The EU Taxonomy regulation and the Soil Health Law

The role of sustainable investments for agricultural soil health

A contribution to the NOVASOIL project.

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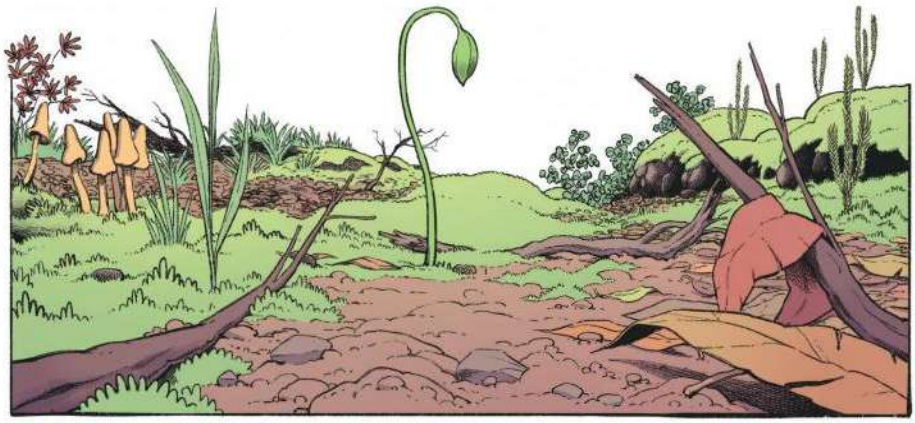

Abstract

Along with nature's unprecedented decline in human history, 60 to 70% of soils in the European Union (EU) are currently in an unhealthy state and depleting. In order to contain soil health degradation in agriculture, and with the evident failure of other European policies to do so, the EU announced on its Soil Strategy its ambition to adopt a new spearhead to fight soil health depletion: an EU soil health law. Such ambition has resulted in a watered-down proposition by the Commission for a directive on "Soil Monitoring and Resilience". Indeed, despite emphasizing the need for urgent action, this proposition doesn't provide mandatory requirements for sustainable soil management (SSM) nor binding targets regarding agricultural soil health improvement.

On a close timeline, the EU also adopted an Action Plan on Financing Sustainable Growth, which aims to rationalize excesses in the financial sector and reorient capital flows towards sustainable investments. This potential added support for sustainable activities is aimed at tackling environmental issues, such as, for example, preventing or halting soil degradation and enhancing soil biodiversity. The action plan resulted, among others, in the adoption of a central regulation: the EU Taxonomy. This regulation provides a yet unfinished classification system for investors to identify and promote sustainable activities to invest in.

In this context of inadequate EU environmental law to protect agricultural soils, and the prevalence of consensual obligations and economic incentives in environmental regulations, the EU Taxonomy emerges as a promising regulation. As exposed, it could have the potential to address some of the financial needs associated with the implementation of SSM practices, thus compensating for some of the shortcomings of the Soil Monitoring Directive. Moreover, transposing SSM standards from the Soil Monitoring directive into the Taxonomy sustainability criteria could assist investors in identifying the most promising agricultural activities fostering soil health.

Hence, we envisioned a potential synergy between these two legislations. However, this overlap is still paved with limitations that might hinder its capacity to contribute to the agroecological transition.

Key words: EU Environmental law, sustainable soil management, agri-environmental transition, EU Taxonomy, sustainability criteria, regulations synergies, natural commons, property rights, financialization, EU Soil Strategy.

Résumé

La nature décline globalement à un rythme sans précédent dans l'histoire humaine. De même, entre 60 et 70% des sols de l'Union européenne (UE) sont actuellement en mauvais état de conservation et continuent de péricliter. Afin d'enrayer ce déclin, particulièrement prégnant dans les agroécosystèmes, et compte tenu de l'absence de cadre juridique spécifique en matière de protection des sols, l'UE a annoncé dans sa nouvelle Stratégie pour les Sols son intention d'adopter un nouveau fer de lance dans la lutte contre la détérioration des sols: une loi européenne sur la santé des sols.

Cette ambition a finalement abouti en une proposition à l'ambition mesurée, pour une directive sur la "Surveillance et la Résilience des Sols". Malgré avoir réitéré l'urgence d'agir pour la santé des sols, cette proposition n'impose pas d'exigences supplémentaires en matière de gestion durable des sols (GDS) dans le secteur agricole.

Dans une temporalité proche, l'UE a également adopté un Plan d'Action sur la Finance Durable, visant à rationaliser les excès du secteur financier et à réorienter les flux de capitaux vers des investissements durables. Ce potentiel soutien accru aux activités durables est destiné à contribuer aux objectifs environnementaux de l'UE, notamment pour contrecarrer la dégradation des sols (agricoles) tout en améliorant la biodiversité qu'ils hébergent. Ce plan d'action a permis l'adoption, entre autres, d'une réglementation clé : la Taxonomie Européenne. Ce règlement, encore inabouti, établit un cadre normatif permettant d'identifier les activités économiques dites « durables » dans le but d'y canaliser les investissements financiers.

Dans ce contexte d'insuffisance du droit de l'UE en matière de protection des sols agricoles, et compte tenu de la prévalence des incitations économiques dans les réglementations environnementales au détriment d'obligations contraignantes, la Taxonomie émerge en tant qu'outil normatif prometteur. Ainsi, la Taxonomie Européenne pourrait constituer un levier financier conséquent, et pourrait offrir ainsi un soutien financier accru pour les agriculteurs mettant en œuvre des pratiques de GDS. En outre, l'intégration des standards de GDS issus de cette directive au sein des critères de durabilité de la Taxonomie pourrait aider les investisseurs à identifier les activités agricoles qualifiées comme ayant le plus de potentiel, afin de contribuer à l'amélioration et la conservation de la santé des sols.

Par conséquent, nous avons mené une étude prospective sur la pertinence d'une synergie potentielle entre la proposition de directive sur la santé des sols et la Taxonomie Européenne et comment cette synergie pourrait être matérialisée. Cependant, cette approche présente plusieurs limites à même d'entraver sa capacité à contribuer à la transition agroécologique, l'efficacité d'une telle approche soulevant un grand nombre de d'incertitudes.

Mots clés : Droit de l'Environnement de l'UE, gestion durable des sols, transition agro-environnementale, Taxonomie Européenne, critères de durabilité, synergies réglementaires, communs naturels, droits de propriété, Stratégie de l'UE pour les Sols.

Acknowledgments

This paper wouldn't have been possible without the support, propositions, and advice of my academic and personal entourage. First of all, I'd like to thank Ms. Camproux for giving me the chance to join this Master degree in environmental law, and for all the enriching experiences and encounters that followed.

Of course, I would especially like to thank Alexandra Langlais[1] for her guidance, her long and exhaustive reviews, suggestions, as well as her support along this journey.

Next, the NOVASOIL team has been a considerable supporter. Notably, they have provided me with an instructing point of view on farmers' practices and needs.

Then, I would especially like to thank the research team of room 208, who helped me to take a step back from my research and fed it with their insights. To name some of them, Garance Thomas been uniquely supportive. Her expertise and thoughts on property rights, as well as her introduction to the rich ecosystem of S&T studies, has greatly influenced and nourished my thought process on the fundamental questions underlying this study. Alix Vollet has also been an amazing support in shaping my work and has helped me on gaining in coherence and nuance. She has greatly nurtured my work, notably on biodiversity issues, as well as allowing me to finish my work in peace at her home. Likewise, Emmanuelle Moy has helped me a great deal to structure this paper and has enriched it with her critical thoughts, as well as being a fun and trusty support on the NOVASOIL team.

Finally, I would like to thank my family, friends, and classmates, especially Adèle, for their huge support, thoughts, and help in the review and correction of the present work.

[1] CNRS Research Director – Habilitée à Diriger des Recherches. Institut de l'Ouest : Droit et Europe (IODE). UMR CNRS 6262. In the context of this work with the NOVASOIL team, I was Alexandra's intern and research fellow.

Context of the study

This work is built upon a contribution to the NOVASOIL project[2], a multidisciplinary research program funded by the EU[3].

The objective of the project, which is still ongoing, is to "highlight the benefits for the society and the environment from the investment in soil health". The studies are carried out with the support of the empirical experience provided by 13 case studies concerning "country-specific agricultural systems" and business models.

Its main expected outcome is to provide a toolbox for the analysis of the suitability of different business cases that promote soil health.

Our work with the French National Center for Scientific Research (CNRS) in the NOVASOIL project, under the supervision of Alexandra Langlais, will be to collaborate in envisioning incentives and policy solutions. Doing so, we will examine the potential of normative action and tools, such as the upcoming Soil Health Law and the recently adopted EU Taxonomy, to foster business models for agricultural soil health.

This research took place from April 2023 until August 2023, in the Western Institute on Law and Europe (IODE in French) in Rennes. We also took part in the working seminar that took place in Sevilla in May 2023, where the roles of each partner were clarified and the different stages of progress were discussed.

As a research intern for Alexandra Langlais, I was tasked to work on the potential contribution of the EU Taxonomy to foster investments in agricultural soil health in Europe. Therefore, we decided to focus on the potential synergy between the EU Taxonomy and the upcoming Soil Health Law, seeing sustainable investments as an interesting lever to fund the implementation of sustainable soil management practices.

[2] See the website: https://novasoil-project.eu/ (consulted on the 8th of August 2023).
[3] Project 101091268, Horizon-Miss-2021-SOIL-02.

Acronyms

AEMs: Agri-environmental measures.

CAP: Common agricultural policy.

CJEU: Court of Justice of the European Union.

CSRD : Corporate Sustainability Reporting Directive.

DNSH: Do no significant harm.

EAFRD: European agricultural fund for rural development

EAGF: European agricultural guarantee fund.

ECR: European Committee of the Regions.

EGR: European green deal

ESG: Environmental, Social and Governance.

EU: European Union.

GAECs: Good agricultural and Environmental Conditions.

GHG: Greenhouse Gases.

IEEP: Institute for European Environmental Policy

IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

IPCC: Intergovernmental Panel on Climate Change.

MBI's = Market-Based instruments.

OF: Organic Farming.

SFDR: Sustainability-related disclosures in the financial services sectors regulation.

SFI: Sustainable finance and investments.

SMR: Statutory management requirements.

SNP: Strategic national plans.

SOC: Soil organic carbon.

SSM: Sustainable soil management.

UAA: Utilized agricultural area.

Summary

Sommaire

On the letterhead of the Jackson County Zoning and Sanitation Department, the following appears: "The land belongs to the people ... a little of it to those dead ... some to those living ... but most of it belongs to those yet to be born..." [4]

[4] WISCONSIN SUPREME COURT, *Just v. Marinette County*, 56 Wis. 2d 7, 24 n.6, 201 N.W.2d 761, 771 n.6, 1972.

Introduction

"Our survival depends on a handful of soil. Manage it carefully and it will provide us our food, fuel and shelter and it will surround us with beauty. Abuse it and the soil will collapse and die, taking humanity with it"[5].

"Greed, avarice and selfishness, when expressed in the world of uncontrolled financial speculation, are essential causes of the financial, economic, and social crises from which societies suffer"[6].

1. Agriculture is considered a "major contributor" in "transgressing planetary boundaries"[7], with soil health depletion as a central factor among countless other challenges[8]. This degradation often results in diminishing or even eradicating essential soil functions, subsequently undermining its capacity to provide crucial ecosystem services[9]. Following the models of the Meadows report, the increasing erosion of soils and the depletion of soil fertility, stemming from an intensive and highly capitalized agriculture, could lead to an upcoming collapse in populations[10].

2. This frightening perspective gains credibility with each passing day[11] and, as emphasized by the European Parliament concerning the EU[12], it demands urgent action, particularly within the agrifood industry. Failing to meet this appeal with resolute measures would be a reckless bet against planetary tipping points, all while lacking the means to gauge the associated hazards[13]. Our common destiny with natural commons- such as land, biodiversity, water, and climate – is undeniable[14], and agriculture significantly contributes to their deterioration[15].

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[5] VEDAS, Sacred scriptures, Sanskrit, 1500 BC. Cited by the ADEME, on "Les sols portent notre avenir", 2015. ISBN 978-2-35838-944. Translated by us.

[6] PAILLUSSEAU J., « Respect des équilibres, choix de société et gestion du risque financier systémique », n°6, *RD banc*, Novembre 2010, étude 36. Translated by us.

[7] CAMPBELL, BRUCE M., et al. "Agriculture Production as a Major Driver of the Earth System Exceeding Planetary Boundaries." *Ecology and Society*, vol. 22, no. 4, 2017. *JSTOR*, https://www.jstor.org/stable/26798991.

[8] ROCKSTRÖM Johan, GUPTA Joyeeta, QIN Dahe *et al.*, « Safe and just Earth system boundaries », *Nature*, 619, Nature Publishing Group, 2023. Additionally, the authors state that "Seven of the eight global-scale safe and just Earth System Boundaries that we quantified have already been crossed", agriculture being a major contributor.

[9] FAO, The state of the world's land and water resources for food and agriculture – Systems at breaking point. Synthesis report 2021. Rome. See https://doi.org/10.4060/cb7654en

[10] MEADOWS, DONNELA H., et al. The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind. New York: Universe Books, 1972, 205 pp, page 164 and 181.

[11] TURNER Graham M., « A comparison of The Limits to Growth with 30 years of reality », *Global Environmental Change*, 18, 2008.

[12] RESOLUTION OF THE EUROPEAN PARLIAMENT, 28 November 2019 on the climate and environment emergency (2019/2930(RSP)) OJ C 232, 16.6.2021, p. 28–29.

[13] LENTON, T. M. et al. Climate tipping points—too risky to bet against. *Nature* 575, 592–595, 2019.

[14] HARDIN Garrett, « The Tragedy of the Commons », *Science*, 162, American Association for the Advancement of Science, 1968.

[15] NAKICENOVIC et al. *Global Commons in the Anthropocene: World Development on a Stable and Resilient Planet*. IIASA Working Paper (IIASA, 2016); http://pure.iiasa.ac.at/14003/. Indeed 60 to 70% of soils are degraded as a direct result of unsustainable management practices, many of which from intensive agriculture: See VEEMAN et al. "Caring for soil is caring for life. Ensure 75% of soils are healthy by 2030 for food, people, nature and climate : report of the Mission board for Soil health and food", European Commission, Directorate-General for Research and Innovation, Publications Office, 2020.

3. Moreover, the convergence of biodiversity collapse[16], climate change[17], a burgeoning global population, and emerging conflicts disrupting the supply of agricultural goods[18] presents unparalleled challenges for tomorrow's agriculture. The agricultural sector must adapt to the complexities of the Anthropocene[19] to safeguard European food security, while actively contributing to nature's restoration[20]. Agriculture, as a victim and perpetrator, "has been huge" in the "anthropogenic processes that had planetary effects", knowing that the Anthropocene is "more than climate change" as it comprises "extraordinary burdens of toxic chemistry, mining, depletion of lakes and rivers under and above ground, ecosystem simplification", etc.[21]

4. Consequently, the agricultural sector is faced with the need to contribute to halting and reversing biodiversity loss, reduce its greenhouse gas (GHG) emissions, enhance soil carbon sink functions, and stabilize yields in a complex and changing world[22] [23]. Such contributions will be crucial to complying with international and European environmental objectives.

5. These challenges also coincide with the imperative to uphold fundamental rights in Europe, including "a high level of environmental protection and the improvement of the quality of the environment"[24], the right to adequate food[25] as well as ensuring a "fair standard of living for the agricultural community"[26]. While not always directly applicable in interpersonal legal

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[16] IPBES. "Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services", 2019. https://doi.org/10.5281/zenodo.6417333

[17] IPCC, "Climate Change 2023: Synthesis Report". A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, (in press), 2023.

[18] Such as the war in Ukraine, which also destabilized global food systems.

[19] CRUTZEN Paul J. et STOERMER Eugene F., « The 'Anthropocene' (2000) », in *Paul J. Crutzen and the Anthropocene: A New Epoch in Earth's History*, Springer International Publishing, 2021.

[20] See here the COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITEES AND THE COMMITTEE OF THE REGIONS, "Safeguarding food security and reinforcing the resilience of food systems", COM (2022) 133 final. "Healthy soils make the Union food system more resilient by providing the basis for nutritious and sufficient food", and thus are vital to ensure food security", 2022.

[21] HARAWAY Donna, « Anthropocene, Capitalocene, Plantationocene, Chthulucene », *Environmental Humanities*, 6, 2015. This article also quotes Anna Tsing and her suggestion that "the inflection point between the Holocene and the Anthropocene might be the wiping out of most of the refugia from which diverse species assemblages (with or without people) can be reconstituted after major events (like soil desertification). See: TSING Anna, "Feral biologies", Anthropological Visions of Sustainable Futures, University College London, February 2015. From the invited lecture in "Engagements: the anniversary of anthropology in Copenhagen," University of Copenhagen, June 2015.

[22] IPCC, "Climate Change 2023: Synthesis Report", *Op. Cit.* : "8% of current agricultural land will become climatically unsuitable by 2100". In the most pessimistic scenarios: 30%.

[23]XU, C, KOHLER, T et al. "Future of the human climate niche". *Proc. Natl Acad. Sci. USA* 117, 11350–11355 2020. The authors underline the fact that the Holocene was the Only State of the Earth system we have evidence of being able to support the world as we know it. This knowledge could make us rethink the actual pertinence and effectivity of current intensive methods.

[24] Article 37 of the Charter of fundamental rights of the EU, 2012/C 326/02*,* OJ C 326, 26.10.2012, p. 391–407.

[25] For example as set out in the article 2 of the International Covenant on Economic, Social and Cultural Rights (1966), or article 25 of the Universal Declaration of Human rights (1948). Knowing that soils provide for 98.8% of our food and human populations are projectedt to reach 9.8 billion by 2050. See: KOPITTKE Peter M., MENZIES Neal W., WANG Peng *et al.*, « Soil and the intensification of agriculture for global food security », *Environment International*, 132, 2019.

[26] Article 39, 1, (b) of the TFEU.

disputes (referred to as non-horizontal effects), States must fulfill these principles to prevent litigations or compensatory actions (vertical effects), particularly against the EU. Besides, ensuring social justice among farmers and citizens, as well as international distributive justice[27], stands as a crucial foundation for achieving a just and durable agroecological transition[28].

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6. Generations of poor soil management have resulted in the degradation of agricultural soil health[29]. Indeed agriculture has changed from feudal to intensive industrial farming, allowing a quantitative increase in production, the expansion of the utilized agricultural area (UAA) per farmer, as well as a decline in soil quality, notably through the increasing use of synthetic inputs and increasing mechanical stress[30]. This shift in the social economy of the agricultural sector has been correlated by an increasing role of finance in agriculture, to support industrial investments and to provide debt to farmers to finance their costly expansion[31]. More fundamentally, the evolution of the law made this intensification possible, especially with the establishment of absolute private property in the land, which allowed the continuous expansion of the UAA, the establishment of dominant (financialized) agrifood firms, as well as the exhaustion of soils resources through appropriation. The establishment of absolute property rights contributed to agriculture's financialization as well, since property is "essential for any investor's project of economization", and "lies at the core of the value creation process of most investors and asset managers"[32].

7. Going back to soils, their decline comes at a huge environmental and social cost[33], especially in Europe[34]. Notably soil erosion, desertification, salinization, the degradation of soil and agroecosystem's biodiversity, as well as the depletion of soil nutrients and soil organic carbon (SOC) have a detrimental impact on the environment, soil fertility, and subsequently on

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[27] BLAKE, M. & SMITH, P. T. "International distributive justice". In *The Stanford Encyclopedia of Philosophy*, ed. Zalta, E. N., Stanford, 2022. https://plato.stanford.edu/archives/sum2022/entries/international-justice/.

[28] By agroecological transition we mean "the transition from productivism or efficiency/substitution-based to biodiversity-based agriculture" as defined by: DURU Michel, THEROND Olivier et FARES M'hand, « Designing agroecological transitions; A review », *Agron. Sustain. Dev.*, 35, 2015. We might add that in this transition the agricultural sector will have to adapt to climate change as well as contributing to its mitigation, while reducing natural resource consumption and impacts on natural commons, all while preserving farmers income…
But as noted by A. Langlais, we acknowledge that the term "agroecological transition" is not used by the EU Commission, for example in regulatory documents of the new CAP 2023-2027, as they rather refer to the "transition to sustainable agriculture". LANGLAIS Alexandra, « The new Common Agricultural Policy », *Rev Agric Food Environ Stud*, 104, 2023.

[29] FAO, "The state of the world's land and water resources for food and agriculture" *Op. Cit.*

[30] PERKINS John H. et JAMISON Rachael, « History, Ethics, and Intensification in Agriculture », in *The Ethics of Intensification: Agricultural Development and Cultural Change*, Springer Netherlands, 2008.

[31] OUMA Stefan, « From financialization to operations of capital : historicizing and disentangling the finance-farmland-nexus», *Geoforum*, 72, Pages 82-93, 2016.

[32] *Ibid.*

[33] IPBES "The IPBES assessment report on land degradation and restoration". *Op. Cit.* The IPBES states that despite the increasing production of food, "land degradation has reduced agricultural productivity on 23% of global terrestrial area and affects 3.2 billion people." And this reduction puts at risk "between $235 billion and $577 billion in annual global crop output, as a result of pollinator loss".

