food systems. Women play critical roles in agricultural production, processing, and marketing, yet they often face systemic barriers to participation and decision-making, such as limited access to land, credit, and education.²⁰

By integrating gender-transformative approaches into resilience thinking, agri-food value chains can become more inclusive and equitable. For example, empowering women through capacity-building programs, access to resources, and leadership opportunities can enhance their adaptive capacity and resilience. Moreover, addressing gender-based vulnerabilities can lead to broader social and economic benefits, such as improved household food security and community well-being.²¹

Social Justice and Resilience through Regulation

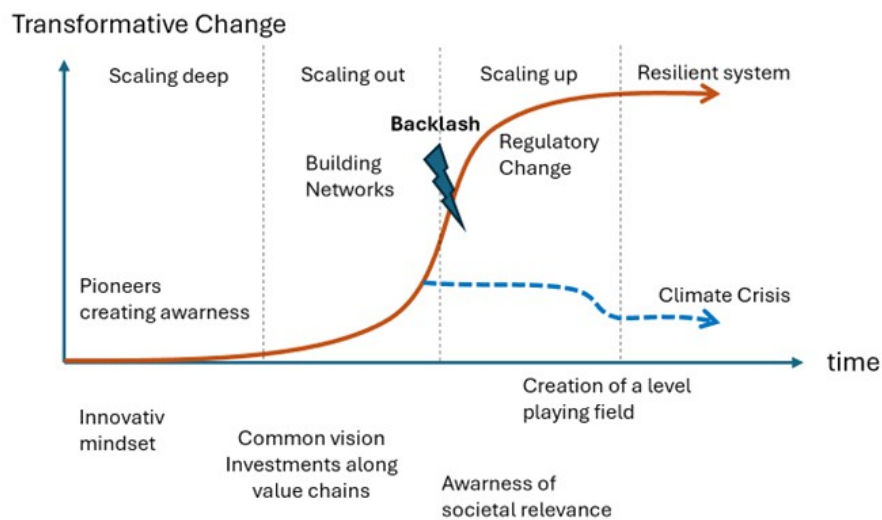
Sustainability regulation such as the *German Supply Chain Due Diligence Act* or the European *Corporate Sustainability Due Diligence Directive (CSDDD)* aim to protect vulnerable groups against a wide range of human rights violations such as child labor, forced labor, discrimination or land grabbing. They can act as an important pillar in scaling up social justice within (agri-food) supply chains by enforcing businesses to implement grievance mechanisms, execute risk management practices, and by holding them accountable under civil law. In addition, mandatory regulation provides increased visibility of marginalized individuals in global supply chains, as the obligatory risk analysis requires businesses to consider the effects of their economic activities on vulnerable groups and the environment. Lastly, due diligence regulation requires companies to take preventative and remedial actions, which consequently lead to a stronger integration of rightsholders' perspectives in core business activities. By compelling economic actors to acknowledge and respect the rights of marginalized people at risk of human rights violations or exploitation, regulatory policies can contribute towards breaking up structural inequalities and global North-South imbalances.

The agricultural sector is especially prone to poor working conditions, unequal payment and a lack of social security systems. Women are particularly vulnerable for exploitative practices. They are disproportionately affected by gender discrimination such as inadequate access to financial services, lack of effective remedies, gender-based violence, or limited ownership and control of land. The *United Nations Food and Agriculture Organization* has recognized the risk of gender-specific discrimination, and called upon companies to include gender as a fundamental component in their due diligence considerations.²² Given both the elevated risk of discrimination against women and depriving them of their equal share in the global workforce (e.g. in the textile or agriculture sector), currently existing mandatory due diligence legislation appears insufficient in addressing these specific vulnerabilities faced by women. While mandatory due diligence regulation urges businesses to adhere to human rights in general, dedicated mechanisms to address gender-specific discrimination and violence are still lacking.

Which actions to take? - Pathways for Transformation

Transformative change in agri-food value chains requires a combination of bottom-up and top-down approaches, as well as different scaling strategies. Bottom-up approaches, such as participatory action research and community-based initiatives, empower local actors to co-create solutions that address their specific needs and challenges.²³ Top-down approaches, such as policy reforms and institutional support, create the enabling conditions for systemic change by addressing structural barriers and power asymmetries.²⁴

Scaling strategies are also critical for amplifying the impact of transformative practices. This can happen in three ways: Scaling out involves replicating successful practices across different contexts, while scaling up focuses on influencing policy and institutional frameworks to support systemic change. Scaling deep, on the other hand, emphasizes embedding new values and cultural practices within communities to ensure lasting transformation.²⁵ These strategies play a pivotal role in transforming agri-food supply chains to ensure long-lasting resilience and social justice. Transformation processes can only be initiated when all three strategies are addressed together.



Transformation to climate resilience and social justice in agri-food-value chains (strongly adapted from Moore et al., 2015²⁶ and System Change Lab Report et al 2021²⁷)

Scaling Deep. Pioneers, often isolated in their actions but driven by an innovative mindset, are the initial drivers of scaling deep strategies. By reorganizing their supply chains, these pioneers and best-practice value chains can transform their operations and foster resilience. Scaling deep is rooted in fundamental values such as mutual trust, shared sustainability goals, and heightened awareness. Both policymakers and businesses can support scaling deep strategies by providing a seat at the table for farmer groups and associations, investing in their entrepreneurial knowledge, and triggering co-learning processes. These efforts are motivated by a shared vision of building a resilient system.