[34] VEEMAN et al. "Caring for soil is caring for life." *Op. Cit.*

farmer's revenues[35]. More broadly, unsustainable soil management, which is intrinsically linked with intensive, agricultural practices also severely affects environmental and human health[36], especially with its massive use of pesticides[37], as well as synthetic fertilizers[38]. Likewise, the whole agrifood sector makes a huge contribution to climate change[39]. Finally, knowing that the EU's utilized agricultural area (UAA) covers more than 38% of the EU's land area[40], improving European agroecosystems is an unavoidable imperative to improve ecosystems in Europe.[41]

8. Acknowledging the unbearable cost of ineffective action, investing in soil health preservation and restoration has never been more profitable for the environment, health, and the economy that is intertwined with it[42]. Indeed, investing in soil health comes with many co-benefits that could contribute to several environmental objectives, such as enhancing biodiversity, limiting soil erosion, improving water filtration and its availability for plants, etc.[43] Moreover, soil health contributes to climate mitigation and adaptation, notably increasing and preserving SOC storage (knowing SOC variations concomitant effects on GHG emissions) and thus soil functionality and productivity[44]. It appears clearly as a promising nature-based solution[45].

9. Nonetheless, many obstacles pave the way to change agricultural soil management practices which greatly affect soil health and appear to be insufficiently regulated. Here, the EU could

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[35] PANAGOS Panos, STANDARDI Gabriele, BORRELLI Pasquale *et al.*, « Cost of agricultural productivity loss due to soil erosion in the European Union », *Land Degradation & Development*, 29, 2018. For example in the EU, "the annual cost of this loss in agricultural productivity is estimated at around 1.25 billion".

[36] KEITH Aidan, SCHMIDT Olaf et MCMAHON Barry, « Soil stewardship as a nexus between Ecosystem Services and One Health », *Ecosystem Services*, 17, 2016. From now on, all references to "health" will be linked to the "One health" definitions as "an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent." WHO, « Tripartite and UNEP support OHHLEP's definition of "One Health" », https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohhlep-s-definition-of-one-health [Accessed the 8th of August 2023].

[37] ALLIOT Christophe, MC ADAMS-MARIN Delphine, BORNIOTTO Diana *et al.*, « The social costs of pesticide use in France », *Frontiers in Sustainable Food Systems*, 6, 2022.

[38] KEELER Bonnie L., GOUREVITCH Jesse D., POLASKY Stephen *et al.*, « The social costs of nitrogen », *Sci Adv*, 2, 2016.

[39] CLARK Michael A., DOMINGO Nina G. G., COLGAN Kimberly *et al.*, « Global food system emissions could preclude achieving the 1.5° and 2°C climate change targets », *Science*, 370, American Association for the Advancement of Science, 2020.

[40] EUROSTAT, "Agriculture, forestry and fishery statistics", 2020 edition. Page 10 : Agriculture covered 38,4% of EU'S land area (157.4 million hectares) in 2020.

[41] As intended by the EU biodiversity strategy. See COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCconIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Biodiversity Strategy for 2030 Bringing nature back into our lives, 2020. COM/2020/380.

[42] Indeed, soil degradation costs 50 billion per year in the EU, 1.25 billion solely in annual agricultural productivity loss, 155 million in GDP loss. See: Panagos, P. et al. "Cost of agricultural productivity loss due to soil erosion in the European Union" *Op. Cit.*

[43] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, « Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health », *Frontiers in Sustainable Food Systems*, 4, 2020.

[44] GRISCOM, B. W et al., "Soil health as an Effective natural climate solution". Proc. Natl. Acad. Sci. U.S.A. 44, 11645–11650, 2017. doi: 10.1073/pnas.1710465114.

[45] As defined by the IUCN: "Nature-based Solutions leverage nature and the power of healthy ecosystems to protect people, optimize infrastructure and safeguard a stable and biodiverse future." https://www.iucn.org/our-work/nature-based-solutions

have an important role in shaping future and current regulations on environmental protection in agriculture. Indeed, EU policies and regulations may have the capacity to put in motion harmonized and comprehensive standards on soil management through all EU member states (MS's) legal orders, by the direct implementation or the transposition of its adopted legislations, added to the potential extraterritorial effects of such regulations.

10. Such capabilities and objectives have been enshrined in EU treaties, as the EU aims to provide a high level of protection and improvement of the quality of the environment[46], on par with an internal marked (IM) that aims to "work for the sustainable development of Europe", and "promote social justice and (…) equality between women and men and between generations"[47]. Additionally, we must bear in mind that in the light of article 11 of the TFEU, the EU "must" integrate "environmental protection requirements" into "the definition and the implementation of (all) the Union's policies and activities". To achieve these goals, the EU has been endowed with a shared competence with MS regarding the rules governing the functioning of the IM[48], as well as concerning environmental matters and agricultural policies, consequently having to follow the subsidiarity principle[49].

11. Exerting those competencies, EU policymakers are endowing the EU with supplementary environmental ambitions and regulations, to address the environmental urgency and to meet international and European objectives and obligations. Such is the aim of the EU's Green Deal (EGD) that, as the EU's new legislative roadmap, is materializing these ambitions by proposing several strategies and regulations on environmental standards[50]. Regarding soil health, the Common Agricultural Policy (CAP) reform[51], the Nature Restoration Law[52], the initiative for a Soil Health Law (currently only concretized by a directive proposal)[53], and their adjacent strategies[54] aim, at least incidentally, to effectively halt soil health depletion. Furthermore, regulations such as the EU Taxonomy aim to channel private funds to support sustainable activities, potentially including sustainable undertakings from the agrifood sector[55].

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[46] A goal also established in article 191 of the Consolidated version of the Treaty on the Functioning of the European Union (TFEU), OJ C *326, 26.10.2012, p. 47–390*. Article 191 (1) and (2).
[47] As enshrined in article 3(3) of the Treaty on the European Union (TUE).
[48] TFEU article 4, (2), (a).
[49] TFEU article 4, (2), (e).
[50] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal, 2019.
[51] Carried specially by the Regulation (EU) 2021/2115 of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013, OJ L, 2021. This regulation aims to further impulse the "greening" of the CAP and meet with EU ambitions regarding the agricultural and food sector.
[52] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on nature restoration, COM/2022/304 final.
[53] Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Soil Monitoring and Resilience (Soil Monitoring Law) COM/2023/416 final
[54] As the Soil strategy, the Farm to fork Farm strategy, the Biodiversity Strategy, etc.
[55] UN, The Paris agreement, 12 december 2015. As provided in arrticle 2, (1), (c): The Paris agreement aims in "making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" to attain its objectives (To hold the increase in global average temperatures well below 2C^{o}.

12. These initiatives also prove that the growing interest in soil health is increasingly met with a political response. Indeed improving soil health is seen as "a unique and powerful solution to many of the 21st century's most wicked problems"[56]. However, to do so the implementation of improved requirements regarding sustainable soil management(SSM) [57] and the conditioning of absolute property rights and prerogatives in agricultural soils might need to be considered. Then, providing increased funding for business models[58] implementing sustainable soil management could also help promote these changes of practices. Alternatives exist and could feed humanity while contributing to environmental objectives[59] [60].

13. However, until now the EU environmental law and adjacent agricultural regulations have not been able to stop agricultural soil health depletion. One reason for this failure might be the inadequacy of the provided legal response to the aforesaid vital issues. EU regulations, especially the Common Agricultural Policy (CAP), have yet not delivered convincing results to halt the biodiversity decline[61] and to comply with climate objectives in agriculture[62]. Concerning recent regulations, the promising Nature restoration law has been stripped of most of its constraining requirements on agricultural practices[63]. Also, the Soil Monitoring Directive simply lays down constraining obligations regarding the assessment of soil health in MS's, a necessary intervention but clearly unsatisfying. This absence of consequent SSM provisions

[56] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health", *Op. Cit.*

[57] The use of the "umbrella term" SSM to refer to sustainable practices in agriculture was simply chosen because of its recurrent mobilization by the afferent literature, agricultural international organizations and the EU.

[58] As defined by TEECE David, we understand business models as "the organizational and financial architecture of a business" of any kind, thus including any agricultural activity, and "the business logic required to earn a profit". In consequence a "sustainable business model" is one that introduces in this "logic", it's functioning and production methods "sustainable management practices", as SSM. TEECE David J., « Business Models, Business Strategy and Innovation », *Long Range Planning*, 43, 2010.

[59] RANGANATHAN Janet, WAITE Richard, SEARCHINGER Tim *et al.*, "How to Sustainably Feed 10 Billion People by 2050, in 21 Charts", 2018.

[60] POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Science (New York, N.Y.)*, 360, 2018.

[61] EUROPEAN COURT OF AUDITORS, Special Report 13/2020: "Biodiversity on farmland: CAP contribution has not halted the decline". 2020. https://www.eca.europa.eu/en/publications?did=53892

[62] EUROPEAN COURT OF AUDITORS, Special Report 16/2021: "Common Agricultural Policy and climate: Half of EU Climate spending but farm emissions are not decreasing". 2021. https://www.eca.europa.eu/en/publications?did=58913

[63] Proposal COM/2022/304, *Op. Cit.* Especially by amendments on the article 4 of the proposal, since this article establishes the restoration targets and obligations of MS on terrestrial, coastal, and freshwater ecosystems listed in the Annex 1 of the regulation. They include wetlands, peat grasslands, other pastoral habitats, etc. For example, the article 4, paragraph 6 required that MS "shall ensure (…) a continuous improvement in condition of the habitat listed (…) until good condition (or a "sufficient quality") is reached". After the amendments (especially amendment 120/rev1 and 121/rev1) these requirements where striped of their constraining legal force as MS only "shall endeavour to ensure" those objectives, "where possible", only with "necessary measures" and so the habitats of the species do not "significantly deteriorate on a national level". These terms could qualify more as encouragements than constraints and are deliberately very difficult to interpret in such a way as to bring out legally binding obligations. Concerning the obligation to ensure that the habitats listed in annex 1 do not deteriorate (article 4 paragraph 7), it has simply been deleted. The amendments can be found on: https://www.europarl.europa.eu/doceo/document/A-9-2023-0220-AM-117-121_EN.pdf - Especially amendment 120/rev1

may come as surprising as the EU Environment Agency[64], the European Court of Auditors[65], the Committee of the Regions[66], and even the Commission[67] have already pointed out the widespread degradation of European soils and the inadequacy of current regulations to halt this decline.

14. The environment, and natural resources as soils, are still "seen as an amenity and its protection as a means rather than an end, subject to the research for a balance with economic growth"[68]. This affirmation is especially true in intensive agriculture and constitutes a central obstacle to the EU's ability to effectively tackle environmental issues[69]. Thus, soils are currently not protected and valued by their functional and inherent value and are mostly seen as objects of exclusive and absolute property, a resource to sustain economic activities.

15. Another main obstacle for regulations to branch off our intensive agricultural model is the phenomenon of "path dependence".[70] As explained by Rockström et al., the "loss of functional integrity in agricultural ecosystems and cities below the safe boundary would reduce food productivity, ecosystem capacity to mitigate natural hazards, pollution, and nutrient losses". It increases the "reliance (and dependence) on harmful pesticides and biocides, (the reliance on synthetic nutrients[71]) and (affects the) capacity to choose alternate land uses", altogether "affecting intragenerational justice"[72]. Therefore, caution is required when restraining the use of these environmentally harmful inputs to impose alternative production methods that could affect yields where agroecosystem functionality has deteriorated.

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[64] EUROPEAN ENVIRONMENT AGENGY, "The European Environment: State and Outlook 2020", 2019. https://doi.org/10.2800/96749

[65] EUROPEAN COURT OF AUDITORS, "Combating desertification in the EU: a growing threat in need of more action", 2018. Here the court of auditors made some recommendations regarding SSM, for e.g.: 1= Commission and MS should establish a methodology and relevant indicators to assess desertification / land degradation, interactive maps etc. 2= Asses the appropriateness of current legal framework for sustainable use of soil across the EU. 3= Commission should detail how the EU's commitment to land degradation neutrality will be achieved etc.

[66] COMMITTEE OF THE REGIONS, OPINION "Agroecology", (2021/C 106/05). The committee "calls on the European Commission to propose a new European directive on agricultural soils to halt the decrease in their organic matter content, stop erosion and prioritize soil life in agricultural practices".

[67] COMMISSION STAFF WORKING DOCUMENT […] Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Soil Strategy for 2030Reaping the benefits of healthy soils for people, food, nature and climate {COM(2021) 699 final}, SWD(2021), Brussels, 17.11.2021.

[68] POUJADE R., « Le ministère de l'impossible », éd. Calman-Lévy, 1975, p.32. Translated by us.

[69] CHABERT Ariane, SARTHOU Jean-Pierre, "Ecosystem services delivered by soils, from an agronomic perspective", from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84. Indeed the authors explain that soils have been"relegated by industrial agriculture to the role of an "inert" supporting medium, which may even be discarded (in soilless cultures)".

[70] PALIER Bruno, « Path dependence (Dépendance au chemin emprunté) », *Dictionnaire des politiques publiques*, vol. 3e éd., Paris, Presses de Sciences Po, 2010, p. 411-419, [Accessed the 8th of August 2023]. https://www.cairn.info/dictionnaire-des-politiques-publiques--9782724611755-p-411.htm

[71] TILMAN D., CASSMAN K., et. al. Agricultural sustainability and intensive production practices. *Nature*, 418, 671-677. 2002. For e.g. 60 to 75 units of wheat could be produced with one unit of synthetic nitrogen in the 1960's, whereas in the 2000's the ratio was already down to 20 to 30 units of wheat produced.

[72] ROCKSTRÖM Johan, GUPTA Joyeeta, QIN Dahe *et al.*, « Safe and just Earth system boundaries », *Op. Cit*

16. Decades of support for the continuous expansion of the average agricultural surface[73], coupled with the massive incentives towards intensive farming methods, have also crippled many farmers with debt they contracted to afford the costs of these technology-hungry methods. This rush towards intensification in the EU was supported by public subsidies since the beginning of the Common Agricultural Policy (CAP) in 1957, whose objectives haven't changed since despite its progressive "greening" [74]. If it was justified at the time, it might be a good time now to broaden our considerations and rethink agricultural productivism to address the aforementioned fundamental challenges[75].

17. To rapidly take a "side-step"[76] towards this path, stakeholders from the agrifood sector seem to argue that farmers would need increased funding. Supplementary financial support could provide farmers with a means to transition towards more sustainable soil management (SSM) practices, as well as a safety net to compensate for the risks taken with this side-step, especially in potential initial yield losses[77].

18. Indeed, for some of them, the barriers to change are being considered to be mostly "economic and in some cases technological, while missing knowledge or other factors were less relevant"[78]. Some others could argue that it has more to do with our relationship with nature in Western cultures, and the nature of property rights which allows the pillage of nature from and for the few that benefit from the considerable financial returns of the intensive model[79].

[73] EUROSTAT, "Agriculture, forestry and fishery statistics", 2020 edition, page 11. Knowing that the largest size category farms (at least 100 ha) accounts for 3.6% of the total number of farms but collectively had 52.5% of the total area used for agricultural production in the EU. Furthermore, there were 5.3 million farms less in 2020 than in 2005, so a decrease of 37%, consisting of mostly "farms smaller than 5.0 ha". The only increase in farms number is registered in farms larger than 100 ha with mergers or takeovers of farms.

[74] TFEU, *Op.Cit.* Indeed, article 39 establishes that the objectives of the CAP shall be: a) to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilization of the factors of production, in particular labor;(b) thus to ensure a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture; (c) to stabilize markets; (d) to assure the availability of supplies; (e) to ensure that supplies reach consumers at reasonable prices. These objectives where clearly justified at the time. But now one could argue that they could be reshaped in the light of the Anthropocene.

[75] The EEC has been a net exporter since 1970, so the challenge is no longer to increase the volume of agricultural production, but to review our production methods through the prism of sustainability.

[76] Takin the expression of BODIGUEL Luc, « Du concept d'agroécologie au règlement PSN », Revue de l'Union européenne – 663, décembre 2022 : « La place de l'agroécologie dans la nouvelle PAC 2023-2027 ».

[77] STUBENRAUCH Jessica, EKARDT Felix, HEYL Katharine *et al.*, « How to legally overcome the distinction between organic and conventional farming - Governance approaches for sustainable farming on 100% of the land », *Sustainable Production and Consumption*, 28, 2021.

[78] STRAUSS Veronika, PAUL Carsten, DÖNMEZ Cenk *et al.*, « Sustainable soil management measures: a synthesis of stakeholder recommendations » [online], *Agronomy for Sustainable Development: A journal of the French National Institute for Agriculture, Food and Environment (INRAE)*, 43, 2023, [Accessed the 8th of August 2023].

[79] As suggested by BELLAMY FOSTER John "Marx's Ecology, Materialism and nature", ISBN: 978 1583670125, 2000.

19. However, if we focus on the need to address the economic burden of change, sustainable finance and investments (SFI)[80] might have a role to play in supporting farmers willing to transition towards more SSM practices. Sustainable investments into activities implementing SSM could help farmers cover potential increased costs. This by remunerating them for the provision of ecosystem services arising from soil health enhancement and preservation, providing them loans with preferential rates to meet environmental outcomes, or even by supporting them through the supply of measurement and monitoring tools[81].

20. Then, investors could mobilize the production of ecosystem services through, among others, carbon removal certifications, soil health certifications, and the provision of sustainable agricultural goods. It could also secure the durability of the activities they invest in, since soil depletion puts several agricultural activities at risk. Moreover, fostering sustainable investments for agricultural soil health through regulatory intervention and policy incentives could help contribute to the fulfillment of environmental objectives.

21. Even though some private initiatives exist in that sense, this opportunity remains largely untapped. However, emerging regulations could help build the bridge between sustainable finance and agriculture. Having grasped the challenges of agriculture and the corresponding legal responses, let's now delve into providing more detailed definitions for the terms involved.

[80] CUNHA Felipe Arias Fogliano De Souza, MEIRA Erick et ORSATO Renato J., « Sustainable finance and investment », *Bus Strat Env*, 30, 2021. The term SFI has been chosen, as the authors propose, as it seems to englobe all the sustainable investments and green finance ecosystem.

[81] GREEN FINANCE INSTITUTE, «Financing a Farming Transition ; Key Enablers and Recommendations», 2023. See this final report for more suggestions to build the bridge between farmers and finance.

Preliminary chapter: Defining agricultural soil health, sustainable finance, and the regulatory context.

22. As a first step, we need to define soil health, focusing on agricultural soil health and its legal framing **(I).** Then, we will define sustainable finance and investments as well as its normative framework **(II)** Next, we will be presenting the aim of this research and the questions that arose in our research **(III).** Finally, we will expose the methodology used **(IV),** as well as the structure of the results discussed **(V).**

I) Agricultural soil health, soil functions and its difficult legal framing.

23. Soil can be defined as "the biologically active and porous medium that has developed in the uppermost layer of Earth's crust"[82], which "is composed of mineral particles, organic matter, water, air and living organisms".[83] It is also a component of the land. Land can be more broadly considered as "the material basis of all activities carried out and the place where property or use rights are claimed", thus soils and the land are "closely linked in terms of governance"[84].

24. Concerning soil health, this notion can be referred to as the "capacity of soils to function as a vital living ecosystem that sustains plants, animals and humans"[85]. A healthy soil is one that "maintains or enhances water and air quality" promotes health, and more broadly provides ecosystem services.[86]

25. Without being exhaustive, a healthy soil should have a good structure; be rich in organic matter such as SOC, to help retain water and nutrients; recycle plant nutrients; maintains a good diversity of soil organisms helping to control plant disease and pests; and maintains or absorbs carbon content[87]. Soil health is a component of soil quality, the latter having a less anthropocentric view as it focuses more on soil functions than its ecosystem services[88]. Soil quality has been defined as the capacity for soils to function within the limits of an ecosystem

[82]SPOSITO, GARRISON, "soil", *Encyclopedia Britannica*, 2023. https://www.britannica.com/science/soil. Accessed 21 June 2023.
[83] Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Soil Monitoring and Resilience (Soil Monitoring Law) COM/2023/416 final, July 2023. Article 3.
[84] LANGLAIS Alexandra, « Legal issues of implementing agricultural soil organic carbon sequestration as negative emission technology », in *Burleigh Dodds Series in Agricultural Science*, Burleigh Dodds Science Publishing, 2022.
[85] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health.", *Op. Cit.*
[86] DORAN John W. et ZEISS Michael R., « Soil health and sustainability », *Applied Soil Ecology*, 15, 2000. These definitions are coherent with the Commissions definition on soil health presented by article 3 of the Directive proposal COM/2023/416 final (Soil Monitoring Law).
[87]FAO, "Healthy soils are the basis for healthy food production", 2015. https://bpb-eu-w2.wpmucdn.com/blogs.reading.ac.uk/dist/a/171/files/2018/06/EN_web_IYS_food.pdf
[88] KARLEN D.L., *et. al*. « Soil quality: a concept, definition, and framework for evaluation (a guest editorial)". *Soil Science Society of America Journal*, 61, 4-10, 1997.

and to interact positively with its external environment[89]. The notion of soil quality focuses on the multifunctionality of soils and their dynamic nature, as underlined by M. Desrousseaux[90]. Both notions are commonly used to evaluate SSM practices. Acknowledging that, we will prefer the notion of soil health due to its extended use by European institutions and regulations, to avoid any confusion.

26. Soil health is at the foundation of human agriculture and food systems, and is also a central part of environmental health, knowing the interdependence between environmental and human health. More importantly, soils and their cohort of beings are the sentinels of life, as well as the consorts of death. Indeed, Louis Pasteur, an illustrious French chemist, and microbiologist, celebrated "the role, in the general economy (...) of these little (soil) beings who are the agents of fermentation, putrefaction, and disorganization of everything that has had life on the surface of the globe. It's a huge, wonderful, and truly moving role... Without them, life would come to a halt, because the work of death would be incomplete".[91]

27. Here, we will specifically focus on agricultural soil health degradation caused by unsustainable soil management, even though many other threats to agricultural soils should be urgently addressed[92]. For example, the other most notable issue might be land take, a global and complex issue affecting a broader scope of regulations and affecting particularly agricultural soils[93]. Nonetheless, our conclusions on the possible synergy between the EU Taxonomy and agricultural soil health regulations could be extrapolated to larger normative instruments on soil protection, knowing also that the EU Soil Health Law's scope of action is not limited to agricultural activities (as shaped by the directive proposition).

28. We also have to acknowledge that many unknowns remain on soil functionality, biodiversity, and potential resistance and resilience to deterioration. Indeed, most of soil-living creatures, as microbes, fungi, vertebrates, and invertebrates are still unknown to mankind, acknowledging that soil is "the singular most biodiverse habitat on Earth"[94]. This lack of

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[89]NORFLEET, M.; DITZLER, C.; PUCKET, W.; GROSSMAN, R. & SHAW, J. "Soil quality and its relationship to pedology. Soil Science, 2003, Vol. 168, Nº 3, p. 149-155

[90] DESROUSSEAUX Maylis,"La protection Juridique de la Qualité des Sols", Thesis in Law, Lextenso éditions, 2016.

[91] As cited by SELOSSE M.A., "L'origine du Monde, Une Histoire naturelle du sol à l'intention de ceux qui le piétinent ». Actes Sud, 2021, ISBN 978-2-330-15267-3. Page 202.

[92] See ORGIAZZI *et. al*., "Global Soil Biodiversity Atlas" Joint Research Centre, 2016. The authors identified at least 13 possible stressors: climate change, land-use change, habitat fragmentation, intensive human exploitation, soil organic matter decline, industrial pollution, nuclear pollution, soil compaction, soil erosion, soil sealing, soil salinization, the use of GMOs in agriculture, and invasive species.

[93] See the EUROPEAN ENVIRONMENT AGENCY, "Land take and net land take", 10 September 2019. "Land take and soil sealing amounted annually to 440 km2/year from 2012 to 2018. This rate is gradually slowing, but ecosystems are still under pressure from fragmentation of peri-urban and rural landscapes. And the target of no land take by 2050 unlikely to be met unless annual rates of land are reduced/land recycling increases. (European Environment Agency, "The European Environment: State and Outlook" 2020, 2019. https://doi.org/10.2800/96749)

[94] ANTHONY Mark A., BENDER S. Franz et VAN DER HEIJDEN Marcel G. A., « Enumerating soil biodiversity », *Proceedings of the National Academy of Sciences*, 120, Proceedings of the National Academy of Sciences, 2023. This recent review on soil biodiversity studies proves that "soil is likely home to 59% of life including from microbes to mammals".

knowledge of soils would justify apprehending its usage and protection with a great deal of caution, applying the precautionary principle and the principles of preventive action[95]. We also need to acknowledge the timespans of pedogenesis and therefore the irreversible consequences, in human lifespans, of soil loss and degradation[96].

29. Nevertheless, since the available knowledge already allows us to apprehend the practices that should be prioritized to have a positive impact on soil functionality, agricultural regulations could tend to protect this complex object through requirements on SSM. Moreover, the progressively recognized role of farmers in shaping soils through their practices and as "guardians of biodiversity" in agroecosystems[97], has been translated into increasing environmental requirements for farmers' practices in Europe [98].

30. This is especially true since the "greening" of the CAP, a central EU Policy, starting with the Mac Sharry reform in 1992. Some big steps in this "greening" of the CAP were the decoupling of subsidies and especially the environmental conditionality of subsidies, conditioning CAP subsidies to a limited number of requirements on SSM practices[99]. Subsequently, the EU has primarily addressed soil degradation through an escalating incentivization of "agroecological" practices, aiming to offset the potential income reduction resulting from their implementation.

31. Despite increasing SSM requirements via the CAP and annex regulations, that struggle to deliver results, there is still a clear lack of legal obligations at the EU level concerning soil use and soil health conservation as well as a lack of financial support for SSM practices despite its utmost importance[100].

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[95] Article 191 TFEU, 2.

[96] As explained by SELOSSE M.A., "L'origine du Monde, Une Histoire naturelle du sol à l'intention de ceux qui le piétinent ». *Op. Cit.* It can take up to 1000 years to produce 1cm of fertile soil, knowing that current soil erosion goes exponentially faster. It is very complex process, as well as rather unknown, that humans cannot grasp in their lifespan. See Chapter VI.

[97] MINISTÈRE DE L'AGRICULTURE, « Les agriculteurs, gardiens de la biodiversité en milieu agricole », sur Ministère de l'Agriculture et de la Souveraineté alimentaire, [Accessed the 8th of August 2023]. https://agriculture.gouv.fr/les-agriculteurs-gardiens-de-la-biodiversite-en-milieu-agricole For e.g, this formula has been employed by the French ministry of agriculture.

[98] COUNCIL Directive 75/268/EEC of 28 April 1975 on mountain and hill farming and farming in certain less-favoured areas. OJ L 128, 19.5.1975, p. 1–7. Indeed, this directive enounces that farmers, besides providing agricultural products, "perform a fundamental function" in the conservation of mountain and hill landscapes, thus justifying specific requirements on the management of such lands.

[99] ROCHDI G.,« Synthèse - Politique agricole commune - Lexis 360 Intelligence », 18 Novembre 2019. https://www-lexis360intelligence-fr.scd-rproxy.u-strasbg.fr/encyclopedies/JurisClasseur_Rural/RU0TOCID/document/EF_SY531010_0KSS?q=Synth%C3%A8se%20-%20Politique%20agricole%20commune%20&doc_type=doctrine_synthese&sort=score&from=0&to=1693527544191&source=history&date_filter=0&numero=1

[100] ROBERTS Michaela, HAWES Cathy et YOUNG Mark, « Environmental management on agricultural land: Cost benefit analysis of an integrated cropping system for provision of environmental public goods », *Journal of Environmental Management*, 331, 2023. For e.g. in this recent research the authors state that in the first six years of transition from intensive conventional management to Integrated cropping (with SSM) had better environmental outcomes, but lower margins. Therefore "financial incentives are likely to be important to allow farmers to transition towards a more environmentally friendly cropping system".

32. With that being said, now comes the time to explore the fundamental issues of soil legal protection. Certainly, translating soils, soil health, and more broadly the land, as material objects, into the law, as legal objects, cannot be done without raising major problems[101]. This translation highlights the issues of a legal epistemology that is inadequate to grasp the complexity and fragility of this material object – the soil – and its constituent elements. This difficulty in framing soils comes from the fact that soil is also "a particular element of State sovereignty"[102], and that it has an infrangible link with private property, as a "real good by nature"[103]. The land is "without a doubt the first true object covered by property law"[104] and the paradigmatic object of property rights in modern times[105].

33. As the land, soils (which are part of it) are therefore characterized in the law as mere objects of exclusive property, while mostly denying their material existence as complex, living, and rather unknown ecosystems since the actual legal epistemology fails to recognize any agency to non-humans. This legal fiction, establishing States and persons as total sovereigns on the soils they own, allows the accumulation and commoditization of soils. It occurs without acknowledging and thinking of soils *per se,* without grasping soils and more generally the land as a vital ecosystem, as "property is precisely man's deterritorialized relationship with the land".[106] Indeed, some argue that "property rights are still based on possessive individualism and therefore have no social or environmental purpose"[107]. Then, soil health, just as soil quality (or health), simply becomes "an attribute of the owned property, nothing more"[108].

34. Even if any legal analysis of soils inherently entails a study of property rights, the relationship between land ownership, especially the *abusus*[109], and soil conservation, as well as

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[101] THOMAS Garance really helped me a lot to conceptualize and write this section. To read more of her thoughts on the evolutions in environmental law regulations, and the legal epistemology resulting from legal globalization, especially on property rights, see her doctoral thesis: "Waste conceived by the Law", under the supervision of Pr. BISMUTH Régis. To be published. See Part 1 "Le déchet, les contours de l'objet juridique", Chapter 2 « Les limites épistémologiques du déchet, le déchet insaisissable par le droit des biens ».

[102] LANGLAIS Alexandra: "Legal issues of implementing agricultural soil organic sequestration as negative emission technology", Chapter taken from: Rumpel, C. (ed.), Understanding and fostering soil carbon sequestration, pp.851–876, Burleigh Dodds Science Publishing, Cambridge, UK, 2023, (ISBN: 978 1 78676 969 5; www.bdspublishing.com).

[103] LEFEBVRE D. J.cl civ, fasc. art. 518-521 (2, 1985), n°8, p. 4, as cited by BILLET Ph., « La protection juridique du sous-sol en droit français », Thesis in law, 1994. p. 28. Translated by us.

[104] BOSC Lionel, "Property and soil protection: Reflections on civil law and the integration of soil quality", from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84.

[105] GARNSEY Peter, *Thinking about Property* [online], Cambridge University Press, 2007.

[106] Translated by us: DELEUZE Gilles and GUATTARI FÉLIC, « capitalisme et schizophrénie 2: Mille Plateaux », Paris, éditions de Minuit, 1980, p. 483.

[107] BERTRAND Murielle. La protection des sols dans le cadre de l'Union européenne, under the direction of PhilippevBillet. - Lyon : Université Jean Moulin (Lyon 3), 2018. Page 89 Available on : http://www.theses.fr/2018LYSE3007

[108] BOSC Lionel, "Property and soil protection: Reflections on civil law and the integration of soil quality" *Op. Cit.*

[109] Here we refer to the fact that property is an absolute right, at least in French law (see article 544 Civil Code). Therefore, proprietors have exorbitant prerogatives over their soils and can enjoy or dispose of them in the most absolute way (the abusus), even if it means damaging them, albeit with fairly circumscribed limits as if they infringe the rights of a third party.

the disregard for property rights in conceiving soils *per se,* these issues will only be addressed in an incidental manner. As current normative interventions on soils, we will focus on the legal requirements and incentives from positive law such as those instituted by the EU Taxonomy and those proposed in the Soil Monitoring directive, especially to assess their potentialities to allow a legal protection of soils where other mechanisms have failed.

35. If soil's legal framing sometimes receives the notion of soil health by recognizing the importance of soil functions, agricultural soil's health conservation is mostly received by the law through requirements on agricultural practices, explaining our focus on SSM legal obligations[110]. Neoliberal law does not question how the law frames agricultural soil use through property and relies on responsibility mechanisms and incentive mechanisms to frame agricultural practices, rather than conditioning property rights.

36. This epistemological shift is not without raising concerns. As Marie Douglas explained in 1966[111], the pollution of ecosystems, such as soil deterioration, is not a simple externality to regulate. This pollution is rather the logical consequence of our use of property, here our use of soils through intensive (agricultural) production methods. In her line of thinking, we could rather question if the law should allow agricultural production to maximize profit via intensive practices and to focus on productions with high market value, knowing that they are much more consuming in common resources and produce the most of these "externalities". These damages can hardly be retained via liability mechanisms. Furthermore, some might argue that these impairments on common goods such as land, biodiversity, water, and air, could be limited via further conditioning property rights regarding natural commons, allowing only responsible uses that do not alter the substance of such commons[112].

37. Then, as explained by Garance Thomas[113], soils regulations focus shifts from property considerations to liability considerations through a more composite policy approach. Soil health is not defined within the realm of property rights but rather through liabilities that entail diverse legal obligations placed upon farmer's shoulders. Thus, soil health policies must follow fragmented legal answers according to different areas of constraints over farmer's practices[114]. However, SSM requirements fail to find constraining legal grounds. Tort regulation over a farmer's behaviors falls then under soft law obligations, partially evading legal constraints to

[110] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Biodiversity Strategy for 2030 Bringing nature back into our lives, COM/2020/380 final, 2020. For example, the EU biodiversity Strategy for 2030 explicitly states that the halting of soil degradation "should be done by adopting sustainable soil management practices". See point 2.2.3.

[111] GULLIVER, P. (1967). Mary Douglas: Purity and danger: An analysis of concepts of pollution and taboo, viii, 188 pp. London: Routledge and Kegan Paul, 25s. *Bulletin of the School of Oriental and African Studies, 30*(2), 462-464, 1966. doi:10.1017/S0041977X00062765

[112] As envisionned by CAMPROUX DUFFRENE Marie Pierre, « Repenser l'article 714 du Code civil Français comme une porte d'entrée vers les communs. » 2018. halshs-01933631

[113] THOMAS Garance, Waste conceived by the Law", *Op. Cit.* Chapter 2 « Les limites épistémologiques du déchet, le déchet insaisissable par le droit des biens ».

[114] Constituting what some qualify as a "jungle of regulations". STAFFOLANI Sandrine, « La conservation du sol en droit Français », 2008. Université de Limoges, Faculté de Droit et des Sciences Économiques.

join voluntary obligations based on ethical considerations[115]. Furthermore, as it does not fall within a singular legal category, soil health suffers from its fragmented definition. In consequence, soil health policies are fragmented into different EU regulations, therefore lacking visibility and enforceability[116].

38. Indeed, soils and therefore soil health, have been neglected by positive law and have yet not been framed by a global juridical definition and regime. Soils are considered as "a major component of the environment, but a minor object of environmental law"[117]. As Carole Hermon explains[118], in EU environmental law soils are only protected by incidental dispositions such as, for example, provisions from the nitrates directive[119], the EU water framework directive[120], the CAP, etc.[121] Therefore, unlike water and air, which are protected in their entirety, sectoral approaches reign in soil conservation[122].

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39. Soils *per se* have been defined for the first time in European *soft law* in the European Soil Charter of 1972, from the Council of Europe, as "one of humanity's most precious assets", a "living and dynamic medium which supports plant and animal life"[123]. This charter already acknowledged that soils are a limited resource, non-renewable, and that their quality must be preserved by farmers' methods. Many European and International initiatives to protect soils followed. For example, soils have been provided with a World Soil Charter[124], and following the Rio Earth summit in 1992 soils have been incidentally protected by the UN Framework Convention on Climate Change, the Convention on Biological Diversity, and the Convention

[115] As exposed by THOMAS Garance, (Waste conceived by the Law", *Op. Cit.)* we do recognize the debate among scholars over the constraint of soft law, but as EU soil regulations are largely driven by soil health standardization rather than establishing constraining requirements on farmers or caps on agricultural activities, we will not revisit this debate here. For e.g. see: Catherine Thibierge, "La force normative, naissance d'un concept", LDGJ, 2009. Chapter 2 « Les limites épistémologiques du déchet, le déchet insaisissable par le droit des biens ».

[116] HEUSER Dr. Irene, « Soil Governance in current European Union Law and in the European Green Deal », *Soil Security*, 6, 2022. https://www.sciencedirect.com/science/article/pii/S266700622200020X

[117] MOLINER-DUBOST M., Droit de l'environnement, Dalloz, 2019, p. 373. Translated by us This affirmation is true in France but also in most MS of the EU. The Commission has in fact stated that very few MS have a comprehensive legal framework that covers soil protection/restoration/sustainable use and monitoring.

[118] HERMON Carole, "Soil protection in Law"; from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84.

[119] COUNCIL, Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources With, for example, requirements on the establishment of grass strips alongside watercourses, in "vulnerable zones", to protect them alongside other ecosystem services..

[120] COUNCIL and EUROPEAN PARLIAMENT, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, *OJ L 327, 22.12.2000, p. 1–73.*

[121] HERMON Carole, "Soil protection in Law", *Op. Cit.* The author also mentions Natura 2000 contracts, AEM's and GAEC's from the CAP, directive 91/271/CEE relative traitement eaux urbaines résiduaires (DERU) en limitant contaminants d'eaux et dans les boues de station d'épuration des eaux usées, avec environ 70% épandues sur les sols agricoles

[122] HEUSER Dr. Irene, « Soil Governance in current European Union Law and in the European Green Deal », *Op. Cit*.

[123] COUNCIL OF EUROPE, "European Soil Charter", Ref : B (72) 63, June 1972.

[124] FAO, "World soil charter", 8p., November 1982.

to combat land desertification[125]. However, the first functional definition of soils by a legally binding text was made by the protocol on the implementation of the Alpine Convention of 1991 from the Council of Europe, to which the EU is a party. This convention defines (alpine) soils multiple environmental, cultural, and economic functions.[126]

40. The first EU initiative for an ambitious and legally binding text on soil conservation emerged in 2002 with the "Thematic Strategy for Soil Protection"[127]. This Strategy identified the aforementioned issues regarding soil health and recognized the need for global legal protection for soils.[128] This strategy led to the proposition from the Commission of a Framework directive for soils in 2006[129]. Albeit this proposition was not met with political approval from member states (MS) and was finally abandoned in 2014 without official motives[130]. Some argue that the underlying causes were opposition from MS's to amend their industrial and agricultural policies, but also preoccupations with the costs due to the new requirements [131], especially on polluted industrial sites rehabilitation[132].

41. If other EU policies indirectly protect soils, the EGD has revived the ambitious objectives that this directive had regarding soil health. Those aspirations have been transposed more or less satisfactorily in the 2023/2027 CAP reform[133], and above all into the "EU Soil Strategy for 2030" followed by an action plan that should culminate in an "EU Soil Health Law" [134]. Its legal basis and justification to act are found in article 191 of the TFEU which establishes the objectives of the EU environmental policy. The so-called EU Soil Health Law has been reduced

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[125] UNITED NATIONS, "Framework convention on climate change", Drafted in 1994 and opened for ratification in October 15, 1994; UNITED NATIONS, "Convention on biological diversity", adopted the 22th of May 1992; UNITED NATIONS, "Conventions to combat desertification, in those countries experiencing serious drought and/or desertification, particularly in Africa", 1994.

[126] EUROPEAN COMMUNITIES, "Protocol on the implementation of the alpine convention of 1991 in the domain of soil conservation", Official Journal of the European Union L 337/29, 22nd December 2005. See article 1, (2).

[127]COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS; "Towards a Thematic Strategy for Soil Protection", 35 pp., COM(2002) 179 final, Brussels, 16.4.2002.

[128]*Ibid.* Precisely, the Commission states that "despite the delivery of some soil protection through several existing policy areas, a comprehensive Community approach to soil protection does not exist. Soil protection is more the result of the crosscutting nature of soil [which benefit from legislation that does not directly address them] than the outcome of an explicit intention to tackle soil problems. Page 28.

[129] COMMISSION OF THE EUROPEAN COMMUNITIES, Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for the protection of soil and amending Directive 2004/35/ECCOM/2006/0232 final - COD 2006/0086, 22nd September 2006.

[130] A common position was never reached due to a blocking minority of five MS. See the Procedure File: 2006/0086(COD) | Legislative Observatory | European Parliament (europa.eu). Therefore the proposal was withdrawn in May 2014 by stating that "the Commission remains committed to the objective of the protection of soil and will examine options on how to best achieve this. Any further initiative in this respect will however have to be considered by the next college."

[131] HERMON Carole, "Soil protection in Law", *Op. Cit.*

[132] CHEN Yijia, « Withdrawal of European Soil Framework Directive », *Journal of Sustainable Development*, 13, 2019.

[133] GADBIN Daniel, « Droit de l'Union européenne - Réforme de la PAC – Le projet de programme stratégique national aux prises avec les objectifs issus du Pacte vert », Lexis 360 Intelligence , 2021.

[134] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Soil Strategy for 2030 Reaping the benefits of healthy soils for people, food, nature and climate, COM/2021/699 final, 17th November 2021.

to a Soil Monitoring directive proposition, as the opposition to the soil directive subsist despite the increased environmental urgency[135]. Nonetheless, this directive could provide the EU legal order with a global definition for soils and soil health with legal value, if adopted by the MS's. Moreover, this draft proposition could be drastically improved, explaining why during our exposition we will refer to the Soil Health Law, as what it could be revised into following the EU Soil Strategy ambitions, and to the Soil Monitoring directive when referring to what is *de lege data* and when using its proposed provisions.

42. The draft proposition of the Commission, which could be amended, defines soil health as "the physical, chemical and biological condition of the soil determining its capacity to function as a vital living system and to provide ecosystem services "[136], coherently with current scientific knowledge.

43. But despite asserting the vital importance of soils and laying down ambitious objectives to "achieve healthy soils by 2050 and maintain soils in healthy conditions"[137], with corresponding legal definitions, the draft of the Commission on the directive proposition does not contain any constraining SSM requirement for MS's. Consequently, this prudent approach could undermine its aim to attain "coordinated measure by all MS" by complying with the established measures on SSM in agriculture[138]. The Commission's reserve is justified by the compliance to the subsidiarity and proportionality principle[139], and a complacent carefulness to the obstacles that consumed the precedent proposition. Among its motives, the Commission states the fact that there is a "wide range of soil conditions and uses across the EU" which justifies a "need for flexibility and subsidiarity", as provided by a directive contrary to a regulation[140].

44. Therefore, one could argue that the juridical response to agricultural soil health degradation might be unfit to answer the recognized importance of soils in light of their functions and current decline, and the Commission might lack ambition to improve their normative framing. Indeed, the Commission missed a good opportunity to set constraining standards on soil planning and management to lay down what must be achieved, and the measures to be taken in the case of non-compliance. This could be done, as for water[141] and air[142], by laying down the

[135] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*
[136] *Ibid.* Article 3.
[137] *Ibid.* Article 1 (1).
[138] *Ibid.* As stated in the introduction of the draft proposition and on its article 1 (2).
[139] EUROPEAN UNION, "Treaty on European Union (Consolidated version)", Treaty of Maastricht, 7 February 1992, Official Journal of the European Communities, C325/5; 24 December 2002. Article 5(3) of the TEU. This since the proposed action cannot be sufficiently achieved by MS's and that actions based on the article 191 of the TFEU (environmental policies) need to be justified by this principle as the EU only has a shared competence in this area. But the Commission specifically emphasizes on the proportionality principle, based on the article 5(4) of the TEU, stating that the EU "shall not exceed what is necessary to achieve the objectives of the Treaties", knowing that the necessity of constraining SSM measures is still debated among MS's.
[140]Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* As also stated in the introduction of the draft proposition.
[141] COUNCIL and EUROPEAN PARLIAMENT, Directive 2000/60/EC, *Op. Cit.*
[142] DIRECTIVE (EU) 2016/2284 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC, 17th December 2016. Article 1.

criteria that establish the thresholds for healthy soils, knowing that "there are no such provisions for soils"[143].