Scaling Out. Farmers, once they recognize their pivotal role in resilient agri-food value chains, can form farmer or innovator groups and establish networks with businesses, organizations, and scientists. Together, they can work toward a common vision to address future challenges, particularly those posed by climate change. Businesses can contribute to the resilience of supply chains by supporting these actions or co-creating transformative steps. In the short term, businesses can provide farmers with a living income, enabling them to invest in more resilient measures, which are often constrained by current market prices. Over the long term, businesses can assist farming communities in their transformation processes by facilitating actions such as building innovator and female farmer groups, providing crop insurance for smallholder farmers, supporting the implementation of agro-ecological measures like agroforestry, offering technology to measure

biomass increases, and investing in water management systems. By building networks, businesses can expand their actions, inspire other companies to adopt similar strategies, and advocate for shared interests and a level playing field.

Scaling Up. Scaling up involves supporting policies and providing financial resources to businesses during the transformation process. The aim is to encourage investments in farmers and promote changes in sourcing strategies. Regulatory policies can enhance structural change by establishing a mandatory framework that market actors have to follow and adjust to. They complement guidelines that are based on voluntariness, thereby offering potential for widespread scale-up of social justice in agri-food supply chains. Public supporting mechanisms and additional funding accompanying policy implementation are crucial to avoid uneven burden sharing at the expense of smallholder farmers or other vulnerable groups who must adjust to the new regulation.

Mandatory Sustainability Regulation as a Tool for Transformation – The Case of Germany's Supply Chain Act

Since the publication of the *United Nations Guiding Principles on Business and Human Rights* in 2011, the public and political debate about corporate responsibility in global supply chains has gained momentum. International frameworks such as the UN Guiding Principles or the *OECD Guidelines for Multinational Enterprises* are decisive foundations for corporate due diligence. They offer guidance for businesses but have a non-binding character to them, as they are purely voluntary. However, in recent years a shift from voluntary due diligence frameworks to legally binding sustainability regulation can be observed.

A prominent example illustrating this shift is the *German Supply Chain Due Diligence Act*. In 2016, the German government adopted the *German National Plan on Business and Human Rights (NAP)* to work towards just globalization. The NAP aims to promote corporate responsibility and adherence to human rights and sees businesses as a key factor in doing so. The implementation of the NAP was accompanied by a multi-annual study to analyze if voluntary due diligence standards (such as the UNGP or OECD Guidelines for MNE) are sufficient in ensuring adherence to human rights in global supply chains. According to the study, only 17 to 19 percent of businesses were able to fulfill their due diligence requirements.²⁸ The results were interpreted as clear evidence that there is a necessity for mandatory policies on corporate accountability to ensure effective due diligence and to reach the targets set out in the NAP. The question was no longer if there should be mandatory due diligence or not, but how it should be set up.²⁹ Consequently, the legally binding *German Supply Chain Due Diligence Act* was adopted in 2023. Its' implementation was accompanied by a wide range of supporting mechanisms, helping businesses in navigating and implementing successful due diligence.

While voluntary sustainability standards can act as a guideline for companies and as important international frameworks for policymakers to work from, they show – due to their non-binding nature – only limited effectiveness for triggering transformation and for securing social justice and climate resilience in global value chains. Nonetheless, the slow but steady move from voluntary to mandatory due diligence is by many seen as a paradigm shift in corporate accountability.³⁰ With global agri-food supply chains being especially prone to negative effects of climate change, mandatory regulation can help in protecting the rights of those individuals who are particularly affected by its' adverse impacts e.g. by providing grievance mechanisms or access to remedy. Especially in countries with low environmental or social standards and/or weak governance, mandatory due diligence policies offer the potential to close a governance gap that has emerged

during economic globalization, and which has led to devastating human rights violations and a disregard for environmental protection.³¹

Regulation as Preparation for Climate Change Impacts

Considering the unprecedented challenges associated with the climate crisis, harmonized sustainability- and due diligence regulation can help in building up more resilient supply chains. As an example, new environmental regulation such as the *European Deforestation Regulation (EUDR)* requires businesses to ensure that the production of certain commodities is not linked to deforestation. Businesses need to increase transparency, analyze supply chains and improve risk management, allowing for quicker identification of potential disruptions. Besides, reputational risk can be reduced while also improving supplier relationship and -diversification. By investing in relationships within their value chains, businesses enhance their resilience, trigger co-learning processes, and thereby transform their value chains to achieve climate resilience. This can be seen as a strategic advantage and a future-focused investment, especially in the context of climate change.

Regulatory Backlash

Despite the potentials that mandatory due diligence policies offer to scale up social justice, European and national due diligence legislation currently faces substantial political backlash. In February 2025 the European Commission announced the so-called “Omnibus-proposal” including amendments to several core pillars of the *Corporate Sustainability Due Diligence Directive* and other sustainability regulation. Among others, the proposal suggests diluting civil liability of businesses, weakening the risk-based approach, excluding the necessity to execute climate transition plans and rejecting EU wide and harmonized penalties in case of violations against the law.³² Similar ambitions can be seen on a national level in Germany. The new coalition has agreed to maintain the *German Supply Chain Due Diligence Act* until the transposition of the (weakened) CSDDD is completed. However, it agreed on drastically reducing reporting obligations and sanctions in case of violations. According to the coalition agreement, companies should only be fined in case of “massive human rights violations”, which drastically reduces the protection of vulnerable groups.