45. In this context of the failure of environmental law to rationalize individual behavior by constraining obligations, our interest was drawn by upcoming financial regulations promoting environmental considerations. This given that we cannot rely on the compulsory nature of the law and that other "modes of existence"[144], such as economics and finance, can support environmental objectives such as fostering soil health. At the same time, as economic legal tools blossom, finance has been increasingly interested in environmental considerations as a way to secure their profits from what has been reduced to "environmental (or ESG) risks".

46. Thus, to promote improved requirements on SSM in agriculture that regulatory interventions lack providing, we were interested in the potential synergy between sustainable finance regulations, supporting sustainable activities, and the EU Soil Health Laws. As mentioned before, farmers certainly need improved financial means to change their practices. Additionally, some environmental regulations and strategies arising from the EGD have already identified sustainable finance as having the potential to support the intended systemic change[145].

47. Sustainable finance arises from the idea that the prodigious financial lever of citizens' savings and investments that the asset management industry controls, especially in Europe[146], "should be used to promote the development of businesses which have chosen – above and beyond the legitimate quest for financial gain – to pursue objectives of general interest or relating to social, ethical, or environmental development".[147] And lately, there has been a growing interest of states[148], civil society, companies and investors to channel those assets into the support of SSM practices improving soil health[149].

II) The rise of sustainable finance and investments: definitions and regulatory framework.

48. Sustainable finance is a "protean concept"[150], with manifold ways to define it. First and foremost, if we reason "*a contrario",* sustainable finance could be defined as opposed to

[143] HERMON Carole, "Soil protection in Law", *Op. Cit.*

[144] As explained by LATOUR Bruno, in "La fabrique du droit, une ethnographie du Conseil d'État ». Paris, Éd. La Découverte, Poche, coll. Sciences humaines et sociales, 320p, 2004.

[145] COMMUNICATION FROM THE COMMISSION (…) "EU Soil Strategy for 2030 (…)", COM/2021/699 final, *Op. Cit.* For example see paragraph 6.1.

[146] AZAD Sid, *et. al.* « European asset management after an unprecedented year | McKinsey », [Accessed the 3th august 2023]. https://www.mckinsey.com/industries/financial-services/our-insights/european-asset-management-after-an-unprecedented-year For example, European asset managers ended the year 2020 "with a record €25.2 trillion in assets under management (AUM)."

[147] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Journal of Business Ethics*, 177, 2022.

[148] For e.g. under the G20 Green Finance study group, that later became the G20 Sustainable Finance working group. See https://g20sfwg.org/

[149] For e.g. this gathering of various stakeholders: « WWF, REMY COINTREAU, MOET HENNESSY and GENESIS accelerate and amplify the transition to regenerative agriculture », [Accessed the 8th of August 2023].

[150] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». Thèse de doctorat, Université de Limoges, Licence CC BY-NC-ND 3.0, 2020. Page 18.

"conventional finance" and its "commercial approach, characterized by (the exclusive search of) rentability and productivity"[151]. Then, its conceptualization can refer to "green finance"[152], "sustainable finance"[153] or even "climate finance". It could generally be defined as the financing of "investments that provide environmental benefits in the broader context of environmentally sustainable development"[154], or as the process of "taking environmental, social and governance (ESG) considerations into account when making investment decisions in the financial sector"[155].

49. However, climate finance specifically refers to "the financing of public and private investments that seek to support mitigation and adaptation to climate change and can therefore be considered as a subset of green finance"[156]. Even if there is a clear preponderance of climate considerations in sustainable finance, in this paper we will underline the need for sustainable finance and agriculture to consider more broadly environmental issues, especially biodiversity decline in agroecosystems, to be able to effectively tackle agricultural soil health decline.

50. To rationalize all these definitions, Cunha et al. suggest that sustainable finance and investments (SFI) could be established as an "umbrella term" that represents all concepts related to the implementation of financial and investment activities based on sustainability-oriented strategies[157]. Then, SFI could be defined as "the management of financial resources and investments with the aim of promoting long-lasting, positive, and measurable social and environmental impacts."[158] This definition is in line with the EU Commission that establishes that SFI "generally refers to the process of taking due account of environmental and social considerations in investment decision-making, leading to increased investments in longer-term and sustainable activities "[159].

51. SFI is also closely linked to Corporate Social Responsibility (CSR), both being "a side of the same coin"[160], CSR aiming for greater consideration of environmental concerns in companies and SFI aiming to support those who do it best. Without requirements on CSR reporting, investors wouldn't be able to evaluate the ESG performance of the companies they invest in and therefore effectively invest in sustainable activities.

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[151] *Ibid.*
[152] G20 GREEN FINANCE STUDY GROUP, « G20 Green Finance Synthesis Report 2016", 15 july 2016. http://www.g20.utoronto.ca/2016/green-finance-synthesis.pdf
[153] G20 GREEN FINANCE STUDY GROUP, « G20 Green Finance Synthesis Report 2022", 2022. https://g20sfwg.org/wp-content/uploads/2022/10/2022-G20-Sustainable-Finance-Report-2.pdf
[154] G20 GREEN FINANCE STUDY GROUP, « G20 Green Finance Synthesis Report 2016", *Op. Cit.*
[155] BRÜHL Volker, « Green Finance in Europe — Strategy, Regulation and Instruments », *Intereconomics*, 56, 2021.
[156] CUNHA Felipe Arias Fogliano De Souza, MEIRA Erick et ORSATO Renato J., « Sustainable finance and investment », *Bus Strat Env*, 30, 2021.
[157] *Ibid.*
[158] *Ibid.*
[159] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Action Plan: Financing Sustainable Growth. COM/2018/097 final, 8th March 2018.
[160]CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* Page 118.

52. Next, who are the "players", the stakeholders behind SFI? Cunha et al. identify four main actors in SFI[161]. Providers (1) would be on the supply side, providing or channeling financial resources towards "sustainable activities", and could be individual or institutional investors such as microfinance institutions, banks, insurance companies, municipalities...[162] Recipients (2), on the demand side, would be the companies, having what can be considered "sustainable business models". Therefore, they promote and provide products and services contributing to SFI objectives. As the authors underline, recipients as cooperatives and associations should not be overlooked in SFI, knowing their importance in agricultural activities. Then, supporters (3) are the ones that "create and develop the institutional environment necessary for SFI development and implementation". This category includes governments and international organizations since they regulate and supervise SFI. But it could also include "NGO's, stock exchanges, data and rating providers, standard organizations, network organizations, academia, and the media."[163] Finally, the main beneficiaries (4) of SFI are the environment and society, that should not be overlooked by literature as the authors warn.

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53. Having established the substance of SFI, how is this definition translated into the law? As Ahlström and Monciardini underline, "until recently, there has been a significant lack of sustainability provisions in financial regulation" in the EU, SFI being mostly framed by "soft law". However, SFI has recently "moved from being a peripheral issue in the EU policy agenda to the central stage" constituting now a "sizeable share of the financial sector".[164] Therefore it could finally have a great potential to support systemic change. The authors also highlight that rising financial regulations had a key role in the emergence of this field since they allow providers, recipients, and supporters in Europe to have detailed guidance on what projects and activities can qualify as contributing to ESG objectives. Also, it further impulses its deployment offering SFI actors a secured legal framework for their investments, something that instruments with a disputed legal status didn't allow[165].

54. The attention of EU regulators towards SFI was first brought by the 2007-2008 global financial crisis and the intention to learn from the harmful excesses of the financial system, especially excessive speculation, with improved transparency and regulatory supervision[166]. Then, the EU's interest in SFI was explicitly manifested in 2016[167] with the establishment of a

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[161] CUNHA Felipe Arias Fogliano De Souza, MEIRA Erick et ORSATO Renato J., *op. cit.*

[162] *Ibid.* The detailed presentation of SFI "players" is made based on the presentation provided by Cunha et al. that were able to present them better than I ever could. I shall take no credit for this.

[163] *Ibid.*

[164] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*

[165] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit. "*The uncertainty linked to the binding nature of its instruments is likely to slow down the deployment of (SFI) and, consequently, to alter the conception of sustainable finance". Page 172.

[166] AHLSTRÖM H., "Policy hotspots for sustainability: Changes in the EU regulation of sustainable business and finance". *Sustainability, 11*(2), 499, 2019.

[167] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND

"High-level expert group on sustainable finance" in December 2016. This initiative resulted in a final report[168] that was then materialized by the Action plan on "Financing Sustainable Growth" from the 8th of March 2018[169]. This plan took up on the above objectives of SFI "to develop more sustainable economic growth, ensure the stability of the financial system, and foster more transparency and long-termism in the economy".

55. In order to fulfill its aim, this action plan called for the elaboration and enactment of the cornerstone for SFI regulations in Europe, a "unified EU classification system, or taxonomy". Such taxonomy could provide clarity and detailed information on the activities and projects that could be qualified as sustainable and help to further improve investors' obligations to make the EU financial system more sustainable. This classification could therefore help investors against greenwashing allegations by harmonizing via mandatory requirements the interpretation of the information provided by CSR requirements[170]. This resulted in the EU Taxonomy regulation[171].

56. It is important to specify that peripheral national and EU regulations complete and implement the EU Taxonomy legislative framework. We will have a special consideration of the second pillar of the aforementioned action plan which aims to improve the transparency and the trustworthiness of extra-financial disclosures and implement sustainability considerations in corporate governance. This second pillar was materialized by two regulations: the regulation on sustainability-related disclosures in the financial services sector (SFDR) and the Corporate Sustainability Reporting directive (CSRD). Such regulations are particularly important since they impose institutional investors, financial counselors (both under the SFDR[172]), and

THE COMMITTEE OF THE REGIONS Capital Markets Union - Accelerating Reform, 2016, [Accessed the 8th of August 2023].

[168]EUROPEAN COMMISSION,« Sustainable Finance », sur European Commission [online], [Accessed the 8th of August 2023]. https://ec.europa.eu/commission/presscorner/detail/en/IP_18_542

[169] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Action Plan: Financing Sustainable Growth, 2018, [Accessed the 8th of August 2023].

[170] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* Page 171. Indeed, "the taxonomy separates the true from the false, sets out requirements for interpreting the information transmitted by CSR and enables companies to be classified as sustainable or not".

[171] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (Text with EEA relevance) PE/20/2020/INIT; OJ L 198, 22.6.2020, p. 13–43. This regulation entered into force on 12 july 2020 and it is reviewed every 3 years (art 26). In respect of the env articles (a and b of article 9): they enter into force from 1 January 2022; And those on c to f (of article 9) enter into force from 1 January 2023.

[172] « Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (Text with EEA relevance) », OJ L, 2019.
This regulation was later on amended to integrate the taxonomy criterion and provisions : Commission Delegated Regulation (EU) 2022/1288 of 6 April 2022 supplementing Regulation (EU) 2019/2088 of the European Parliament and of the Council with regard to regulatory technical standards specifying the details of the content and presentation of the information in relation to the principle of 'do no significant harm', specifying the content, methodologies and presentation of information in relation to sustainability indicators and adverse sustainability impacts, and the content and presentation of the information in relation to the promotion of environmental or social characteristics and sustainable investment objectives in pre-contractual documents, on websites and in periodic reports (Text with EEA relevance) C/2022/1931. *OJ L 196, 25.7.2022, p. 1–72*

companies (under the CSRD[173]), mandatory extra-financial disclosure obligations (such as ESG disclosures). Putting it simply, those providers shall inform their clients and the public about the sustainability of the financial products they sell[174]. Also, they shall give them pre-contractual information on the way those ESG objectives are attained, to ideally guide them towards sustainable investment decisions.

57. Moreover, the action plan on sustainable finance called for the creation of an EU label on green investment funds. Still, to be able to fulfill this duty, there needs to be a precise, consensual, and harmonized definition of what is the criterion to "establish the degree to which an investment is environmentally sustainable" for all the aforementioned regulations and directives[175]. This need was also identified for EU standards and labels in respect of financial products and corporate bonds[176] that may be identified as sustainable. Here is where the EU Taxonomy intervenes.

58. The EU Taxonomy regulation was finally adopted on the 18th of June 2020 and entered into force in July 2020, except for some specific articles[177]. Its legal basis is found in article 114 of the TFEU, regarding the establishment and the functioning of the internal market. This level of intervention by the EU is justified by the need to have a harmonized definition of sustainable activities and investments for the EU internal market, and more broadly a coherent legislative framework for the European financial sector. As a regulation, the EU taxonomy, just as its delegated acts[178], has a general application that is binding in its entirety and is directly applicable to all MS legal orders[179]. Because of this, this regulation has already a wide scope of applications, and more so with the fact that it applies to measures adopted by MS's regarding adopted requirements for private providers in respect of sustainable financial products and corporate bonds[180]. Furthermore, the EU Taxonomy applies to private SFI providers, identified

[173] Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting. Note that it's article 4 will apply only from 1 January 2024. This directive shall be transposed before the 6th of July 2023.
[174] Regulation (EU) 2019/2088 (SFDR), *Op. Cit.* Article 2.12 of the SFDR defines financial products: a) a portfolio managed in accordance with point (6) of this article. ("in accordance with mandates given by clients on a discretionary client-by-client basis where such portfolios include one or more financial instruments" – Article 4 of the Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments) ; (b) an alternative investment fund (AIF); (c) an IBIP; (d) a pension product; (e) a pension scheme; (f) a UCITS; or (g) a PEPP;
[175] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Article 1.
[176] Bonds are fixed-income instrument that represents a loan made by an investor to a borrower (typically corporate or governmental). They are used to finance projects and operations; hence the owners are creditors of the issuer.
[177] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* In respect of the env articles (a and b of article 9): enters into force from 1 January 2022; And those on c to f (of article 9) enter into force from 1 January 2023.
[178] THIERY Sylvain, "Les actes délégués en Droit de l'Union Européenne, Legal thesis, 2020. page 14. As Sylvain Thiery explains, delegated acts, which find their legal basis on the article 290 of the TFEU, are non-legislative acts "at the frontier between the legislative and executive power that shall not be overlooked". They are legally binding and they have a huge impact on the substance of the regulations since they "precise" under the cover of merely "technical prescriptions", as the professor Brunessen Bertrand underlines in the preface of this thesis. This is particularly true in the EU Taxonomy regulation and has also been true for the CAP for example.
[179] EUROPEAN UNION, Consolidated version of the Treaty on the Functioning of the European Union, 13 December 2007, 2008/C 115/01. Article 288, paragraph 2.
[180] Regulation (EU) 2020/852 (The EU Taxonomy), *Op. Cit.* Article 1.

as “financial market participants that make available financial products”, as well as all undertakings subject to extra-financial reporting[181].

59. The present regulation defines what a “sustainable” activity and investment is by listing environmentally sustainable activities that could contribute to attaining EU environmental goals for 2030. It especially focuses on climate and energy targets but also includes biodiversity conservation, sustainable use of water, etc. This list is made via a harmonized classification system with technical screening criteria establishing the requirements for each sector of activity to be qualified as “sustainable”. Such technical screening criteria are then précised via delegated acts adopted by the Commission[182].

60. This benchmark aims to “remove obstacles to the efficient movement of capital into sustainable investments” by “making available financial products which pursue environmentally sustainable objectives”[183]. Therefore, the EU Taxonomy ensures a common definition of sustainable activities and investments, providing investors with securities, cross-border common standards, and higher transparency. Altogether, the Taxonomy improves confidence and incentives to make such investing decisions. Moreover, it intends to help companies to improve their degree of sustainability and mitigate market fragmentation.

61. However, the technical screening criteria for all agricultural activities have yet not been provided. Still, it is expected to be for the activities contributing to environmental goals such as soil health improvement. If the EU Taxonomy does not deal directly with soil health, it does so incidentally while contributing to its environmental objectives. For example, capturing SOC or restoring agroecosystems could contribute to climate and biodiversity goals as well as improving soil health.

62. Thus, the EU Taxonomy could help build the bridge between sustainable investments and agricultural activities fostering soil health. Furthermore, the implementation of the EU Taxonomy regulation and its delegated acts is being carried out at the same time frame as the EU Soil Health Law, a promising regulation, if revalued, that will need large funding to fulfill its goals. Despite this and to our surprise, sustainable investments have yet not been identified as an interesting lever to support this regulation. To our surprise because further than its potential, the need to think about this synergy between the EU Taxonomy Regulation and EU Soil Health Laws would also fall under the obligations of article 7 of the TFEU establishing that “the Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers”. Therefore, this obligation drew our attention to how this potential convergence could be materialized to promote investments supporting the Soil Health Law objectives, knowing that no visible connection has been made between the two regulations.

[181] *Ibid.* Article 1, (2) (b) and (c) Regulation (EU) 2020/852.
[182] *Ibid.* pursuant to article 20 of the EU Taxonomy regulation, the Commission has the power to adopt delegated acts referred to in Articles 8(4), 10(3), 11(3), 12(2), 13(2), 14(2) and 15(2).
[183] *Ibid.* See (11).

63. The focus on the EU level to analyze suitable regulations, legal incentives, and securities, is justified by the fact that there is an "unrivaled prominence and scale of EU reforms"[184] on sustainable finance (in Europe). Also, the importance of many EU regulations and policies concerning soils and regulations, such as the CAP or upcoming regulations as the EU soil monitoring directive, justifies this focus even though there is a huge diversity in soil characteristics and legal contexts in different EU MS's territories. Nevertheless, we also analyzed some national (mostly France) and international policy documents and legal tools related to SFI and soil health. All these considerations justify why we focused on the foundation of this overarching legal framework of the EU, the EU Taxonomy.

III) Aim of the study.

64. Starting this study we asked ourselves: how does SFI, under the EU taxonomy, constitute an interesting lever to improve agricultural soil health?
Indeed, the EU Taxonomy could help channel investments towards activities fostering agricultural soil health. This assumption comes, among others, from the acknowledgment of the failure of environmental law, and EU Soil Health laws, to establish constraining provisions on agricultural soil management and rather rely on economic incentives to promote change in practices. Accordingly, sustainable investments under the EU Taxonomy could have been identified as a suitable incentive, while boosting and rationalizing current private initiatives on soil health investments.

65. Likewise, when sustainable investments in agricultural soil health are orchestrated privately between players using their own criteria[185], they remain limited on their potential for global results and durability, as well as on the security and confidence offered to investors wanting to step in. Correspondingly, provisions from the Soil monitoring directive proposition could provide for harmonized SSM criteria in agriculture.

66. However, the EU taxonomy may present some *lacunae* that could hinder the will and the capacity to invest into, for providers, and adopt, for recipients, business models fostering soil health in the agricultural sector. For example, there is a clear focus on climate considerations in the EU Taxonomy, while improving soil health relies on broader considerations, such as biodiversity enhancement. Also, further investigation revealed some risks and limitations of this approach. To cite some of them, the fact that this initiative depends greatly on voluntary interventions among all stakeholders[186], or the fact that finance can at the same time be

[184]AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
[185] For example, GENESIS, « WWF, REMY COINTREAU, MOET HENNESSY and GENESIS accelerate and amplify the transition to regenerative agriculture », May 25, 2023. [Accessed the 8th of August 2023]. https://en.genesis.live/post/wwf-remy-cointreau-moet-hennessy-et-genesis-accelerent-et-amplifient-la-transition-vers-une-agriculture-regeneratrice
[186] A critic raised for example from SOTIROPOULOU A., "Sustainable investments in European Union Law". Law & European Affairs, 2022/2, 27 September 2022.

perceived as a solution and a potential danger[187], made us rethink the underlying issues of this subject.

67. In light of this potential, the obligation of consistency between EU policies[188], as well as the limitations of this approach, a central question was raised: **What type of synergy could be relevant to build between the EU Taxonomy regulation and the emerging EU Soil Health Laws?**

IV) Methodology.

68. This study on policy documents included work staff documents, communications, public consultations, related legal acts, jurisprudence, and scientific literature related to SSM and SFI especially focusing on the EU Taxonomy and the EU soil health law. Here we identified a lack of research from legal doctrine on the link between new sustainable finance regulations and soil protection regulations, especially as a driver to support SSM practices. Moreover, due to the recent or not yet effective entry into force of these regulations, related case law has not been studied in-depth.

69. The limited framework of time of this research (from April to August 2023) has to be considered in the discussion of our findings, knowing that further legislation concerning soil health, the EU Taxonomy, and adjacent delegated acts, is expected from the EU by the end of the year.

V) Discussion.

70. Even though the EU Taxonomy could be an interesting lever to support the ambitions of the upcoming EU Soil Health Law, and that they could contribute to completing their mutual shortcomings, both regulations have yet not converged. Furthermore, external sources such as adjacent regulations and the rise of soil health investments in soil health without a secure framing, underlined the need to further frame sustainable finance in agriculture to promote agricultural soil health. Therefore, building a synergy between the EU Taxonomy and the EU soil health law, as materialized by the directive proposition, may appear compelling **(Part 1)**.

71. Still, many potential regulatory improvements and limitations have yet to be addressed. Indeed, the EU Taxonomy has yet not "matured" and could be reinforced in itself as well as with the support of the proposed EU Soil Health law provisions to effectively support activities promoting agricultural soil health. Nonetheless, the limitations of our approach must be identified, especially regarding agricultural and financial governance as well as the risks carried by market-based approaches, as they may hinder the potential to perfect this synergy **(Part 2)**.