With new political and economic realities, mandatory due diligence regulation is seen as a bureaucratic scapegoat that is dampening competitiveness and restricting economic growth. This is especially irritating considering the broad support from business-, scientific- and civil society communities, which highlight the importance of harmonized and effective due diligence regulation to protect vulnerable individuals and to create a level-playing field for businesses. Similarly, a wide range of companies have invested extensively to be aligned with existing or upcoming due diligence legislation. Other studies report a drop in sourcing from countries with weak environmental and human rights governance as a direct effect of mandatory national and European due diligence laws, suggesting positive effects on human rights and environmental protection.³³

Nevertheless, an evaluation of the *German Supply Chain Due Diligence Act* after two years does show room for improvement. Grievance mechanisms have shown to be difficult to access, as written complaints are required but most affected individuals are unable to read or write. Other aspects hindering accessibility and efficiency include language barriers, fear or retaliation or dismissal, denial of supplier relationships by businesses or an insufficient integration of complainants. Lastly, the *Federal Office for Economic Affairs and Export Control*, who has the

mandate for the enforcement of the *German Supply Chain Due Diligence Act*, provides only vague and general information of ongoing complaints procedures.³⁴

When studying transformation processes, we observe that backlashes are an integral part of the journey. However, to make supply chains resilient in the face of climate change, regulatory changes are not merely a 'nice to have' but a necessity. Such policies are essential to prepare businesses, food systems, and the economy for the challenges posed by a changing climate.

Conclusion

The resilience of agri-food supply chains is not only a technical challenge but also a social and political one. Addressing the vulnerabilities and inequalities within these systems requires a holistic approach that integrates resilience thinking, gender-transformative approaches, and the Proximity Framework. By fostering spatial and relational proximity, empowering female actors, and promoting adaptive governance, agri-food supply chains can become more resilient, equitable, and sustainable. Existing research provides valuable insights into the pathways for transformation, highlighting the importance of participatory methods, innovative scaling strategies, and inclusive policies. As the global food system continues to face unprecedented challenges, these insights offer a roadmap for building resilience and advancing social justice in agri-food value chains. If you are interested in learning more about our project, ClimChain funded by the *Austrian Climate Research Programme (ACRP)*, where we explore best-practice examples for increasing climate resilience in agri-food supply chains, please feel free to reach out or visit our website.

¹ Wheeler, T. & von Braun, J. (2013). Climate change impacts on global food security, *Science* 341(6145), 508–513.

² Barros, V., M. Mastrandrea, M. Abdrabo, W. Adger, Y. Federation, O. Anisimov, D. Arent, S. Cohen, P. Dasgupta, D. Davidson, F. Denton, P. Doell & G. Yohe (2014). Climate change 2014: impacts, adaptation, and vulnerability – IPCC WGII AR5 summary for policymakers, 1-32.

³ Folke, C., Carpenter, S., Walker, B., Scheffer, M. & Rockström, J. (2010). Resilience thinking: Integrating resilience, adaptability, and transformability, *Ecology and Society* 15.

⁴ Boillat, S. & Bottazzi, P. (2020). Agroecology as a pathway to resilience justice: Peasant movements and collective action in the Niayes coastal region of Senegal, *International Journal of Sustainable Development & World Ecology* 27, 662–677.

⁵ Folke, C., Carpenter, S., Walker, B., Scheffer, M. & Rockström, J. (2010). Resilience thinking: Integrating resilience, adaptability, and transformability, *Ecology and Society* 15.

⁶ Ifejika Speranza, C., U. Wiesmann & S. Rist (2014). An indicator framework for assessing livelihood resilience in the context of social–ecological dynamics, *Global Environmental Change*, 28, 109–119.

⁷ Darnhofer, I. (2021). Resilience or how do we enable agricultural systems to ride the waves of unexpected change? *Agricultural Systems* 187, 102997.

⁸ Pelling, M., K. O'Brien & D. Matyas (2014). Adaptation and transformation, *Climatic Change* 133.

⁹ Edelmann, H., X. Quiñones-Ruiz & M. Penker (2022). How close do you like your coffee? - Examining proximity and its effects in relationship coffee models *Journal of Rural Studies* 91, 24-33.

¹⁰ Stone, J. & S. Rahimifard (2018). Resilience in agri-food supply chains: a critical analysis of the literature and synthesis of a novel framework, *Supply Chain Management: An International Journal* 23, 207-238.

¹¹ Edelmann, H., X. Quiñones-Ruiz & M. Penker (2022) How close do you like your coffee? - Examining proximity and its effects in relationship coffee models, *Journal of Rural Studies* 91, 24-33.

¹² Pelling, M. & C. High (2005). Understanding adaptation: What can social capital offer assessments of adaptive capacity? *Global Environmental Change* 15, 308-319.

¹³ Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak (COVID-19/SARS-CoV-2) case, *Transp Res E Logist Transp Rev.* 136, 101922.

¹⁴ Darnhofer, I. (2010). Strategies of family farms to strengthen their resilience, *Environmental policy and governance*

20, 212-222.

¹⁵ Edelmann, H., X. Quiñones-Ruiz & M. Penker (2022) How close do you like your coffee? - Examining proximity and its effects in relationship coffee models, *Journal of Rural Studies* 91, 24-33.

¹⁶ Altenbuchner, C., Vogel, S. & Larcher, M. (2017). Effects of organic farming on the empowerment of women: A case study from Western Odisha, India, *Women's Studies International Forum* 64, 28–33.

¹⁷ Jacobi, J., S. Mukhovi, A. Zonta, H. Augstburger, F. Käser, C. Pozo, M. Ngutu, F. Delgado, B. Kiteme & S. Rist (2018) Operationalizing food system resilience: An indicator-based assessment in agroindustrial, smallholder farming, and agroecological contexts in Bolivia and Kenya, *Land Use Polic*, 79, 433-446.

¹⁸ Boillat, S. & P. Bottazzi (2020). Agroecology as a pathway to resilience justice: peasant movements and collective action in the Niayes coastal region of Senegal, *International Journal of Sustainable Development & World Ecology* 27, 662-677.

¹⁹ Khanna, R., R. K. Murthy & S. Zaveri (2016), *Gender transformative Evaluations: Principles and Frameworks* 16-37.

²⁰ Altenbuchner, C., Vogel, S. & Larcher, M. (2017). Effects of organic farming on the empowerment of women: A case study from Western Odisha, India, *Women's Studies International Forum* 64, 28–33.

²¹ Boesten, J., & Wilding, P. (2014). Transformative gender justice: Setting an agenda, *Women's Studies International Forum* 51.

²² Food and Agriculture Organization of the United Nations (2021). Integrating a gender perspective into supply chain due diligence.

²³ Wakeford, T. & J. Rodriguez. 2019. *Participatory action research: towards a more fruitful knowledge*.

²⁴ Pelling, M., K. O'Brien & D. Matyas (2014). Adaptation and transformation, *Climatic Change* 133.

²⁵ Moore, M.-L., D. Riddell & D. Vocisano (2015). Scaling Out, Scaling Up, Scaling Deep Strategies of Non-profits in Advancing Systemic Social Innovation, *Journal of Corporate Citizenship* 67-84.

²⁶ Moore, M.-L., D. Riddell & D. Vocisano (2015) Scaling Out, Scaling Up, Scaling Deep Strategies of Non-profits in Advancing Systemic Social Innovation, *Journal of Corporate Citizenship* 67-84.

²⁷ System Change Lab et al. (2021). The state of climate action, in <<https://systemschangelab.org/publications>> [Accessed 20 May 2022].

²⁸ Adelphi et al. (2019). Zwischenbericht – Erhebungsphase 2019, in <https://www.csr-in-deutschland.de/SharedDocs/Downloads/DE/PDF-Dateien/zwischenbericht-erhebungsphase-2019.pdf?__blob=publicationFile> [Accessed 22 May 2025].

²⁹ Krajewski, M., Tonstad, K. & Wohltmann, F. (2021). Mandatory Human Rights Due Diligence in Germany and Norway: Stepping, or Striding, in the Same Direction? *Business and Human Rights Journal* 6.

³⁰ Wilhelm, M. (2024). Mandatory due diligence legislation: a paradigm shift for the governance of sustainability in global value chains? *Journal of International Business Policy* 7.

³¹ German Environment Agency (2020). Umweltbezogene und menschenrechtliche Sorgfaltspflichten als Ansatz zur Stärkung einer nachhaltigen Unternehmensführung. Final Report.

³² European Commission (2025). Press release, in <https://ec.europa.eu/commission/presscorner/detail/en/ip_25_614> [Accessed 20 May 2025].

³³ Kolev-Schaefer, G., Neligan, A. (2024). Due Diligence – Effect of Supply Chain Regulation, *IW-Report* 8.

³⁴ European Court for Constitutional and Human Rights (2025). Zwei Jahre Lieferkettengesetz – Ein Erfahrungsbericht.