[187] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
[188] See *Supra*, § 62. As established under article 7 of the TFEU.

PART 1: The untapped synergies between the EU Taxonomy and the EU Soil Health Law proposition.

72. No thought seems to be given to a potential complementarity between the EU Taxonomy and the announced Soil Health Law. This even though both regulations aim to support activities fostering agricultural soil health in light of their legal scope, along with the fact that they could provide for their mutual deficiencies **(Chapter1).** Besides, many indicators and upcoming regulations seem to testify to the compelling nature of this synergy **(Chapter2).**

Chapter 1: A logical but unthought-out link between the Taxonomy regime and Soil Health Laws.

73. If we follow the criteria for the applicability of the EU Taxonomy regime, some activities supporting agricultural soil health could already be eligible to be qualified as "sustainable", to be potential recipients of sustainable investments, and others as "unsustainable", to dissuade potential investors from harmful activities **(I).** More importantly, both regulations have converging philosophies and could help counterbalance their mutual deficiencies to foster activities contributing to the established environmental goals **(II).**

I) A cluster of evidence for the applicability of the EU Taxonomy regime to agricultural soil health.

74. Article 3 of the Taxonomy sets out 4 overarching conditions for an activity to be qualified as sustainable. Firstly (a), it "contributes substantially to one of the six environmental objectives set out in its article 9". These objectives include the contribution to climate change mitigation and adaptation, the sustainable use of water, the transition to a circular economy, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems.[189]

75. Second (b), said activities shall also "not significantly harm any (of the set out) environmental or social objective(s)" to avoid being excluded from the "sustainable" qualification [190]. Thirdly (c), this activity is "carried out in compliance with the minimum safeguards laid down in article 18"[191]. And finally (d), it "complies with the technical screening criteria established by the Commission", in accordance with the articles detailing each environmental objective and the ways an activity could contribute to the set out environmental objectives.[192]

[189]Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* See article 9.
[190] *Ibid.* Article 3, (b).
[191] *Ibid.* Referring to the "procedures implemented by an undertaking that is carrying out an economic activity to ensure the alignment with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, including the principles and rights set out in the eight fundamental conventions identified in the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work and the International Bill of Human Rights."
[192] *Ibid.* Namely, articles 10, 11, 12, 13, 14 or 15.

76. In the light of those provisions it becomes apparent that agricultural soil health conservation and enhancement fits into the Taxonomy environmental objectives, thus activities fostering agricultural soil health might already qualify as being "sustainable" **(A).** Additionally, it is also important to identify agricultural activities that might harm the objectives of this EU Taxonomy to, as this regulation also aims, discourage investments towards those unsustainable activities **(B).**

A) Indirect considerations on agricultural soil health by the Taxonomy goals.

77. The establishment of the technical screening criteria for agriculture has been delayed, supposedly because of the negotiations that were underway for the CAP reform of 2023/2027[193]. Still, on the day these lines are written, none of the delegated acts have established these criteria for the agricultural sector[194]. Therefore presumed "sustainable" agricultural activities cannot yet be qualified as so, under the Taxonomy regime, as they can't possibly comply with article 3 (d) of this regulation.[195]

78. Nonetheless, many activities fostering agricultural soil health already comply with the overarching conditions to identify a "sustainable activity" **(1).** In addition, existent technical screening criteria could give us indicators to specifically designate sustainable agricultural activities fostering soil health **(2).**

1. Activities fostering agricultural soil health in the scope of the EU Taxonomy.

78. Three categories of economic activities are under the scope of the EU taxonomy. First, the ones that make a substantial contribution to the set environmental objectives. Then, enabling activities that help other activities to make those substantial contributions by providing them with services or technologies. They can be qualified too as "substantially contributing" to the taxonomy objectives, under some conditions[196]. Lastly, the taxonomy also considers "transitional economic activities" that could qualify as "substantially contributing" to the environmental goals, especially climate goals[197].

79. Primarily, activities implementing SSM such as in Organic Farming (OF), or to a certain extent conservation agriculture could qualify here as "sustainable activities" as they certainly

[193] As stated in (14) of the EUROPEAN COMMISSION,« Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities (Text with EEA relevance) », OJ L, 2022.

[194]See online in: EUROPEAN COMMISSION, "Sustainable finance package", 5th of July 2023. [Accessed the 8th of August 2023] https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en

[195] See *Supra*, § 75.

[196] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* See article 16. Conditions (a) and (b) that will be further detailed.

[197] *Ibid.(*41).

contribute to the Taxonomy environmental objectives[198] [199]. For example, according to the Taxonomy criteria, it is acknowledged that SSM in croplands, grasslands, and wetlands, as well as "regenerative agriculture", a broad term that can include both OF and conservation agriculture[200], substantially contribute to climate change adaptation [201] and the protection and restoration of biodiversity and ecosystems[202].

80. Then, the qualification of "enabling activities" could be attributed to, among others, manufacturers of sustainable agricultural supplies such as organic soil amendments, biofertilizers[203], biopesticides[204], light and reparable agricultural machinery[205], etc. Furthermore, companies specialized in soil testing and monitoring technologies as well as local structures providing access to investing opportunities for local farmers implementing SSM could be included as "enabling activities"[206].

81. Concerning transitional activities they refer to activities in which GHG emissions are "substantially lower than the sector or industry average" and that "do not hamper the development and deployment" of better alternatives among other conditions[207], taking an example from the energy sector. For agriculture, we could make the case that conventional farmers adopting some conservation agriculture practices, such as with reduced tillage but with a maintained and reasonable pesticide usage, could qualify as transitioning activities[208]. Less

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[198] CHABERT Ariane, SARTHOU Jean-Pierre, "Ecosystem services delivered by soils, from an agronomic perspective", from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84.

[199] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health.", *Op. Cit.*

[200] Since "regenerative agriculture" requires for example the elimination of the use of synthetic compounds, such as in OF, or at least its limitation, such as in conservation agriculture. See KHANGURA Ravjit, FERRIS David, WAGG Cameron *et al.*, « Regenerative Agriculture—A Literature Review on the Practices and Mechanisms Used to Improve Soil Health », *Sustainability*, 15, Multidisciplinary Digital Publishing Institute, 2023.

[201] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* For example, by strengthening land carbon sinks. See Article 10, (1), (f).

[202] *Ibid.* As set in the Article 15, (1), (c). This article identifies "sustainable agricultural practices, including those that contribute to enhancing biodiversity or to halting or preventing the degradation of soils and other ecosystems, deforestation and habitat loss". The regulation also recognizes multiple agricultural services contributing to this objective: "namely provisioning services, such as the provisioning of food and water; regulating services, such as the control of climate and disease; supporting services, such as nutrient cycles and oxygen production; and cultural services, such as providing spiritual and recreational benefits."

[203]See BHATTACHARJEE R., & DEY, U, "Biofertilizer, a way towards organic agriculture: A review". *African Journal of Microbiology Research*, *8*(24), 2332-2343, 2014.

[204] See NOLLET L. *et. al.* "*Biopesticides handbook"*, RC Press, 2023.

[205] That help reducing mechanically induced stress for soils such as compaction, while providing added independency and control to farmers regarding their working tools in a context where agricultural machinery is getting more and more costly and complex. Such providers already exist, see : GAILLARD Chris, « L'Atelier Paysan », sur *L'Atelier Paysan*, [Accessed the 8th of August 2023]. https://www.latelierpaysan.org/

[206] Such as the promising Hometown Investment funds, that "connects investors with projects in their own locality, where they have personal knowledge and interests" as explained by: SACHS Jeffrey D., WOO Wing Thye, YOSHINO Naoyuki *et al.* (dir.), "*Handbook of Green Finance*", Springer Singapore, 2019.

[207] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* These conditions are precised by the afferent delegated acts.

[208]CHABERT Ariane, SARTHOU Jean-Pierre, "Ecosystem services delivered by soils, from an agronomic perspective: The case of conservation agriculture.", *Op. Cit.* As stated here, transitioning from conventional to

ambitious, may also qualify as transitioning activities conventional farmers that simply go beyond what's required from the CAP conditionality[209]. Riskier, some agricultural providers could also be concerned here, such as fertilizers and phytosanitary producers, if they implement and invest in products having reduced associated risks and using renewable energy sources, without hampering more effective alternatives.

82. However, as stated before, delegated acts are in charge of completing the technical screening criteria needed to comply with the requirements set out in articles 10, 11, 12, 13, 14, and 15 of the regulation, regarding the contribution to the environmental objectives. Thus, they condition the granting of the "sustainable" label, or Taxonomy-aligned qualification, to a list of specific requirements. Withal, none of the delegated acts have yet established these criteria for the agricultural sector concerning activities contributing to the climate mitigation and adaptation objectives[210], which is the most detailed objective, nor regarding the other environmental objectives[211].

83. Nonetheless, if several areas of uncertainty remain for agricultural activities, we could still try to imagine under which conditions activities and projects from the agri-food sector could qualify as being "sustainable" by extrapolating the existent criteria for comparable activities.

2. Emerging technical screening criteria related to agricultural soil health.

84. The delegated act establishing the criteria "for determining the conditions under which an economic activity qualifies as contributing substantially to climate (goals) and (…) whether (it) causes no significant harm to any of the other environmental objectives", already provides a lot of informations on the future design of the sustainability criteria for farmers fostering soil health[212]. It is important to mention that this delegated act is the only one that has already entered into force, on the 1st of January 2022 (article 3), as well as being a lot more precise and complete than the drafts for the delegated acts related to the other environmental objectives.

85. Above all, the affirmation that this delegated act does not consider agricultural activities is only true regarding activities related to crop, livestock, or insect production, as well as

conservation agriculture is often associated with an increase in pesticide use to compensate the absence of mechanical weed control trough tillage.

[209]As obligations from statutory management requirements, eco-schemes, and good agricultural and environmental conditions. For a detailled explanation on the 2023-2027 conditionality see : AUBRY CAILLAUD Florence, « PSN et normativité environnementale : des avancées à relativiser », Revue de l'Union européenne – 663, décembre 2022 : « La place de l'agroécologie dans la nouvelle PAC 2023-2027 ».

[210] COMMISSION Delegated Regulation (EU) 2022/1214. *Op. Cit.*

[211]As seen in all the drafts of the delegated acts detailing the technical screening from the article 12 to 15 of the EU Taxonomy, See online in: EUROPEAN COMMISSION, "Sustainable finance package", 5th of July 2023. [Accessed the 8th of August 2023] https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en

[212] COMMISSION Delegated Regulation (EU) 2022/1214. *Op. Cit.*

"enablers" for such producers. It's important to keep this in mind knowing that agricultural activities are usually defined more broadly[213].

86. Indeed, some activities related to the agricultural sector and having an impact on soil health have already been given their sustainability technical criteria. For example, the forestry sector is already targeted by the aforementioned delegated act as well as manufacturers of biofuels, the latter having limited requirements for us to exploit. Taking an example from forestry, sustainable afforestation activities contributing to climate mitigation (through carbon absorption) should establish an afforestation plan (or equivalent instrument) that complies with a long list of requirements[214]. For this exposition, we will call the afforestation plan "management plan".

87. Firstly, the management plan should provide detailed information on the area in which the activity takes place, as well as "all elements required by the national law relating to environmental impact assessment of afforestation." Extrapolating this criterion, farmers fostering soil health already have some tools to comply with those requirements. Regarding the used area, this information is already provided when applying for CAP subsidies. On the other hand, the impact assessment of the project might be the most difficult part of this undertaking knowing the extent and complexity to choose proper soil health indicators[215], and to ensure the environmental additionality of the implemented SSM practices[216].

88. However, the test-soil-for-free initiative, launched by the Soil Monitoring directive[217], could provide funds for farmers to test their soil. Therefore, they could precisely evaluate the progress made through the implementation of SSM in terms of carbon absorbed, soil structure, soil biodiversity, etc., by comparing future data to the initial testing, for example on SOC content. This could also provide trustworthy information and a starting point for investors willing to support such practices while ensuring their contribution to the established environmental objectives.

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[213] For example, article L311-1 of the French Rural and sea fishing code defines agricultural activities as "all activities corresponding to the control and exploitation of a biological cycle of a plant or animal and constituting one or more stages necessary for the unfolding of this cycle, as well as activities carried out by a farmer which are an extension of the act of production, or which are supported by the farm. Etc." Translated by us.

[214]COMMISSION Delegated Regulation (EU) 2022/1214. *Op. Cit.* Forestry provisions go from page 16 to 32.

[215] There are still no common and exhaustive indicators regarding soil health or soil qualify as stated by RENAULT Pierre, GASCUEL Chantal, COUSIN Isabelle *et al.*, "From soil properties to quality indicators to support public policies and meet the needs of society"; *ISSN: 1252-6851 ; Etude et Gestion des Sols ; https://hal.inrae.fr/hal-04018969 ; Etude et Gestion des Sols, 2023, 30, pp.207-222 ; https://www.afes.fr/publications/revue-etude-et-gestion-des-sols/volume-30/*, 2023, [Accessed the 8th of August 2023].

[216]By environmental additionality we refer to the ability of the said practices to durably improve soil health and therefore have measurable environmental benefits. On the additionality concept in agriculture see: CANALES Elizabeth, BERGTOLD Jason S. et WILLIAMS Jeffery R., « Conservation intensification under risk » [online], *American Journal of Agricultural Economics*, 25 June 2023. https://doi.org/10.1111/ajae.12414 However, when referring to additionality they emphasize on the ability of incentives "to generate new conservation adoption efforts that would not occur in the absence of program payments".

[217] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* The draft claims that "in 10 years about 40% of the 10.5 million agricultural holdings would have had its soil tested." And "the capacity for laboratories in the EU is not expected to be a limiting factor to deliver such a program".

89. Also, it could help auditors or group assessments (required by the delegated Act on Forestry) when verifying compliance to the established requirements. Audit structures provided for CAP compliance checks could be of great help in establishing audit and assessment procedures. We can already find here our first testimony for a potential synergy between the emerging EU Soil Health Laws and the EU Taxonomy.

90. Then, the management plan should describe the area, the site preparation, and impacts "on pre-existing carbon stocks, including soils and above-ground biomass (…)", as well as the "management goals, habitat context, measures deployed to maintain the good condition of (forest) ecosystems), societal issues (including preservation of landscape), assessment on impact on food security, etc." These requirements fit perfectly crop and livestock farming challenges. Additionally, SSM requirements from the proposed directive on soil monitoring could be implemented here unto the management goals. Still, those provisions are rather demanding and could increase the already consequent administrative burden on farmers[218].

91. Finally, long-term requirements are needed to ensure the environmental additionality of the project, along with clearly established management goals (as SSM plans). Here many innovative contracts[219], such as land tenure contracts with environmental clauses[220] or real easements[221] could provide solid guarantees for long-term commitments[222].

92. Hence, this activity-based entry point could contribute to a broader support of business models fostering agricultural soil health. Still, our reasoning might seem inconsequential with our assertions on the detrimental effects of current agricultural practices. Consequently, could the EU Taxonomy help to characterize activities that do not meet the "do no significant arm" requirements? Such an identification could hamper investments supporting harmful activities while channeling investments towards "sustainable" activities contributing to the envisioned Soil Health Law objectives.

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[218] For e.g., see the EUROPEAN COURT OF AUDITORS, Special Report number 21 (2017) "Greening: a more complex income support scheme, not yet environmentally effective", (pursuant to Article 287(4), second subparagraph, TFEU), 12/12/2017. The administrative burden is already heavy for farmers, and sometimes impedes the implementation of SSM.

[219] "Innovative contracts" can be defined as "contractual arrangements that incentivise farmers to produce environmental public goods alongside private goods, but which are (in part) still experimental and deviate from mainstream AECMs. The differences can be either in their characteristics, the (re) combination of their characteristics, or the way in which they are implemented including contract governance". KELEMEN Eszter, MEGYESI Boldizsár, MATZDORF Bettina *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Land Use Policy*, 131, 2023.

[220] Here the CONSOLE Report made a great exposition on current contractual solutions to ensure durable engagements from farmers under a supportive framework. LANGLAIS Alexandra, CARDWELL Michael et al. « Report on Legal Aspects on Contractual solutions for the delivery of public goods", CONSOLE, H2020 - GA 817949.

[221] See BENEZECH-SARRON Patricia, "La protection contractuelle des sols : Contribution à l'étude des contrats affectant la propriété foncière à la protection de l'environnement », Université Savoie Mont Blanc, Centre de recherche en Droit Antoine Favre, 2021. Especially part 2, title 1. P. Benezech makes a thorough exposition of real covenants, servitudes etc.

[222] See *Infra*, § 210.

B) The "do no significant harm" criteria: an operational safeguard for agricultural soil health.

93. Identifying "unsustainable" agricultural activities and hampering their financial support and viability might also contribute to channel investments towards Taxonomy-aligned activities, helping to meet climate and biodiversity objectives[223]. Here is where the "do no significant harm" (DNSH) criteria intervenes, as laid down in Article 17 of the EU Taxonomy and précised, only for climate objectives, in appendix A of the aforementioned delegated act[224].

94. Indeed, the DNSH safeguard might help rule out investments towards activities that neither contribute to the Taxonomy nor the Soil Health Law objectives. Thus, it could deter unsustainable management practices. And after analyzing the DNSH criteria we can already see that considerations directly related to agricultural soil health have already been taken into account in its provisions.

95. The DNSH criteria uses life-cycle assessments to establish whether an activity does significant harm, with projection scenarios from 10 to 30 years for major investments considering the "production, use and end of life of (their) products and services"[225]. For example, regarding climate objectives, activities leading to significant GHG emissions are considered to do significant harm[226]. Here intensive agricultural activities depleting SOC, thus affecting soil health, as well as all activities from the agrifood sector that make extensive use of fossil fuels, such as for producing and using fertilizers and pesticides[227], seem to fall already under the Taxonomy regime as "unsustainable activities".

96. Precisely, under climate-related hazards, the DNSH technical screening criteria already identifies activities contributing to soil degradation, soil erosion, or water stress[228]. The whole agrifood value chain is here concerned, knowing it's responsible for around a third of human GHG emissions[229], as well as the adverse effects of intensive practices on SOC, thus affecting soil health and its capacity to retain water and nutrients[230]. Thus, labeling them as "doing significant harm" might be an interesting incentive to make them improve their production methods and their soil management practices to comply with the DNSH criteria and be eligible for sustainable investments.

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[223] UN, The Paris agreement, *Op. Cit.* Article 1.
[224]Commission Delegated Regulation (EU) 2021/2139, *Op. Cit.*
[225] *Ibid.* Appendix A, I.
[226]Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Article 17 (1), (a).
[227] PFEIFFER D.A., *Eating Fossil Fuels: Oil, Food and the Coming Crisis in Agriculture*, New Society Publishers, Gabiola Island, Canada, 144 p., 2006.
[228] Commission Delegated Regulation (EU) 2021/2139, *Op. Cit.*Appendix A, II. See "solid mass-related" hazards.
[229] CRIPPPA, M., SOLAZZO E., "Food systems are responsible for a third of global anthropogenic GHG emissions »,. Food 2, 198–209, 2021. https://www.nature.com/articles/s43016-021-00225-9
[230] Unlike OF or conservation agriculture, that could therefore be favored to comply with DNSH requirements. See for e.g. GATTINGER Andreas, MULLER Adrian, HAENI Matthias *et al.*, « Enhanced top soil carbon stocks under organic farming », *Proceedings of the National Academy of Sciences*, 109, Proceedings of the National Academy of Sciences, 2012.

97. The same goes for activities affecting the good status or the good ecological potential of bodies of water[231] as well as activities increasing the emissions of pollutants into air, water, or land are also identified [232]. This criterion seems to be precisely aimed at tackling agricultural activities contributing to (via the provision of supplies) or implementing unsustainable soil management practices since they are at the center of this degradation even though they are not the only ones responsible. Indeed, intensive practices rely on considerable pesticide and fertilizer usage, having adverse effects on water bodies, biodiversity, and increasing pollutants into the air and the land[233] [234].

98. Finally, without being exhaustive, the EU Taxonomy also targets activities being "significantly detrimental to the good condition and resilience of ecosystems" as well as those "detrimental to the conservation status of habitats and species"[235]. Activities affecting agricultural soil health cannot possibly be ignored here. As stated before, it is widely recognized that intensive agricultural activities affect ecosystems (including soils) negatively[236], even within the highest national judicial bodies[237] and of course within European institutions[238].

99. Certainly, the whole agrifood value chain is responsible for causing "indirect land-use changes at the expense of biodiversity-rich ecosystems which result in highly degraded terrestrial and aquatic ecosystems"[239], as well as further deteriorating biodiversity and soils via intensive practices[240]. Hence, activities along the agrifood value chain that do not comply with the DNSH criteria can already be identified, and should be, to promote more sustainable production methods all along the agricultural goods production cycle in order to qualify as "sustainable activities".

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[231] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Article 17 (1), (c).)

[232]*Ibid.* Article 17 (1), (e). Regulation (EU) 2020/852 (The EU Taxonomy)

[233] For pesticides see here this extensive research conducted in France : LEENHARDT Sophie et. al. "Impacts des produits phytopharmaceutiques sur la biodiversité et les services écosystémiques », Synthèse du rapport d'ESCo , INRAE - Ifremer (France) ,136 pages, 2022.

[234]For fertilizers see the comprehensive review conducted by KEELER Bonnie L., GOUREVITCH Jesse D., POLASKY Stephen *et al.*, « The social costs of nitrogen », *Sci Adv*, 2, 2016.