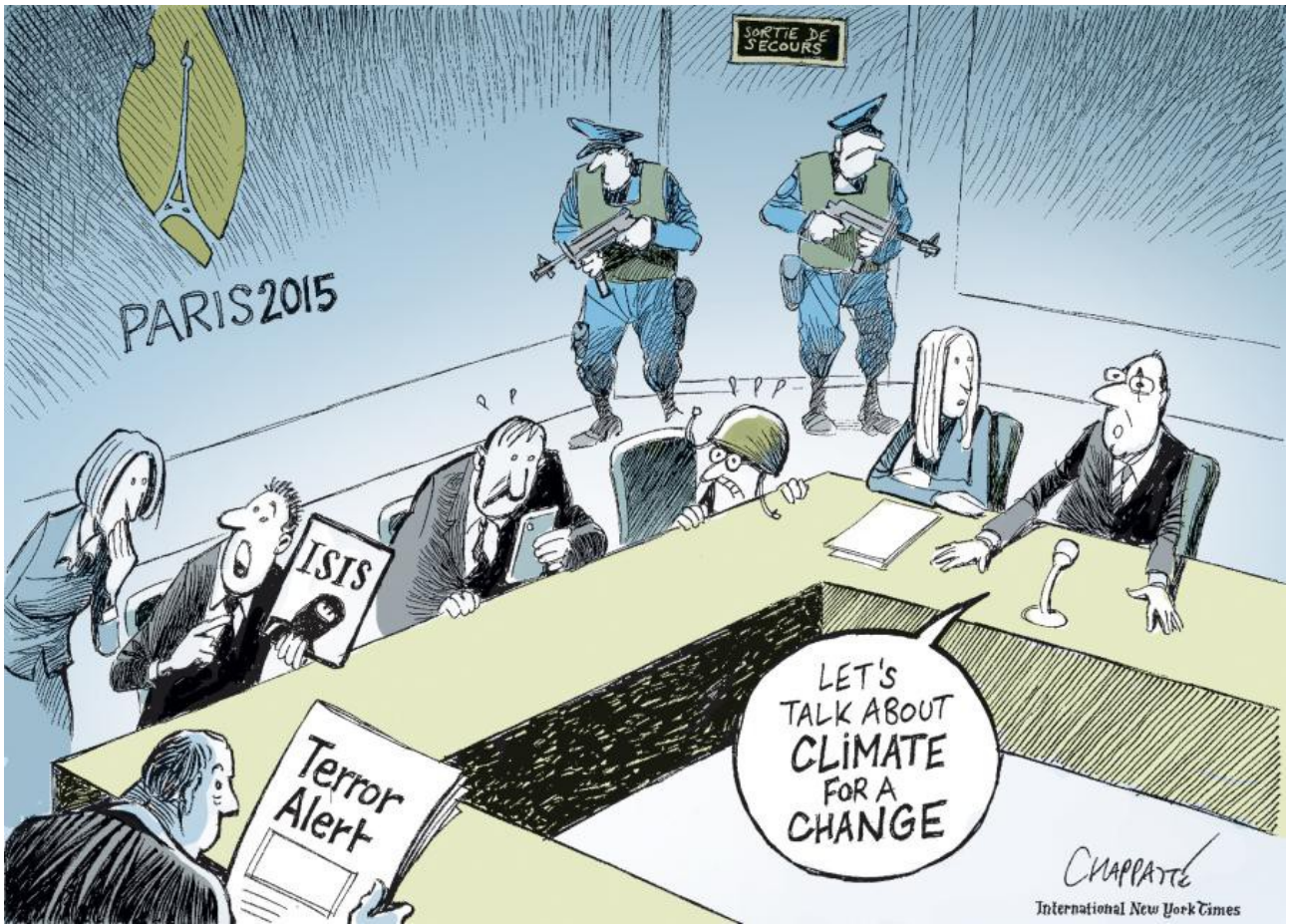
Christine Altenbuchner

Senior Scientist at the BOKU University in Vienna, Austria. Christine Altenbuchner research focuses on climate change adaptation strategies, particularly within the agricultural sector, with a strong emphasis on integrating gender perspectives into resilience-building efforts. With extensive experience in addressing the challenges posed by climate change, she has worked on developing innovative approaches to enhance the resilience of agricultural systems, rural communities, and the individuals within them, paying particular attention to the role of gender dynamics in shaping adaptive capacity. Currently, Christine is leading the collaborative project ClimChain with renowned institutions such as ETH Zurich, UC Berkeley, and Lincoln University. This project aims to strengthen resilience in national and international agri-food supply chains, addressing

vulnerabilities and fostering sustainable practices across the sector. Her work integrates interdisciplinary perspectives, combining insights from environmental science, agriculture, socio-economic systems, and gender studies to develop practical solutions for climate adaptation and food security.

Robert Diendorfer

Policy advisor for business and human rights at Forum Fairer Handel Germany. Robert Diendorfer is involved in informational-, political- and educational work focused on human rights and environmental due diligence, fair trade, as well as EU regulation. Robert has gathered international academic- and work experience in Japan, Nepal, Canada, Germany and Austria. Prior to his current function, he has been working in international development with a focus on private sector engagement, including a cooperation project with the Austrian Ministry of Labour and Economy on the promotion of the OECD Guidelines for MNEs.



Paris Climate Conference

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Compensation climatique pour les paysans/paysannes du Sud : une vision réaliste?

Offrir un soutien direct à l'agroforesterie dans les villages avec un suivi fiable de télédétection en temps réel.

Hans Geisslhofer

Résumé :

Hans Geisslhofer explique, après une longue expérience dans les pays du Sud en aménagement du terroir villageoise, protection de l'environnement et appui aux activités en agroforesterie sa méthode simple, participative et inclusive.

La compensation d'un reboisement par les crédits carbone pourrait donc être réalisée via un suivi à distance avec les mesures des surfaces par le GPS sur place et ensuite leur vérification à l'aide des images satellites précises et récentes.

Les paysans et paysannes des pays pauvres seront ainsi inclus activement dans la protection du climat et pourront améliorer leur niveau de vie en même temps.

Une intéressante tentative de décentraliser le « marché volontaire de carbone » avec des mesures précises et fiables par un échange régulier des données partagées en réseau.

Abstract:

Hans Geisslhofer explains, after a long experience in the countries of the South in land use and village development, environmental protection and support for agroforestry, his simple, participatory and inclusive method.

The compensation of reforestation by carbon credits could therefore be carried out via remote monitoring, detailed surface measurements by GPS on site by verification from precise recent satellite images. Peasants in poor countries would thus be actively included in climate protection and empowered to improve their standard of living at the same time.

An interesting attempt to decentralize the "voluntary carbon market" with precise and reliable measurements by a regular exchange of data shared in a network.

La « Justice pour le Climat » une perspective mondiale inclusive ?

Le débat actuel sur le climat souffre d'un rétrécissement de la perspective vers des sujets purement technologiques sans dimension sociale globale.

Il est avant tout important de prendre en compte la population rurale des pays du Sud et plus particulièrement les femmes.

En raison du reboisement à grande échelle et sans sérieux, planifié d'en haut, les solutions simples et durables la population locale ont été négligées dans le débat sur le climat.¹

Ainsi, ils ont été facilement écartés en tant qu'acteurs importants et peut-être même élément de la solution !

Il semblait nécessaire, à ce stade, que de tels projets soient toujours planifiés et examinés de

l'extérieur, c'est-à-dire à partir des structures du Nord ?

Oser d'inclure une agro-forestière précaire mais émergente !

L'inclusion de l'agriculture marginale dans les tropiques échoue souvent en raison du manque de clarté des droits fonciers, des relations de propriété, de l'inefficacité de structures de mise en œuvre sur place et enfin, de la difficulté à proposer un calcul de compensations climatiques appropriées.

D'autre part, « l'effet puits de carbone » des plantes terrestres pour le stockage du CO₂ de l'air est incontesté et constitue également la base de toute vie sur Terre. Ceci s'applique en principe n'importe où, à chaque arbre qui pousse à condition qu'il ne soit pas coupé.

Cependant, on peut encore se demander si la séparation et l'introduction industriel de ce gaz dans le sous-sol soient techniquement fiables, et surtout économiquement réalisables ?

L'argument toujours avancé contre l'inclusion de la population rurale pauvre dans les modèles de compensation climatique est le suivant :

Le « secteur informel » dans ces zones difficiles d'accès ne serait pas véritablement tangible et contrôlable.

Dans la plupart des pays du Sud global, il n'existe aucun registre foncier et il est difficile surtout pour les femmes d'accéder à leurs propres droits fonciers.²

Mais il est toutefois possible d'obtenir des droits d'usage pour une certaine période auprès des autorités et des structures tribales traditionnelles locales. Ce n'est que si ces droits ne sont plus revendiqués, qu'ils expireront à nouveau.³

Se construire une bonne propriété nécessite également un relevé foncier précis et conventionnel, que beaucoup de gens ne peuvent tout simplement pas se payer.

Appuyer les investissements villageois productives et durables

Pour les femmes qui doivent vivre au jour le jour, il est donc actuellement difficile de faire le moindre investissement dans leur potager ou verger.

Cela s'applique particulièrement à la construction de puits avec un niveau d'eau suffisant, à l'achat d'arrosoirs et de chariots, à l'irrigation goutte à goutte, aux pépinières, pompes solaires, aux conduites d'eau, etc.

Le portage pittoresque de l'eau sur la tête n'est beau que pour les cartes postales, pas pour les femmes concernées....

Cela comprend l'utilisation des produits phytosanitaires nécessaires, même s'ils peuvent être produits naturellement sur place, ainsi que des clôtures ou des haies pour se protéger des intrus.

L'auteur a passé la moitié de sa vie à soutenir et à planifier de tels projets par l'intermédiaire d'ONG's en Afrique et peut le confirmer.

Avec la vague néolibérale des années 1980, de tels projets ont été laissés quasiment à la charge des organisations caritatives.

La subvention de l'agriculture, comme c'est notre coutume pour la stabilisation des prix et la régulation des marchés en Europe, n'a pas été mise en œuvre en Afrique à cause des programmes d'ajustement structurel promus des institutions internationales. Le soi-disant « amaigrissement structurel », avait rendu cela impossible.

Mais si des millions de petits paysans et surtout d'agricultrices plantaient leurs jardins un peu partout pour leur survie, et les entouraient de haies et de cultures fruitières, cela aurait eu déjà un impact immense sur le climat local et global !

Pourquoi alors, à une époque où l'inquiétude face au changement climatique prévaut, ne devrions-nous pas être autorisés à soutenir des telles initiatives ?

Les nouvelles technologies en appui de façon décentralisés

Depuis environ 5 ans, presque chaque grand village compte quelqu'un avec un téléphone portable. Surtout, ce sont les femmes qui l'utilisent de plus en plus.

Si vous apportez votre papaye à l'un des marchés hebdomadaires locaux, vous saurez exactement si il y a une pénurie et ou vous pourrez donc vous attendre à de meilleurs prix ?

Ces téléphones portables peuvent également être utilisés comme appareils d'arpentage, avec une application simple, gratuite et facile à utiliser.

Cela vous permet de mesurer vous-même les jardins, les champs et les plantations d'arbres et de télécharger les coordonnées correspondantes sur Internet.

Envoyez ensuite des photos des plantes prises depuis le sol avec votre téléphone portable. Les smartphones peuvent être rechargés presque partout, grâce à de petits panneaux solaires installés sur les cabanes.

La réception n'est pas encore possible partout, mais les réseaux s'étendent progressivement.

Toutes ces informations peuvent ensuite être consultées par les ONG partenaires du Nord grâce à « *Google Earth* » et des images satellites mises à jour régulièrement comme SENTINEL 2.⁴

Le calcul de la capacité de ces « *puits de CO₂* » correspondante résulte alors de l'amélioration du sol (compostage des résidus de culture), du nombre et de la densité des arbres plantés et de la période de croissance estimée de ceux-ci.

Les transferts équivalents seraient alors directement proportionnels aux mesures effectuées sur les comptes de téléphonie mobile des femmes.

Les « crédits carbone » qui avancent déjà petit à petit...

Puisque les arbres poussent plus vite sous les tropiques, mais prennent quand-même encore 15 ans environ à cela, les femmes dans les champs ne peuvent pas attendre aussi longtemps pour recevoir l'argent de compensation. C'est donc un système de crédit agricole qui est appliquée.

Ceci doit donc être transféré sur leur téléphone portable en versements annuels, et en fonction des

prix actuels du CO₂.

Chaque année, de nouvelles données sur la délimitation des actions par GPS, photos du terrain, etc. sont donc nécessaires. Celles-ci seraient alors transmises, et mises en correspondance avec les images satellites de ces mêmes sites.

L'objection, selon laquelle cela n'aurait qu'un impact négligeable sur le changement climatique mondiale ne s'applique que si l'on considère des villages séparés les uns des autres.

Mais si vous calculez cela à l'échelle régionale et créez en même temps une opportunité d'emploi pour des millions de femmes rurales pauvres, elles se saisiraient sûrement de cette occasion ?

Il existe déjà quelques start-ups qui testent des approches aussi prometteuses à petite échelle.