[235] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Article 17 (1), (f).

[236] AGOVINO Massimiliano, CASACCIA Mariaconcetta, CIOMMI Mariateresa *et al.*, « Agriculture, climate change and sustainability », *Ecological Indicators*, 105, 2018.

[237] LANGLAIS A. – Commentaire décision de la Cour de Cassation (Civ. 3ème, 10 novembre 1987), Rdr, 1988, p.80 : The French Cour de Cassation considers the following : "Intensive cultivation impoverishes the leased land, as the fertilisers used and the resulting yields destroy the elements in the soil".As cited by DESROUSSEAUX Maylis,"La protection Juridique de la Qualité des Sols", *Op. Cit.* Translated by us.

[238] For e.g. on its first "Biodiversity strategy": Communication from the Commission to the Council and the European Parliament - Biodiversity Action Plans in the areas of Conservation of Natural Resources, Agriculture, Fisheries, and Development and Economic Co-operation, COM/2001/0162 final, 2001.

[239] STUBENRAUCH Jessica, EKARDT Felix, HEYL Katharine *et al.*, « How to legally overcome the distinction between organic and conventional farming - Governance approaches for sustainable farming on 100% of the land »,*Op. Cit*.

The farm stage dominates, representing 61% of food's GHG emissions (81% including deforestation), 79% of acidification, and 95% of eutrophication as explained by POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op. Cit.*

[240] TSIAFOULI, « Intensive agriculture reduces soil biodiversity across Europe, Global Change Biology - Wiley Online Library », 2015.

100. Looking at the EU Taxonomy applicability conditions, many provisions seem to establish that activities related to agricultural soil health fall already under its scope. Only one prerequisite is still missing to unleash its potential to contribute to the proposed Soil Health Law objectives: a delegated act establishing further technical screening criteria for the agri-food sector. Besides, when looking at the underlying motives behind both regulations, as well as their potential for complementarity, their mutual indifference is all the more surprising.

II) Converging objectives and complementarities between the EU Taxonomy and the EU Soil Health Law.

101. Despite the non-confluence of the two regulations, both aim to foster long-term investments and practices that could improve soil health, at least potentially **(A).** In addition, they call to be further linked to compensate for their weaknesses **(B).**

A) Objectives geared towards long-term investments and activities for the environment.

"The environment is still seen by traditional financial players as an infinite source of natural resources. This anthropocentric worldview should change if SFI is successful" [241]

102. As many authors underline, "a key contradiction remains unbridgeable: how to attract financial investors (and economic actors) to greener projects, often characterized by a higher risk profile and lower profitability than polluting projects with no environmental constraints? How can governments, public agencies, and economic agents reduce the risk and increase the return of green assets to encourage investments in green activities?"[242]

103. This is the central purpose of the EU Taxonomy and the EU Soil Health Law, with the ultimate goal to halt nature's and soil health decline in Europe, as regulators are key players in the rise of sustainable investing[243]. Both regulations have analogous motives: supporting economic actors willing to make long-term investments in sustainable agrifood activities, as well as actors implementing long-lasting SSM practices for soil health or contributing to their implementation **(1).** Their efforts are geared towards the recognition of the higher long-term profit, for farmers, companies, society, and the environment, to effectively implement broader soil health considerations in agriculture **(2).**

1. Regulations aiming to rationalize the path dependence towards short-term profits.

104. The EU action plan on sustainable finance identifies the financial system as a key actor in supporting a "greener and more sustainable economy" [244]. This as a provider of funding for

[241] CUNHA Felipe Arias Fogliano De Souza, *et. al*., «Sustainable finance and investment », *Op. Cit.*
[242] DUCHÊNE Sébastien, « Review of Handbook of Green Finance », *Ecological Economics*, 177, 2020. Duchêne provides an interesting review of the following book: SACHS Jeffrey D, *et al.* (dir.), "*Handbook of Green Finance*", *Op. Cit.*
[243] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
[244] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND

economic activities, by impelling sustainable investing. This may come as surprising as some argue that SFI is an "oxymoron", claiming that finance is only driven by private interests and economic gain[245]. Such a claim is not without grounds, as financial stakeholders (such as trustees) may even have the legal obligation, through the fiduciary principle, to "administer (a) trust solely in the interest of the beneficiary" [246]. Therefore, this obligation may imply disregarding ESG considerations if they undermine the potential profitability of the trust[247].

105. Despite this, on the other hand, some authors claim that SFI "is based on values with a non-financial dimension", long term social and environmental considerations, thus breaking "with the notion of *homo-economicus* driven solely by its self-interest"[248]. Therefore, SFI would not be seeing "finance as an end in itself, but rather as a mean to satisfy the needs of society and future generations"[249].

106. Here, remain unaddressed the two central tensions between the financial theory, "focused in short-term returns (…) regardless of the impact in terms of the growing social inequality and environmental destruction"[250], and SFI supposedly transcending the profit maximization logic ingrained in finance to support aforesaid environmental and social goals. As Ahlström and Monciardini suggest[251], a certain pragmatic compromise can be found without being labeled as being "overly optimistic". As the authors state, finance can be perceived as part of the problem and also a solution and their contradictions need to be addressed with normative deterrents and safeguards (such as intended with the DNSH criterion). This is exactly what the EU action plan on sustainable finance aims.

107. Firstly, the plan aims to reorient capital flows towards sustainable investments, comprising private and public funding.[252] Second, to "manage financial risks stem stemming from climate change, resource depletion, environmental degradation, and social issues".[253] Thirdly, "to foster transparency and long-termism in financial and economic activities". These aims are predominantly carried out by the EU Taxonomy. It could then act as an "antidote to

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SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Action Plan: Financing Sustainable Growth. COM/2018/097 final, 8th March 2018. Sustainable finance is defined here as "The process of taking due account of environmental and social considerations in investment decision making, leading to increased investments in longer-term and sustainable activities.", coherently with the exposed in *Supra*, §48.

[245] On this: MERCIER V., « La finance durable : un oxymore », RD banc. fin., n° 4, juillet 2015, 43.

[246] SCOTT Austin W., « The Fiduciary Principle », *California Law Review*, 37, 1949. The author underlines that "Where the trustee has an adverse interest in the transaction, the consent of the beneficiary will not preclude him from holding the trustee liable for a breach of trust if the transaction wat not fair and reasonable."

[247] As underlined by financial stakeholders interviewed by: ALBERT Éric and CHOCRON Véronique, « Le mirage de la « finance verte » », *Le Monde*, 2021. https://www.lemonde.fr/economie/article/2021/10/21/le-mirage-de-la-finance-verte_6099347_3234.html

[248]CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.*, page 61.

[249] *Ibid.*

[250] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*

[251] *Ibid,* The authors explain that this perspective is "grounded on the influential idea that institutional investors have become « universal owners » and have a key role to play in driving the transition towards a more sustainable economic model".

[252] For eg., to vouch for this objective the EU has pledged to make a least 20% of its budget "directly climate relevant". See https://ec.europa.eu/clima/policies/budget_en

[253] *Ibid.*

financialization", financialization being referred to as the prevalence of the "dominant financial logic" with "profit-maximization" as "an end in itself"[254]. This philosophy is fully in line with the ambition endorsed by the EU Soil Strategy, to channel investments toward agricultural producers implementing SSM rather than towards "conventional" producers, the latter being often associated with the choice of greater short-term economic benefits over social and environmental considerations.

108. Indeed, the EU Soil Strategy for 2030 attracts the attention of private finance and EU funding on the need to further finance and reward actors applying SSM practices, to meet its overarching objectives on soil health enhancement and preservation[255]. To do so, it underlines that the "entire value and supply chains and economic sectors depend on healthy soils", even if most of the concerned actors are unaware of their vulnerability regarding the consequences of soil deterioration[256]. Thus, all agrifood stakeholders should broaden their considerations on agricultural soil health, at least to limit financial risks and ensure their durability if environmental considerations are not compelling enough.

109. Additionally, the Commission also points out that awareness is already rising among players in the financial sector, notably through upcoming schemes such as for carbon payments. To capitalize on this growing interest, the Commission is said to further promote "investments in projects that sustainably manage and do not significantly harm soils under the EU Taxonomy Regulation and its delegated acts".[257] If the latter has yet not been accomplished, the Commission's desire to emphasize on the long-term benefits of investing in agricultural activities promoting soil health is already manifest.

110. Hence, if these two regulations achieve their shared transformative ambitions, it could lead to the spread of private endeavors fostering soil health. This could leverage what some describe as the « stakeholder theory ». This theory refers to the growing willingness of financial stakeholders to "overcome the conventional financial logic", making their own the will to step out of profit maximization by awakening their ethical values to finally be "agent(s) of (sustainable) progress"[258]. Thus, it contributes to giving their activities meaning, a great driver for engagement[259]. Consequently, this could allow commitments from SFI participants driven by agricultural soil protection as a moral consideration. Here, broadening considerations on the profits of investing unto soil health might further drag their interest.

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[254] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
[255] COM/2021/699 final, *Op. Cit.* See from point 6.
[256] *Ibid.* Point 6.
[257] *Ibid,* See « actions » under 6.1.
[258] TCHOURIAN I. « la reconnaissance juridique de l'« entreprise citoyenne » ou la conséquence de la perception nouvelle de l'entreprise en tant que construction collective », Université de Montréal, Papyrus, 2008. https://papyrus.bib.umontreal.ca/xmlui/handle/1866/2561. Translated by us.
[259] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* From page 83.

2. A shared aim to rethink "profits" by underlying the benefits of investing in soil health.

111. To promote the profits associated with soil health enhancement, the EU Soil Strategy asserted that "investing in prevention and restoration of soil degradation makes sound economic sense"[260]. As the EU Biodiversity strategy previously underlined, "natural capital investments, including restoration of carbon-rich habitats and climate-friendly agriculture" offer "high economic multipliers"[261]. Of course, those profits add up to the reduction of costs related to ecosystem degradation, as for soils[262], knowing that "the cost of action is much smaller than the cost of inaction"[263] . Those growing expenditures and losses in earnings are at the expense of society as well as farmers, and not the perpetrators of such degradations (such as for example agrochemical industries). This could even justify, in the absence of appropriate measures to ensure their proportional contribution, a complaint against the concerned MS's, especially France, for a breach of equality regarding public financial burdens[264].

112. Indeed, investing in ecosystem conservation or restoration is highly profitable overall, and if we stay in economic considerations, in some cases it can have an overall benefit/cost ratio of at least 100:1.[265] For financial stakeholders, engaging in sustainable investments is also profitable as there is a profusion of evidence on the performance of sustainable portfolios[266].

113. Returning to agriculture, "croplands and grasslands in the EU provide EUR 76 billion worth of ecosystem services per year (…) with less than one third coming from crop production and the rest from other ecosystem services"[267], an interesting insight to put agricultural productivism into perspective. As highlighted by the EES Committee, "soils are not a mere platform for settlements and activity" as healthy soils provide several vital ecosystem

[260] COM/2021/699 final, *Op. Cit.*Also : "The impacts on soil health create cascading effects with the potential to disrupt entire industries."
[261] COM/2020/380, *Op. Cit.*
[262] The Commission also underlines that "soil degradation is costing the EU several tens of billion euros per year" and this loss is estimated at EUR 50 billion in VEEMAN et al. "Caring for soil is caring for life. Ensure 75% of soils are healthy by 2030 for food, people, nature and climate : report of the Mission board for Soil health and food", *Op. Cit.*
[263] As also underlined by NKONYA, E., et al. Economics of Land Degradation and Improvement - A Global Assessment for Sustainable Development, 2016. https://doi.org/10.1007/978-3-319-19168-3
[264] Knowing that the principle of equality regarding public burdens has a constitutional value in France (article 13 Déclaration des Droits de l'Homme et du Citoyen de 1789). Additionally, it is required that "any act whatsoever committed by a human, which causes damage to another obliges him to make reparation for it (Article 1240 of the French Civil code in the formulation it tout on the ratification of its constitutional value by the Decision nº82-144 DC of the 22th October 1982). Therefore, to preserve equality, and according to the principle of responsibility, any form of immunity (regarding the damages caused) is prohibited and should be meet with resolute measures to ensure that those responsible bear the financial burden of the damages they cause (Déc. n° 88-248 DC du 17 janv. 1989). If the State fails to do that, it could be held responsible for such a breach of equality in a compensatory action. Translated by us.
[265] BALMFORD Andrew, BRUNER Aaron, COOPER Philip *et al.*, « Economic Reasons for Conserving Wild Nature », *Science*, 297, American Association for the Advancement of Science, 2002.
[266] As underlined by AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
As well as CUNHA Felipe Arias Fogliano De Souza, *et. al*., «Sustainable finance and investment », *Op. Cit.*
[267] EUROSTAT, "Accounting for ecosystems and their services in the EU (INCA)", 2021. https://ec.europa.eu/eurostat/web/products-statistical-reports/-/ks-ft-20-002

services[268]. The firsts that come to mind are the provisioning services such as good food, water, fuel, and medical products[269]. But as the soil monitoring proposition underlines, areas with SSM and therefore healthier soils are also key to "increase resilience to adverse events (floods, landslides, droughts) and the adaptation to climate change" [270]. More, they also improve health, agrotourism, carbon capture, well-being, etc.[271] Consequentially, "the costs of SSM are in many cases outweighed by the economic benefits, and in all cases by the environmental benefits"[272], as well as providing increased employment opportunities in the soil remediation sector[273].

114. Still, the higher final profitability of investments into SSM is not always followed with economic returns for farmers that are significant enough to stimulate change[274], knowing that "the driving force in smaller farms is profitability rather than environmental or social advantages"[275]. Thus, addressing the yield gap between sustainable and conventional farming might also have to be considered[276]. But if the exposed initiatives succeed, they could help valorize SSM environmental and social profits and be correlated with increased investments. This since providers will be fully aware of the multiple interests associated with investments in agricultural soil health. It is also worth noting that this "logic of valuation" of nature should only be used as "a pragmatic short-term tool rather than as an end in itself "[277] as it can have a limited effect when stimulating the moral commitment towards soil preservation[278]. However, increasing sustainable investments in agricultural soil health could compensate for some of the

[268] OPINION of the European Economic and Social Committee on the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on EU Soil Strategy for 2030 Arnaud Shwartz (Rapporteur) signed by Christa SCHWENG (President of the EESC), adopted in plenary the 23/03/2022. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021AE5627

[269] See here the Novasoil case study on the opportunity to redesign farming systems under the scope of sustainability with the introduction of perennial medicinal and aromatic crops, having a high added value in final products, to support local sustainable farmers with low income. PEÑALOZA Félix González, « A model for multifunctional and sustainable local development of marginal areas IT - novasoil », published the 24 november 2022. https://novasoil-project.eu/index.php/work-packages/

[270] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*

[271] For a detailed exposition see: FAO ITPS, "*State of knowledge of soil biodiversity - Status, challenges and potentialities"*, FAO, 2020.

[272] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*
And see for e.g., KIK et al., The economic value of sustainable soil management in arable farming systems – A conceptual framework, 2021. DOI: https://doi.org/10.1016/j.eja.2021.126334.

[273] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* This sector having the potential to "increase with 25000 jobs, with a boost of 1.85 billion in returns, according to the proposal.

[274] Even though, as the Commission underlines, this statement is sometimes proven wrong by some SSM practitioners. See: Climate-ADAPT Case study "Agroforestry: agriculture of the future? The case of Montpellier" https://climate-adapt.eea.europa.eu/metadata/case-studies/agroforestry-agriculture-of-the future-the-case-of-Montpellier, here agroforestry practices where accompanied with an increase of 40% in productivity while improving soils, water quality and biodiversity.

[275] COM/2021/699 final, *Op. Cit.* As underlined in the Synopsis report of the open public consultation for the EU soil Strategy, Commission consults on new EU Soil Strategy. https://ec.europa.eu/environment/news/commission-consults- new-eu-soil-strategy-2021-02-02_en

[276] As suggested by STUBENRAUCH Jessica, EKARDT Felix, HEYL Katharine *et al.*, « How to legally overcome the distinction between organic and conventional farming - Governance approaches for sustainable farming on 100% of the land »,*Op. Cit*.

[277] GÓMEZ-BAGGETHUN Erik, DE GROOT Rudolf, LOMAS Pedro L. *et al.*, « The history of ecosystem services in economic theory and practice », *Ecological Economics*, 69, 2010.

[278] See *Supra*, from §292.

current Soil Health Law proposal text deficiencies, such as the lack of sufficient support for SSM practices.

B) An interest for a synergy to fill their mutual shortcomings.

115. The fact that the Soil Health Law proposition doesn't provide constraining SSM obligations for agriculture could have led to thinking that further incentive legal instruments, such as the EU Taxonomy, would have been interlinked with it to make up for this shortcoming[279]**(1).** On the other hand, the EU Taxonomy still lacks from sustainability criteria for activities from the agrifood sector. These criteria could be established using provisions from the proposed soil monitoring directive, as well as using afferent agricultural regulations to fill some shortcomings of the EU Taxonomy **(2).**

1. Filling part of the EU Soil Health Law shortcomings via sustainable financing.

116. As beforementioned, the EU Soil Health Law initiative has been reduced to a Soil Monitoring directive proposition. The choice of a directive, which is binding only as to the result to be achieved leaving MS's "the choice of form and methods" to attain said result[280], was made to give enough flexibility to MS's to comply with the established objectives. It is important to highlight that the goal of the Soil Monitoring directive, which is to ultimately "achieve healthy soils by 2050", is not mandatory. Additionally, no intermediate targets are set to attain this objective[281]. This freedom is justified by the need to "give MS's time (…) to first assess the conditions of soils and then decide on the regeneration measures needed", knowing that soil health varies depending on climate, texture, topography, etc.

117. Still, if monitoring and increasing knowledge about soils is vital, it could have been expected that the Soil Health Law would provide a baseline of adjustable SSM requirements, especially in the light of the exposed arraignments from the Commission on the causes of soil degradation. In contrast to this observation, the directive's proposition explicitly declares that "the proposal does not require Member States to create any new programs of measures or soil health plans" and "the proposal does not contain measures affecting land use" [282]. This choice is made despite having asserted that "this approach may entail an increased risk not to reach the objective of healthy soils by 2050". At most, the Commission will "carry out an analysis on the need to set more specific requirements to restore/regenerate unhealthy soils by 2050, in the context of an early evaluation of the directive scheduled 6 years after its entry into force" [283].

118. Here, we might argue that while the need for urgent action does not have to lead to precipitation, there is already a profusion of reliable evidence about the causes and potential

[279] Even though the financial needs to comply with soil monitoring requirements are not comparable to what they would be if they were accompanied by supplementary SSM requirements. This might also be one of the reasons on why their synergy remains untapped.
[280] As established in article 288 of the TFUE. MS's will have a maximum of 2 years to adopt the measures needed to transpose the directive. Then, they are required to report to the Commission on a limited number of issues every 5 years.
[281] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*
[282] *Ibid.* See page 13.
[283] *Ibid.* Page 13.

solutions (such as implementing SSM practices) to remediate or mitigate soil health[284]. What is more, this lack of constraining obligations on SSM modifies the role of the EU Taxonomy. Knowing that the primary barrier to the establishment of mandatory SSM practices appears to be the associated costs[285], incentive tools will be all the more important to achieve the broad implementation of non-mandatory SSM practices.

119. Certainly, the proposition states that "the highest costs relate to the implementation of measures for SSM and regeneration" and that "funding is vital to enable a transition to healthy soils". However, the proposition only provides a "Guidance document on EU funding opportunities for healthy soils" thus far[286], which, as the title suggests, exclusively pertains to public funding, financed by taxpayers. Apart from missing out on the opportunity to frame and promote private financial support, the Commission might be further discrediting its proposal and the willingness of public entities to endorse SSM. This is particularly relevant as private companies, particularly those in the agri-food sector, bear a share of the responsibility for perpetuating intensive practices damaging agricultural soils. In line with the polluter's pay principle, they should be called upon to contribute to the costs associated with soil preservation and improvement[287].

120. On the other hand, the EU Taxonomy could be identified as a considerable driver for SSM implementation by enabling private investments towards sustainable agricultural activities endorsing or practicing SSM. In contrast to the above logic, putting the soil monitoring directive in synergy with the EU Taxonomy, to offer added financial support for SSM, could follow a "protector-receiver" logic[288], just as for payments for ecosystem services. Indeed, if "the exploitation of a natural resource" (such as soils) is made "financially less attractive than its safeguarding" via consequent incentives[289], their synergy would be a great ally for a widespread implementation of SSM and would sustain the interest in such practices.

121. Nonetheless, this collaboration has not materialized as of now, given that the aspirations of the soil strategy have not been fully carried out, which results in an incomplete regulatory framework for agricultural soils. In fact, the EU Soil Strategy already identified the potential to support the Soil Health Law goals with private sustainable investments under the EU Taxonomy[290]. To effectively harness this opportunity, the EU Taxonomy could delve more

[284] As asserted by the Commission in the Annex III of the proposition.
[285] See *Supra*, § 18.
[286] COMMISSION STAFF WORKING DOCUMENT, Guidance on EU funding opportunities for healthy soils, Accompanying the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law). COM (2023)416 final. SWD(2023)423 final, Brussels 5/7/2023.
[287] As enshrined in article 191(2) of the TFEU.
[288] An expression from : SUTTERLIN Olivier , « JurisClasseur Environnement et développement durable*, fasc. 2420,* Principe pollueur-payeur"*,* Paris, LexisNexis, 2015.
[289] As explained in: ICHER Liliane, "Public Spending in the Environmental Field: The Case of Soil Protection", from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84.
[290] See *Supra*, § 109.

meticulously into agricultural soil considerations by incorporating the SSM principles outlined in the EU Soil Health Law proposition and endorsing them within its delegated acts.

2. Using the Soil Health law and agricultural policies as safeguards addressing the Taxonomy limitations.

122. Knowing that negotiations for the CAP 2023-27 reform concluded almost 1 year ago, the reasons for the delay of the delegated acts establishing the sustainability criteria for agriculture might come from a lack of consensus on the framing of this complex sector. Apart from the obvious underlying economic interests[291], an important hurdle was the absence of a shared understanding of what constitutes an SSM practice, as well as a common definition of "healthy soil" to evaluate those SSM's. Defining them in a harmonized way is necessary to establish which activities deserve the Taxonomy endorsement by being qualified as "sustainable".

123. As stated by Köninger et. al., the criteria regarding SSM and soil biodiversity (to ensure that identified activities DNSH) have to be precisely addressed before further developing agricultural considerations in the EU Taxonomy[292], especially to avoid over-indulgent requirements for the award of the "sustainable label" in agricultural activities[293]. Here is where the Soil Monitoring directive intervenes, as it provides "a common definition of what constitutes a healthy soil" and subsequently it will "lay down SSM principles" to manage agricultural soils[294]. Consequentially, article 9 of the proposition proposes a set of cumulative conditions to be fulfilled to consider soil as being "healthy". Then, article 10 compels MS's to define SSM as well as unsustainable practices, a useful measure to identify activities that "do significant harm" to the Taxonomy objectives. However, the flexibility given to MS's to define SSM is contained by the establishment of SSM principles, under its Annex III, which should be followed to attain a healthy state in agricultural soils.

124. Here, fundamental practices stemming from regenerative agriculture can be found[295]. To cite some, maintaining vegetative soil cover, minimizing physical disturbance (such as tillage and compaction), having adequate landscape features, crop rotation and diversity, avoiding

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[291] As encountered for the Nature restoration Law and as expressed regarding the Soil Monitoring directive proposition: "Over 80% of companies/business organization and business associations, which were represented by farmers, agrochemical and mining companies, do not see the need for specific soil regulation at EU level." As stated in the Soil Monitoring Draft using data from the "Synopsis report of the open public consultation- Commission consults on new EU Soil Strategy" https://ec.europa.eu/environment/news/commission-consults-new-eu-soil-strategy-2021-02-02_

[292] KÖNINGER J., PANAGOS P., JONES A. *et al.*, « In defense of soil biodiversity », *Biological Conservation*, 268, 2022.

[293] As underlined by a coalition of 25 environmental NGO's: Letter to Commission on Taxonomy Regulation from 25 civil society organizations, Brussels, About the "Forthcoming Taxonomy Delegated Act on agriculture". , 8 March 2023, https://wwfeu.awsassets.panda.org/downloads/joint_letter_to_commission_on_forthcoming_taxonomy_delegated_act_on_agriculture_8_mar.pdf

[294] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* See page 8.

[295] For a global review see: KHANGURA Ravjit, FERRIS David, WAGG Cameron *et al.*, « Regenerative Agriculture—A Literature Review on the Practices and Mechanisms Used to Improve Soil Health », *Op. Cit*. Regarding its application in Europe see also the EASAC policy report 44: "Regenerative agriculture in Europe: A critical analysis of contributions to EU Farm to Fork and Biodiversity Strategies", April 2022, ISBN: 978-3-8047-4372-4. www.easac.eu

inputs harming health, etc. And if further research on soils suggests more relevant SSM, the Commission will be empowered to amend those SSM principles via delegated acts, in accordance with article 20 of the proposition (unless the directive proposition is amended).

125. Compliance with these principles could provide a fairly comprehensive framework for ensuring the sustainability of agricultural activities. They could already form the cornerstone of the Taxonomy criteria to qualify which activities significantly contribute to improving or maintaining soil health. It could be also added to further technical screening criteria based on the soil health indicators of the directive proposition. This is also true regarding the establishment of DNSH criteria. Taking the example of pesticide and fertilizer usage, a huge factor in soil depletion, SSM provisions from the Soil directive could be referred to for their use. Indeed, such SSM provisions on harmful inputs are proposed to be put in tandem with regulations on fertilizer[296] and pesticide use[297], that establish requirements for their "reasonable" use, and already provide valuable but imperfect[298] technical criteria on sustainable use.

126. Furthermore, regulations protecting soil health and providing support to agricultural activities, especially those more vulnerable, could constitute great safeguards to ensure that SSM practices are not exclusively oriented towards the ones having the best financial potential. Indeed, it's important to acknowledge that SFI regulations are not ideal as they are geared towards investors needs and demands, such as in carbon capture to market valuable carbon offset certificates. Thus they affect farmers' freedom, as they will be pushed to conform to investors' demands.

127. This could also be detrimental to equity among farmers and "create spatial and geographical inequalities"[299], since they don't all have the same potential to be recipients of private funding, as soils provide variable ecosystem services depending on multiple factors such as the area, practices, granulometry, etc. More, this could establish a differentiated protection on soils, by preferably targeting those with the biggest financial potential (as in carbon stock capacity) neglecting other "ordinary" soils that deserve just as much to be protected by SSM practices[300]. In this context, it's worth noting that social justice, a pivotal element in agriculture, is the conspicuous absentee of the EU Taxonomy. Requirements on this matter are merely for

[296]Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit. "*The activity minimizes the use of fertilisers and does not use manure. The activity complies with Regulation (EU) 2019/1009 of the European Parliament and of the Council or national rules on fertilisers or soil improvers for agricultural use."

[297] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit. "*The use of pesticides is reduced and alternative approaches or techniques, which may include non-chemical alternatives to pesticides, are favoured, in accordance with Directive 2009/128/EC of the European Parliament and of the Council, with exception of occasions where the use of pesticides is needed to control outbreaks of pests and of diseases."

[298] For e.g., authors have already underlined the deficiencies of the nitrates directive to address environmental challenges on nutrient management. GADBIN Daniel, « La directive nitrates, fer de lance émoussé du Pacte vert ? », *Droit rural*, 2022.

[299] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques ». M. Torre-Schaub (sous la dir.). *Changement Climatique et Normes, Regards Interdisciplinaires*, Mare et Martin, pp. 181-196, 2020. ⟨halshs-03099850⟩

[300] BENEZECH-SARRON Patricia, "La protection contractuelle des sols : Contribution à l'étude des contrats affectant la propriété foncière à la protection de l'environnement », *Op. Cit.* Page 63.

activities to act "in compliance with the minimum safeguards laid down in article 18"[301], a shortcoming bound to be improved[302].

128. To meet with these challenges the emerging Soil Health Law and regulations as the CAP could adapt their framing to channel their funding into farmers with the least access to private finance. This role is already acknowledged as those regulations have been entrusted "to safeguard income in rural communities and families (…) with an equitable distribution of costs and benefits among (agrifood) stakeholders"[303].

129. To conclude, as our evidence suggests, the confluence between the EU Taxonomy and EU Soil Health Laws seems compelling in the light of their regime, their inherent philosophies, as well as their uncomplete provisions. Despite this, the bridge between the two regulations has yet to be built.

130. The draft of the Soil Monitoring proposition mentions a list of plans, measures, and targets under adjacent regulations from which MS's shall "identify synergies" with the directive. Here the Taxonomy and SFI related regulations are surprisingly left out[304]. Still, the first stages of this potential synergy seem to have been sketched out by adjacent regulations, as well as by private initiatives.

Chapter 2: External normative sources and indicators underlying the potential of this synergy.

131. As of now, adjacent regulations as well as a cluster of evidence from practitioners already underline the need to further frame sustainable finance in agriculture to promote agricultural soil health. The expansion of extra-financial reporting and due diligence rules for agrifood stakeholders and funders seems to call for a connection between the EU Taxonomy and the Soil Health Law, to provide criteria for disclosures and investing decisions in agriculture **(I).** Furthermore, surrounding regulations are already laying the foundations for this potential

[301]Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Referring to the limited "procedures implemented by an undertaking that is carrying out an economic activity to ensure the alignment with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, including the principles and rights set out in the eight fundamental conventions identified in the Declaration of the International Labour Organisation on Fundamental Principles and Rights at Work and the International Bill of Human Rights."

[302] See : GOTTLIEB Cleary, "A Social and Governance Taxonomy for Europe: Extending the EU ESG Framework to Socially Sustainable Activities and Sustainable Governance." Alert Memorandum, March 15, 2022. https://www.clearygottlieb.com/-/media/files/alert-memos-2022/a-social-taxonomy-for-europe-extending-the-eu-esg-framework-to-socially-sustainable-activities-and-companies-corporate-governance.pdf

[303]As noted by the OPINION of the European Economic and Social Committee on the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on EU Soil Strategy for 2030 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021AE5627 Arnaud Shwartz (Rapporteur) signed by Christa SCHWENG (President of the EESC), adopted in plenary, 23/03/2022.

[304] See the Annex 4 of the Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* For e.g., the measures adopted implementing the Soil Monitoring directive shall be put into synergy with the national energy and climate plan established in accordance with Regulation (EU) 2018/1999, conservation measures for Natura 2000 sites, etc.

synergy, in an incomplete manner, adding to several indicators pushing for a link between those two regulations **(II).**

I) Extra-financial reporting and due diligence requirements for the agri-food sector calling for Taxonomy criteria on agricultural soil health.

132. There are two major themes regarding Corporate Social Responsibility (CSR). First, extra-financial reporting rules ensure the communication of the relevant information by economic activities, such as how their activity is affected by ESG risk, to evaluate their "sustainability". Second, those information's are valorized in financial markets, notably allowing informed sustainable investments or avoiding financing companies that take ESG risks poorly into account. It's worth noting that the financial services sector also has to comply with transparency requirements regarding the integration of ESG risks into their investment decisions and policies. Such rules address the crucial need for transparency in the financial sector and corporate governance, as stressed by the EU action plan on sustainable finance, to build trust regarding allegations on ESG considerations, and to apply due diligence rules. It's also worth noting that as provided in Article 8 of the EU Taxonomy regarding extra-financial reporting rules, concerned undertakings shall inform to what extent their activities "are associated with economic activities that qualify as environmentally sustainable".

133. Hence, extra-financial reporting in agriculture constitutes a stepping stone for sustainable investing in the agrifood sector **(A).** Then, undertakings having to comply with extra-financial disclosure requirements shall also report on adopted due diligence processes as well as their outcomes. Thus, due diligence rules further contribute to pressure agri-food supply chains to improve their considerations on agricultural soil health, as well as disciplining investors on their financing allocations. This in order to avoid sanctions and attract sustainable investments or clients interested in sustainable investing**(B).**

A) Extra financial reporting in the agri-food sector: an entry point for investments supporting soil health.

134. Article 1 of the EU Taxonomy, precising its scope of application, explicitly underlines that this regulation is particularly aimed toward undertakings subject to non-financial reporting under the new Corporate Sustainability Reporting Directive (CSRD)[305]. Compliance with the CSRD rules, now applicable to all "big" EU companies[306], is therefore increasingly important since the disclosed information will be the basis to evaluate the company's alignment with the sustainability criteria. Because if the sanctions regarding non-compliance to the extra-financial

[305] Directive (EU) 2022/2464 (CSRD) *Op. Cit.*

[306] Directive (EU) 2022/2464 (CSRD) *Op. Cit.* The NFRD directive rules, applying to entities such as banks and insurance companies, have been extended by the CSRD to big companies. Now are qualified as "big companies" all publicly traded companies from the EU (except from publicly traded "micro" companies) and all non-European companies having an annual net sale superior to 150 million euros in the EU and having at least a branch in the EU exceeding certain thresholds. Estimates establish that around 50 000 companies fall now under the scope of the CSRD, many of which are from the agrifood sector. Their reports have also to be evaluated by external certifications. For a summary see: PARTSCH, P., « Chroniques. Droit bancaire et financier européen », J.D.E., 2023/2, p. 90-103. - Strada lex Europe, 2023.

reporting rules are sometimes not a sufficient deterrent, not having access to sustainable investments because of insufficient disclosures might be more dissuasive as it affects the company's profitability. Further, following the "comply-or explain principle", all non-reported components shall be properly justified[307].

135. The reporting standards for companies are being précised unto delegated regulations as the European sustainability reporting standards[308]. These standards require reporting on how the company addresses environmental challenges to foster sustainable corporate governance[309]. Impacts on agricultural soil health are already explicitly addressed here, as they will have to be disclosed under biodiversity or climate-related issues. For example, if disclosing a transition plan, undertakings may explain how they contribute to halting and reversing land degradation and promoting sustainable agriculture[310]. Furthermore, they could also be required to describe whether the company has adopted policies related to sustainable land/agriculture practices, even if there are still no harmonized standards to identify the substance of sustainable agriculture practices[311]. Therefore investors interested in agricultural soil health have already some instruments at their disposal to identify sustainable activities fostering soil health, and those reporting standards could be further improved by using SSM standards from the Soil Monitoring Directive. Moreover, it's worth noting that establishing the criteria for environmentally sustainable economic activities in agriculture "may (also) encourage operators not covered by this regulation to publish and disclose information regarding the sustainability of their activities"[312].

136. However, two main concerns emerge regarding the CSRD rules. First, complying with those extra-financial disclosure requirements is sometimes very challenging and could pose equity issues among activities of the agrifood sector. This concern is raised since the variety of companies subject to the reporting requirements, or the ones that want to engage voluntarily to attract investors, obviously have disparate resources. This while knowing that CSRD obligations require them to allocate substantial sums to assess and publish the impacts of their business, as well as to promote the policies implemented to manage them. If we take for example the delegated acts specifying how competent authorities and market participants shall comply with the obligations laid down in the CSRD, the list of specific requirements is sometimes almost 300 pages long[313]… Consequently, activities having restricted means to allocate to non-financial reporting will be diminished in their potential to be recipients of sustainable financing and in their capacity to foster soil health even if they contribute to ESG

[307] Directive (EU) 2022/2464 (CSRD) *Op. Cit.*For e.g. see article 4.
[308]See the drafts of the delegated acts published here: https://finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/implementing-and-delegated-acts/corporate-sustainability-reporting-directive_en The ESRS are based on recommendations from the EFRAG and adopted by the Commission.
[309] PACCES Alessio M., « Will the EU Taxonomy Regulation Foster Sustainable Corporate Governance? », *Sustainability*, 13, Multidisciplinary Digital Publishing Institute, 2021.
[310]ESRS *Op. Cit.* Under disclosure requirement e4-1 (See precisely requirements Ar.3, d), when explaining how the company adjusts its business model to improve and ultimately achieve alignment with biodiversity and ecosystem goals.
[311] *Ibid.* Under the requirements E4-2, ((24), (b).
[312] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* See (22).
[313] See for e.g. the Annex 1 on the draft of the delegated regulations supplementing the CSRD. See *Supra*, §135.

objectives. Second, this complexity is generally correlated with low levels of reporting as well as a questionable overall quality of the provided disclosures. This observation is especially true for the agrifood sector, according to the assessments of the previous version of the CSRD (Directive 2014/95/EU), and especially for small and medium-sized companies[314].

137. Working in tandem with the CSRD, asset management companies, and financial counselors (comprising insurance companies) shall also comply with similar reporting rules as established by the regulation on Sustainability-related disclosures in the financial services sectors (SFDR)[315]. Those financial actors shall now publicly disclose on their policy regarding the implementation of ESG risks on their investing decisions, as well as giving detailed precontractual information on the sustainability of the financial products and services offered to "final investors". It's worth underlining that the sustainability of those products is established with the Taxonomy benchmark and is based on the non-financial disclosures provided by companies. And again, this regulation could also "promote the dominance of major investment firms in the market for financial productions labeled as sustainable" as the costs associated with the disclosures and the evaluation of ESG risk can be considerable for small entities [316].

138. Furthermore, financial services are required to advocate for the ESG characteristics or the contentious sustainability of the investments made if they are not "Taxonomy-aligned". Additionally, standards on the details of content and presentation of the pre-contractual information to provide about the DNSH principle already encompass agricultural soil health issues[317]. These already operational standards might prove to be a great tool to foster sustainable investments in agricultural soil health. If we take an example under the DNSH-related standards, investments in companies without sustainable land/agriculture practices shall be disclosed by financial market participants[318]. But again, there is still no common definition regarding what sustainable agriculture practices are.

139. Notwithstanding, the implementation of such requirements has also been very challenging, as well as its evaluation[319]. Firstly because the supplementary indications on how to comply have only been provided recently (on the 6th of April 2022), and also because these rules are

[314] ANGUIANO-SANTOS Carlos et SALAZAR-ORDÓÑEZ Melania, « Sustainability reporting as a tool for fostering sustainable growth in the agri-food sector », *Journal of Environmental Planning and Management*, 0, Routledge, 2022.
[315] Regulation (EU) 2019/2088 (SFDR), *Op. Cit.*
[316] SOTIROPOULOU A., "Sustainable investments in European Union Law", *Op. Cit.*
[317] As: COM, Corrigendum to Commission Delegated Regulation (EU) 2022/1288 of 6 April 2022 supplementing Regulation (EU) 2019/2088 of the European Parliament and of the Council with regard to regulatory technical standards specifying the details of the content and presentation of the information in relation to the principle of 'do no significant harm', specifying the content, methodologies and presentation of information in relation to sustainability indicators and adverse sustainability impacts, and the content and presentation of the information in relation to the promotion of environmental or social characteristics and sustainable investment objectives in pre-contractual documents, on websites and in periodic reports (Official Journal of the European Union L 196 of 25 July 2022), OJ L, nº 332, 27 décembre 2022, [Accessed the 8th of August 2023].
[318] They shall be disclosed showing the share of investments in investee companies without sustainable land/agriculture practices or policies. See the Corrigendum to Commission Delegated Regulation (EU) 2022/1288, table 2, (11).
[319] As explained by PARTSCH, P., « Chroniques. Droit bancaire et financier européen », *Op. Cit.*

only applicable from the 1st of January 2023. But at last, this regulation is finally operational. If the EU Taxonomy incorporates the proposed Soil Monitoring directive provisions to establish criteria regarding agricultural soil health risks, the SFRD could now help willing stakeholders that are sensitive to agricultural soil health to make enlightened investments in activities that protect and enhance them[320]. Or at least they could knowingly decide to support or not activities that are identified as doing "significant harm", since financial services will be obliged to inform on the sustainability of companies (thus of the investments unto them) related to the agri-food sector and having an impact on agricultural soil health.

140. On the other hand, the CSRD and the SFDR also provide that companies and financial market participants under their scope shall report on the implementation of their due diligence processes on sustainability[321]. This includes publishing potential adverse impacts connected to their operations and value chains, as well as the actions taken to address those issues. This added transparency allows to check on the compliance of agrifood companies with due diligence rules, and thus their considerations on agricultural soil deterioration along their value chain.

B) Mobilizing due diligence rules in agrifood supply chains for agricultural soil health investments.

141. Despite soil health decline, "salvage accumulation" from soils still blooms in the agri-food sector and their financial providers. Dominant agri-food firms, with the agrochemical, biotech, and machinery sectors, show consistent and even record-high profits despite their impacts on the environment, food security, health, etc[322]. Salvage accumulation, as conceptualized by Anna Tsing[323], is defined as the process by which companies use "free" raw materials, produced by nature's complex production processes, and make a profit by appropriating these resources, as well as the work of farmers, through their value chains, to transform and sell them as capitalistic wealth. Taking the example of agricultural soils, they do so without contributing to this natural process or valuing properly the long and "sophisticated engineering of plants and animals" it took to create such natural wealth[324], and, we might add, without taking responsibility for the social and environmental costs of their practices. As A. Tsing underlines, this is especially true in agribusiness, which depends completely on soil health for provisioning ecosystem services. The issues call for corresponding due diligence obligations on investments and activities along

[320] See *Supra*, § 110.

[321] Directive (EU) 2022/2464 (CSRD) *Op. Cit.* See its article 19a, (2), (f). And Regulation (EU) 2019/2088 article 4, (1), (a).

[322]See the ETC Group report: "Food Barons 2022: Crisis Profiteering, Digitalization and Shifting Power", September 2022. https://www.etcgroup.org/content/food-barons-2022 ; On the cereal sector: HARVEY Fiona et CORRESPONDENT Fiona Harvey Environment, « Record profits for grain firms amid food crisis prompt calls for windfall tax » [online], *The Guardian*, 23 août 2022, [Accessed the 8th of August 2023]. Also, all these sectors being closely tied with the very profitable oil and gas sector which is largely associated with negative ESG impacts; See here the comprehensive review from VERBRUGGEN Aviel,"The geopolitics of trillion US$ oil & gas rents", International Journal of Sustainable Energy Planning and Management, Vol 36, 2022, https://doi.org/10.54337/ijsepm.7395

[323]TSING Anna, "The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins," Economics Books, Princeton University Press, edition 1, number 10581, 2015.

[324] TSING Anna Lowenhaupt, « Salvage Accumulation, or the Structural Effects of Capitalist Generativity », sur *Society for Cultural Anthropology*, publié le 30 mars 2015, [Accessed the 8th of August 2023].

the agrifood value chain to better consider soil health, as well as to ensure "global justice"[325] by communicating "impacts up the supply chain" so that farmers at the bottom of the chain don't cope alone with the costs and risks of soil deterioration [326].

142. Due diligence rules refer to mechanisms, mostly based on civil liability, forcing companies (including financial undertakings) to "internalize negative externalities within their group and supply chains" as they could be liable for causing "damages resulting from adverse environmental or human rights impacts"[327]. Consequently, activities hampering agricultural soil health and adjacent concerns fall under their scope, as well as for financial market participants that support aforesaid activities. It's worth noting that due diligence rules will soon be framed by the directive on Corporate Sustainability Due Diligence (CSDD), with agrifood activities and financial supporters falling under its scope[328]. This directive is inspired by the pioneering French Law on the Duty of Vigilance which sets rules for the liability of large companies on the social and environmental impacts of their activities and value chains and already provides feedback on its implementation in the agri-food sector as it was adopted in 2017[329].