Une société allemande tente, avec le financement du « marché volontaire du carbone », c'est-à-dire d'entreprises qui souhaitent soigner leur image et leur « empreinte », à implanter des plantations de bois précieux certifiés dans des villages d'Ouganda et d'Indonésie.

Les arbres coupés sont ensuite transformés par une coopérative en meubles ou éléments de construction, certifiés de haute qualité, et des nouveaux arbres sont parallèlement plantés dans la même mesure.

La même chose peut être faite avec des meubles en bambou.

Mais ici, ils doivent acquérir leurs propres propriétés, et puis emploient des habitants des environs pour cultiver des cultures et travailler comme charpentiers.

Une approche différente consiste à créer des plans d'utilisation des terres villageoises par un débat participatif est après ceci serait conclu avec des accords précis à ce sujet. Il s'agit des « *conventions locales* » sur la base des cartes détaillées et établis au village même.

En même temps, les villages seront ainsi stabilisés économiquement grâce à la création d'emplois locaux.

Sinon, l'exode rural et l'abandon des terres alimenteront la spéculation foncière et l'accaparement des terres, ce qui signifie ensuite, que de plus en plus de forêts seront détruites ou incendiées.

Plus ces modèles se révéleront faisables, plus le contrôle social sera donc efficace.

Un appui professionnel détaillé suivant les exigences du terrain.

Pendant ma retraite, je reste donc connecté via des vidéoconférences avec ces initiatives au Sahel et ailleurs en cours.

Je peux suivre les activités quasiment partout presque en temps réel depuis mon salon ! Une consultance sans fréquentes voyages en avion !

Ce sont essentiellement des groupes de femmes qui cultivent des champs de légumes et des cultures fruitières, ainsi que du petit élevage ou du commerce.

Leurs hommes travaillent dans les champs où ils cultivent des arachides ou du coton. Quand le sol devient stérile, ils se rendent dans les villes pour chercher du travail.

La charge de travail des femmes à la campagne devient alors particulièrement lourde et est souvent qualifiée de « semi-esclavage ».

Mais, avec des prix fluctuants, la culture de l'arachide sur des sols moins fertiles ne leur rapporte que quelques centaines d'euros/ha/an.

Une famille doit vivre toute l'année avec cela !

Les projets de nombreuses organisations humanitaires ne peuvent pas résoudre ces problèmes à long terme, en raison de la courte durée de mise en œuvre des projets.

Même la « Grande Muraille Verte » le long du Sahara⁵ n'est qu'une goutte d'eau dans l'océan. Le projet a été retravaillé : on ne prévoit plus de planter une ceinture forestière continue désormais, mais plutôt de promouvoir partout de telles initiatives au niveau local, qui, localement seraient alignés progressivement.

Cela a certes des effets positifs tant que ce soutien se poursuit.

Mais les exigences dans les différents pays et régions sont parfois très différentes.

Près de la côte, la salinisation des sols constitue également un problème en raison de l'élévation du niveau de la mer et de l'infiltration d'eau salée dans les puits.

Ici vous pouvez planter de grandes étendues de mangroves sur les plages en eau saumâtre pour la protection du littoral, qui poussent très vite et stockent plus de CO₂ que les autres plantes, car elles sont très proches les unes des autres et les feuilles séchées tombent également dans la boue.

Un suivi permanent, efficace et peu coûteux online à distance

Pour réussir à tous ces défis, il faut les travailler ensemble à chaque fois avec un échange participative utilisant des cartes précises.

Vous n'avez plus besoin de prendre l'avion pour cela et parcourir des centaines des kilomètres sur des mauvaises pistes. Vous pouvez discuter de beaucoup de choses via vos smartphones et discussions en ligne.

Le mathématicien et économiste allemand Franz Josef Radermacher d'Ulm, membre du Club de Rome et ancien membre du Forum éco-social, avait déjà proposé en 2008 un « plan mondial de reboisement ».⁶

Il a calculé en termes généraux qu'avec une superficie de 5 millions de km² répartis sur le monde entier (plus ou moins la surface d'Australie) on pourrait stocker dans les plantes une telle quantité de CO₂ que le changement climatique serait considérablement freiné.

Cela aurait été théoriquement possible, mais tout simplement pas encore faisable autrefois.

De nombreux pays pauvres, déjà lourdement endettés, auraient dû construire rapidement des structures d'encadrement dans les villages les plus petits et les plus reculés.

Et ce ne serait là encore qu'une approche greffée « d'en haut » ?

Par rapport aux structures économiques néocoloniales qui prévaudront, encore, et des entreprises

comme *Coca Cola* proposent leurs boissons au plus petit village, le travail des femmes sur les sols arides ne vaudra toujours rien en comparaison !

Se servir de l'inquiétude climatologique et des « crédits carbone » redimensionnés et suivis en détail, pour s'en sortir ensemble.

La peur actuelle mondiale des effets du changement climatique ne serait-elle pas à convertir à un « facteur de changement » qui offrirait aux femmes rurales la possibilité de générer des revenus supplémentaires pour le climat mondial grâce à une agroforesterie bien surveillée et documentée dans et autour leurs champs ?

Même quelques centaines d'euros en plus par an de compensation pour un seul hectare d'agroforesterie augmenteraient considérablement le niveau de vie du village par famille, les enfants pourraient être mieux nourris et envoyés à l'école.

Les institutions caritatives sont malheureusement trop surchargées par leur compassion pour les pauvres, au détriment un mécanisme d'échange mondial au bénéfice de l'environnement et du climat locale et mondiale !

Notre anxiété climatique, en partie justifiée, se ne transformerait-elle dans de nombreux petits projets de ce type, échangés et vérifiés en ligne ?

Il faudrait seulement encore des « *start-ups* » pour nous aider à réaliser des structures d'un tel nouveau dialogue Nord-Sud traversant les champs et forêts communautaires ?

¹ In <<https://climatepromise.undp.org/news-and-stories/supporting-climate-action-least-developed-countries>>.

² In <<https://globalclimateinitiatives.com/en/les-acteurs-de-la-compensation-carbone-perspectives-et-critiques>>.

³ In <<https://globalclimateinitiatives.com/en/les-acteurs-de-la-compensation-carbone-perspectives-et-critiques>>.

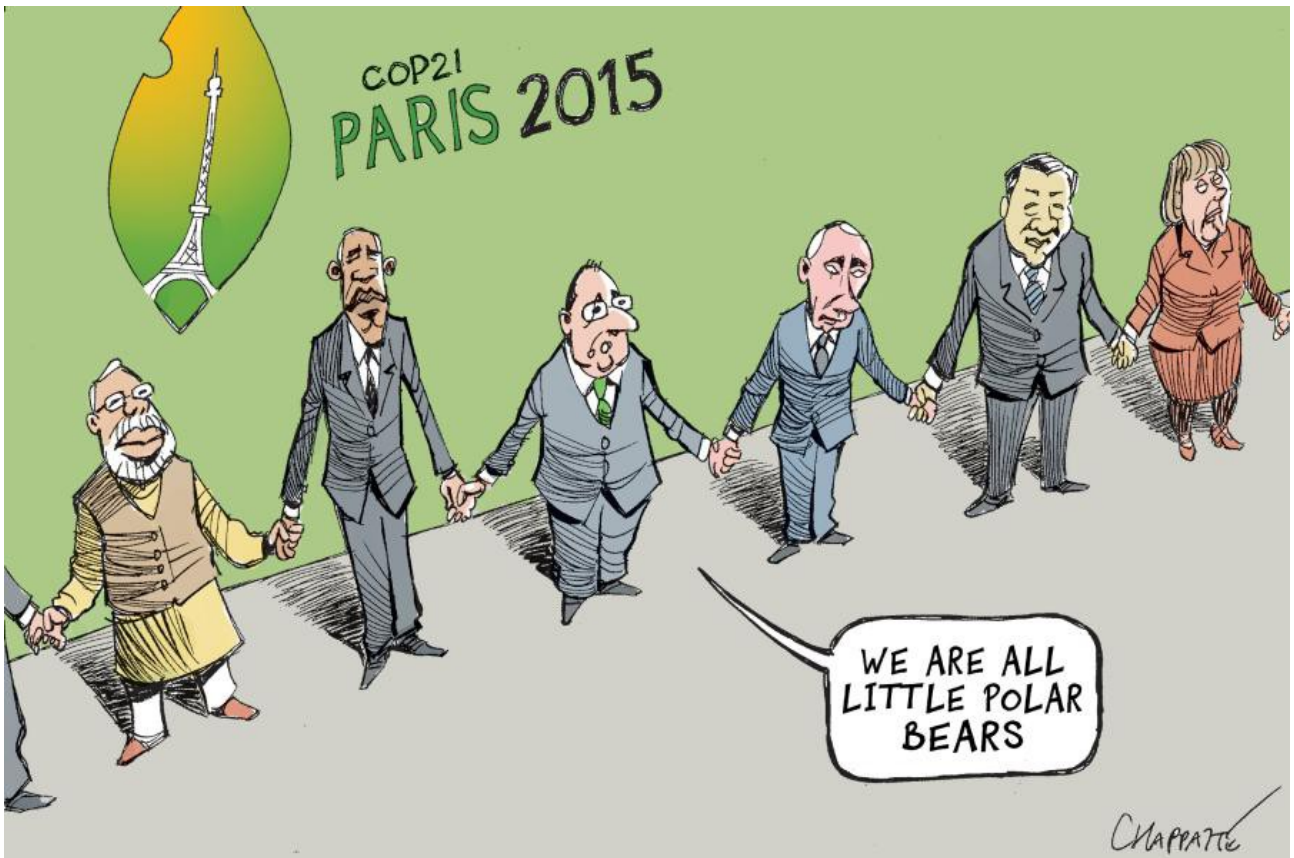
⁴ In <<https://globalclimateinitiatives.com/en/les-acteurs-de-la-compensation-carbone-perspectives-et-critiques>>.

⁵ In <<https://www.bbc.com/afrique/articles/c2qq6q26g9xo>>.

⁶ In <<https://www.itad.de/online-magazin/interview/mit-co2-geld-verdienen-prof-dr-franz-josef-radermacher>>.

Hans Geisslhofer

Ingénieur en aménagement du territoire, diplômé de l'université technique de Vienne, Autriche. Depuis 1977 Hans Geisslhofer a travaillé dans nombreuses pays en Afrique et en Inde pour des ONG's allemandes et Autrichiennes, ainsi que les organisations internationales engagés en hydraulique villageoise, petite irrigation, reboisement, cartographie participative et utilisation des nouvelles technologies de télédétection pour une gestion des ressources naturelles locales. Après des engagements dans 15 pays sur 40 ans, il vit actuellement en retraite en Autriche et travaille encore entent que « Senior Consultant » occasionnel par visioconférences avec des agents du terrain dans des projets courantes des ONG's humanitaires directement avec les populations villageoises sur demande.



Heads of State Gather in Paris

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