143. Under this law, French established companies (comprising their indirect branches) with more than 5000 employees and other companies with at least 10 000 employees shall establish and implement a "vigilance plan". This plan must include "reasonable vigilance measures to identify risks and prevent serious harm to human rights and fundamental freedoms, the health and safety of individuals and the environment" [330]. Consequently, risks on potential damages to soils, agroecosystems, and agricultural workers must be identified and published, so that they can be prevented and notified if they occur, but provided that they are "serious", which is a significant limitation.

144. As underlined by Schilling A. and Gustafsson M., when looking at the "specific ways companies comply and related accountability dynamics" in the agri-food sector, companies "still enjoy much discretion to interpret their obligations and disclose information selectively"[331]. This added to the fact that due diligence rules have a limited scope of action as they apply only to some agrifood companies[332]. Moreover, as agricultural activities are still not

[325]YOUNG Iris Marion, « RESPONSIBILITY AND GLOBAL JUSTICE », *Social Philosophy and Policy*, 23, Cambridge University Press, 2006.
[326] POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op. Cit.*
[327] See the review from :PACCES Alessio M, "Civil Liability in the EU Corporate Sustainability Due Diligence Directive Proposal: A Law & Economics Analysis". March 2023, Law Working Paper nº691/2023, from the ECGI.
[328] Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937, 2022. COM/2022/71 final
[329] LOI n° 2017-399 du 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre (1), 2017-399, 2017.
[330] See the added article L.225-102-4 on the French Commercial Code.
[331] SCHILLING-VACAFLOR Almut et GUSTAFSSON Maria-Therese, « Towards more sustainable global supply chains? », *Environmental Politics*, 0, Routledge, 2023.
[332] For e.g. The proposal for the CSDD (COM/2022/71 final Op. Cit.) set's in article 2, (1), that fall under the scope of this regulations: "companies with more than 500 employees on average and a NWT of more than 150 million EUR; and companies that did not reach the thresholds under point (a), but had more than 250 employees on average and had a net worldwide turnover of more than EUR 40 million in the last financial year for which annual financial statements have been prepared, provided that at least 50% of this net turnover was generated in

precisely framed by the EU Taxonomy, due diligence rules still don't effectively allow to identify companies doing significant harm to agricultural soils, which poses an additional obstacle as environmental risks, a very "imprecise notion", are really difficult to apprehend and evaluate[333]. This hinders the possibility to compel them to consider soil risks more carefully in their "vigilance plans" at the risk of being held liable. Recent jurisprudence confirms this lack of effectivity in due diligence requirements and the limitations of civil liability actions to enforce them[334].

145. However, reputational mechanisms could potentially assume a crucial role in guiding consumers (financial and for agricultural goods) towards more responsible products. This is because due diligence rules and their application give insights into how the activities superficially or insufficiently manage ESG risks and help the public to pressure companies to disengage from harmful activities and investments regarding agricultural soil health[335]. And the pressure is already on, and it's also being translated into legal action[336].

146. For example, regarding fossil fuels and compliance with the Paris Agreement on climate, the French bank BNP Paribas, one of the biggest financial supporters for the expansion of fossil fuels, announced that they would stop financing new projects on gas exploitation and oil[337]. This occurred after having been brought to court but before any court injunction was issued[338]. More, the European Investment Bank has also been convicted for illegally avoiding environmental scrutiny of its financing decisions, after having refused a lawful request to receive funding for a Spanish biomass plant[339]. Consequently, litigation for disregarding environmental issues is a growing risk for companies and investors[340]. Ergo, it might be an interesting additional driver to foster support for agricultural soil health in the future.

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one or more" of the précised sectors. On the mentioned sectors we can find « agriculture, forestry, fisheries (including aquaculture), the manufacture of food products, and the wholesale trade of agricultural raw materials, live animals, wood, food, and beverages". Companies comprise financial undertakings as précised in article 3, (a), (iv).

[333] LABROUSSE F. , « Le droit des sociétés face à la prévention du risque environnemental », Revue Droit et Affaires n° 13, Février 2016, n° 10

[334] The first contentious action brought to the French judges was against TotalEnergies. On the basis of this law the action was dismissed in the summary proceedings, due to procedural shortcomings and a clear flexibility regarding the mandatory contents for the action plan. The debates regarding the implementation of the "vigilance plan" will be addressed in the upcoming main proceedings. See: Tribunal Judiciaire de Paris, 28 Février 2023, n° 22/53942.

[335] SCHILLING-VACAFLOR Almut et GUSTAFSSON Maria-Therese, « Towards more sustainable global supply chains? », *Op. Cit*.

[336] CROISANT, G., « ESG litigation and liability risks – a brave new world? » in Gouvernance et responsabilité, - Strada lex Europe », 28/06/2023.

[337] LE MONDE, « BNP Paribas satisfait une demande des ONG sur le climat », *Le Monde.fr*, 11 mai 2023, [Accessed the 8th of August 2023].

[338] The legal basis for action, still ongoing, was found in article L.225-102-4-I of the French Code of Commerce, introduced by the Law n° 2017-399 du 27 mars 2017 on the "devoir de vigilance". Was also mentioned here the interesting UN guide on "due Diligence for Responsible Corporate Lending and Securities Underwriting", as well as the OECD guide on "Responsible business conduct for institutional investors". See « 20221025-MED-BNP-Paribas.pdf », [Accessed the 8th of August 2023].

[339] CJEU ‚Judgment - 06/07/2023 - EIB v ClientEarth Case C-212/21 P (Joined Cases C-212/21 P, C-223/21 P).

[340] LOEB Vernon, « Climate Litigation Has Exploded, but Is it Making a Difference? », sur *Inside Climate News*, 27th July 2023, [Accessed 8th of August 2023]. https://insideclimatenews.org/news/27072023/climate-change-litigation-explosion/

147. Still, to effectively tackle unsustainable investments and activities damaging agricultural soil health there is a compelling need for a definition with legal force regarding what a sustainable agricultural activity is and what activities "do significant harm" to agricultural soil health. Additionally, as argued, this constitutes another piece of evidence regarding the potentialities for a synergy between the EU Taxonomy and the imminent Soil Health Law. Nonetheless, an outline of this potential synergy has already taken shape responding to the intent of addressing gaps in environmental law concerning soils through sustainable investments, and in line with stakeholders demands.

II) A hidden consideration of soil health from sustainable investments revealed by adjacent regulations.

148. Sustainable investments into agricultural soil health are already occurring, *de lege data,* imperfectly. The proposition for a regulation on Certification for carbon removals (CCR) allows investors to partially support agricultural soil health, as soil organic carbon (SOC) is an important element of soil health[341] **(A).** This further illustrates the preeminence of economic incentives to foster SSM. Thus, with the same approach, a potential synergy between the EU Taxonomy and the EU Soil Health Law could go beyond the CCR regulation to apprehend agricultural soil health more comprehensively, especially to secure and rationalize current investments in soil health that go beyond SOC considerations **(B).**

A) The upcoming regulation on Carbon Removals: a limited pathway for sustainable investments in agricultural soil health.

149. Carbon capture and removal, via farming or industrially, has been identified as a complementary tool, along with massively reducing GHG emissions, to achieve climate neutrality in the EU by 2050[342]. Climate concerns have been the cardinal point of the latest EU environmental regulations, and to address them, the EU has been endowed with regulations that already interlink private investors and farmers engaged in carbon farming. In fact, the EU wants to impulse carbon sequestration as a new green business model for farmers and foresters, to carry out the EU Carbon Farming initiative launched by the Farm to Fork Strategy[343]. To fund those business models, the initiative has identified public subsidies, as from the CAP, and private investments placed on top of those payments. To do so, private investors could purchase carbon removal certificates from farmers. But to enable those investments and ensure additionality, secure removals and avoid greenwashing, as well as to facilitate CAP payments for carbon removals, the EU needed robust certification rules.

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[341] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for carbon removals, 2022. COM/2022/672 final. As a proposal, this text is subject to significant changes.

[342] An objective provided by the Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999, OJ L 243, 9.7.2021, p. 1.

[343] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A Farm to Fork Strategy for a fair, healthy and environmentally friendly food system, 2020, [Accessed the 8th of August 2023] COM/2020/381 final.

150. This initiative resulted in the creation of a Union certification framework by the CCR regulation, amending the LULUCF regulation on GHG emissions and removals from land use, land use change, and forestry[344]. Under this regulation, agriculture is expected to be a major contributor to improving carbon sequestration in soils and biomass, through agroforestry, afforestation, croplands in mineral soils, peatland and grasslands conservation and restoration, and even livestock farm carbon audit[345]. By allowing investors to support such practices, this regulation already materialized the will to call for private providers to support activities that partially foster agricultural soil health **(1).** However, this regulation also pointed up the conspicuous focus on carbon considerations for agriculture and finance, with its set of limitations **(2).**

1. A model to build the bridge with sustainable investments and SSM practitioners via carbon removal certifications.

151. SOC is one of the multiple indicators used to evaluate soils' "healthiness", and increasing its content partially improves agricultural soils and agroecosystems[346]. Its content has important repercussions on soil fertility, structure, and capacity to retain water as the Commission even states that unsustainable practices deplete SOC stocks, and therefore farmers' "bank accounts"[347]. Furthermore, many practices contributing to absorbing carbon emissions also incidentally help to improve soil health as SOC is not the only improved indicator[348]. Therefore, as recognized by Article 7 of the CCR regulation proposition as well as the Soil Health Law proposition, the CCR regulation also aims to generate co-benefits that will contribute to some of the Soil Health Law objectives and further[349]. This by contributing to the protection and restoration of biodiversity and ecosystems (as soils), pollution prevention and control, climate change adaptation and mitigation, etc. It is even expected that soil districts, that the Soil Monitoring directive aims to create, will facilitate access to data and knowledge to contribute to the implementation of the CCR regulation[350].

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[344] Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (Text with EEA relevance) , OJ L, 2018.

[345] As detailed in COMMISSION STAFF WORKING DOCUMENT […] Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Soil Strategy for 2030Reaping the benefits of healthy soils for people, food, nature and climate {COM(2021) 699 final}, SWD(2021), Brussels, 17.11.2021.

[346] DORAN John W. et ZEISS Michael R., « Soil health and sustainability », *Applied Soil Ecology*, 15, 2000.

[347] COM/2021/699 *Op. Cit.*

[348] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health.", *Op. Cit.* Most of the 28 most promissing SSM practices for agricultural soil health identified by the authors also contribute to remove and maintain carbon and therefore increase SOC in soils. Notably by reducing tillage.

[349] These co-benefits for soils stemming from carbon farming are also recognized by the EU Soil strategy for soils, especially its Staff working document stating that the loss of soil organic matter can be addressed by applying SSM. This document also states that other carbon-based regulations and initiatives, such as the LULUCF and the 4/1000, might contribute on improving soil health. The SWD from the Soil Health Law draft also explicitly underlines that Sustainable soil management results in increased carbon sequestration and in most cases in co-benefits for ecosystems and biodiversity. SWD/2021/323, *Op. Cit.*

[350] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*

152. The contribution to the aforesaid objectives will be done by increasing investment towards farmers implementing those practices, by establishing quality criteria for the carbon removal activities (just as SSM standards), rules for verification and certification of the removals, and rules for the functioning and recognition of certification schemes[351]. Under the quality criteria, securities provided by the CCR might also be interesting to build broader certification mechanisms regarding agricultural soil health.

153. Indeed, these criteria ensure a thorough quantification of the removals, the environmental additionality of the farming practices well as long-term storage requirements and liability mechanism in case of releases in carbon stored[352]. Then harmonized certification methodologies are provided to ensure a level playing field between farmers and investors as well as the effectivity and authenticity of the certification mechanisms. The certification rules ensure that operators are certified under the authority of the nationally accredited certification bodies and comply with the audit requirements as securities for additionality; transparent certification schemes regarding management and monitoring, publication of information, etc; interoperable public registries; the Commission recognition of their certification schemes; as well as public reporting describing operations, cases of fraud and remediation measures[353]. Finally, if all the requirements are met, operators will be able to sell their certificates to private companies (including investors).

154. Consequentially, the CCR regulation could be a precursor to linking sustainable investments and activities fostering agricultural soil health as it allows investors to support partial SSM practices as the CAP doesn't provide sufficient funding to support them. The purchase of certificates will therefore remunerate farmers for their provision of ecosystem services (in climate regulation). Carbon removal credits would therefore be "an additional product that land managers could sell alongside their traditional products such as food and biomass", and that is easy to valorize among private stakeholders[354].

155. However, its contribution to soil health is still very limited, as increasing SOC is not sufficient to ensure soil health improvements. This focus on SOC and climate issues, which for example disregards the crucial role of biodiversity to ensure the good function of carbon storage and absorption, might hinder the development of broader environmental considerations when investing in agricultural activities[355].

2. A limited regulation materializing the focus on carbon farming and climate finance.

156. Agriculture and forestry are seen as "essential to reach climate targets" because they are said to have the "capacity to compensate for the unavoidable GHG emission of agriculture and

[351] Proposal COM/2022/672 article 1, as well as chapter2, 3 and 4.
[352] Proposal COM/2022/672, articles 4, 5 and 6.
[353] Proposal COM/2022/672, articles 9 to 14.
[354] GADBIN Daniel, « Droit de l'Union européenne - L'absorption de carbone par les terres agricoles : une politique agricole européenne bis ? - Repère par Daniel Gadbin - Lexis 360 Intelligence », 2023. Translated by us.
[355] See *Supra*, § 200.

other sectors" as carbon sinks since removals from carbon farming are a lot more efficient than industrial removals[356]. It's important to underline here that agriculture is responsible for more than 10% of the EU's GHG emissions[357]. Also, agriculture has still not been able to produce positive results to reduce emissions as well as to increase carbon removals and stocks, despite increasing support from the CAP on those practices[358]. This fact might raise concerns about the capability of agricultural sectors to attain their net removal targets and even more on their potential to offset any other undertaking other than themselves, knowing that the objective established by LULUCF regulation on land-based removals is of -310 million tons of CO2/equivalent by 2030[359].

157. Moreover, the feasibility of these carbon removal targets is very much disputed by scientific literature. Indeed, the CCR regulation is in line with the 4 per 1000 initiative from the UN, based on the assumption that with an annual 4% SOC increase, agricultural topsoil could compensate for the global annual increase in anthropogenic CO2 emissions based on the average of 2003-2012 and assuming no further ecosystems deterioration[360]. Nonetheless, even if those initiatives are very much needed, of course, soil capacity to absorb carbon has been well overestimated. Indeed the 4 per 1000 initiative targets have been proven to be unfeasible in Bavaria (Germany) [361], and in France, knowing that the latter has a broad diversity of climates which implies that those results could also be representative of the feasibility of such targets in many other countries[362].

158. Looking at this approach, some might argue that the underlying intent for this regulation, besides partially improving farmers earnings and soils, would be to turn the challenges of decarbonizing our economy into a financial opportunity more than a path" for social transformation" [363]. As explained by Daniel Gadbin, this market-based approach poses "major risks of financialization in agriculture and farmland grabbing in the medium and long term" stemming from a lack of safeguards[364]. Indeed, the CCR regulation will have an impact on land

[356] COWI, DIRECTORATE-GENERAL FOR CLIMATE ACTION (EUROPEAN COMMISSION), ECOLOGIC INSTITUTE *et al.*, *Setting up and implementing result-based carbon farming mechanisms in the EU* [online], Publications Office of the European Union, 2021, [Accessed the 8th of August 2023]. This Technical Guidance Handbook laid the foundation for the CCR regulation and allowed the operationalization of the EU Carbon Farming Initiative (proposed by the Farm to Fork Strategy) by developing result-based payment schemes for carbon farming in the EU.

[357] EEA, Annual European Union greenhouse gas inventory 1990-2017 and Inventory report 2019, 2019. The exact given number is 10.3% of GHG emissions but "these figures do not include CO2 emissions from land use and land use change" even if agriculture is a major indirect contributor to those issues.

[358]EUROPEAN COURT OF AUDITORS, Special Report 16/2021, *Op. Cit.*

[359]Proposal COM/2022/672, *Op. Cit.* Acknowledging this limited feasibility article 12 and 13 of the regulation provide for several flexibility clauses for MS's, further weaking the objectives of the regulation.

[360] STEFANIE MAYER, RICO HÜBNER, JOHANNES BURMEISTER *et al.*, « Feasibility of the 4 per 1000 initiative in Bavaria: A reality check of agricultural soil management and carbon sequestration scenarios », *Geoderma*, 369, 2020.

[361] *Ibid.*

[362] DOMINIQUE ARROUAYS, BERTRAND GUENET, SYLVAIN PELLERIN *et al.*, « Feasibility of the 4 per 1000 aspirational target for soil carbon: A case study for France », 2021.

[363] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*

[364] GADBIN Daniel, « Droit de l'Union européenne - L'absorption de carbone par les terres agricoles : une politique agricole européenne bis ?", *Op. Cit.*

valuation, depending on the capacity of the soil to store carbon. This could attract covetousness from companies (including financial stakeholders) to exploit the soil capacity to produce carbon certificates to sell them or to avoid costs in reducing their emissions, such as with REDD+ mechanisms[365]. Therefore, carbon farming could be reduced to a simple "business model" further dissociating farmers from their important role in agroecosystems and ignoring agriculture's multifunctionality[366]. All this while investing private and public resources into "innovative technologies (…) to capture, use and store carbon"[367], and not focusing on reducing our emissions as well as reconsidering our production and consumption methods.

159. More generally, the CCR regulation brings out the inherent contradictions of SFI, as "the choice of an instrumental approach to sustainable finance", displaces it from "its original transformative goals" [368]. Surely, EU regulations have "shifted structurally to a narrower emphasis on climate finance, providing scope for development of (more profitable) financial products" [369]. This climate tropism is also materialized in the EU Taxonomy, focusing on the Paris Agreement thresholds, and neglecting other environmental objectives. Indeed its adopted delegated acts still only concern climate objectives, and already frame the sustainability criteria for industrial carbon removals neglecting broader criteria. Carbon as a palpable and precise adversary appears easier to grasp than broader considerations as biodiversity's complex issues.

160. What is more, this approach also lays the foundation for a pathway towards detrimental offset logic that might hinder the will of Companies to reduce their impacts. For example, the Corporate Climate Responsibility Monitor recently questioned Nestle's 2050 net-zero pledges as well as its intermediary targets. These allegations are justified by the acquisition of carbon certificates, focusing on offsetting, as their efforts on reducing emitting agricultural practices (and not manufacturing emissions) will at most lead to a reduction of 6% between 2018 and 2030 on the most significant emission sources[370]. Moreover, this pathway offers fruitful prospects for companies and finance as the multibillion-dollar industry of carbon offsetting seems set to grow exponentially. All this despite ecosystems' inability to compensate for all industrial emissions and the debatable quality of many offsetting schemes (often

[365] DELACOTE Philippe, LE VELLY Gwenolé et SIMONET Gabriela, « Revisiting the location bias and additionality of REDD+ projects », *Resource and Energy Economics*, 67, 2022.
[366] GADBIN Daniel, « Droit de l'Union européenne - L'absorption de carbone par les terres agricoles : une politique agricole européenne bis ?", *Op. Cit*
[367] Something that the CCR promotes while neglecting needs for reduction, as explained in the COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT. Accompanying the document Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals . SWD (2022), 378.
[368] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*
[369] *Ibid.*
[370] DAY Thomas et.al, "Corporate Climate Responsibility Monitor 2023, Assessing the transparency and integrity of companies' emission reduction and net-zero targets", February 2023. See page 107 to 108. https://newclimate.org/sites/default/files/202304/NewClimate_CorporateClimateResponsibilityMonitor2023_Feb23.pdf

overestimated)[371], turning offset solutions as an additional obstacle for climate mitigation objectives with the urge to reduce emissions[372].

161. This also allows the emergence of controversial "solutions" such as the implementation of a "low carbon label" for pig production[373] or the elaboration of similar certifications for cattle farms in France[374]. Such certifications and labels allow the recognition of GHG emissions reductions by farmers, as cattle and pig productions are large emitters with a big potential for reduction, so they can later sell the reduction certificates to companies for offset purposes. In fine, the reduction effort that should result from the particularly polluting nature of this type of farming has been transformed into a financial opportunity. And it wouldn't be so much of an issue if it wasn't for the fact that it offers companies the chance to buy emissions rights, notably to avoid implementing more costly reduction measures.

162. Furthermore, and as pointed out by the ECR opinion, the CCR regulation focuses toward carbon considerations and disregards GHG emissions other than CO2 that should particularly be reduced in agriculture[375]. More importantly, it brings out the risk of falling into the trap of carbon farming at the detriment of agriculture's role as a provider of food. As underlined by the ECR, current conjunctural crisis undermine European food security, such as the war in Ukraine and the biodiversity collapse. Hence, focusing on carbon farming neglects "the nurturing role of agriculture", as well as the need for a broader vision of environmental issues affecting agriculture that will need more holistic interventions to ensure the agroecological transition.

163. Finally, we can say that the CCR is an interesting first step to help channel private capital towards activities implementing SSM practices. But its approach also exposes several limits and insights that should be taken into account if its mechanism is extended with a potential synergy between the EU Taxonomy and upcoming Soil Health Laws. Moreover, it underlines how this potential synergy could fill some of the gaps in the current regulatory framework, to grasp agricultural soil health and farmers' needs more comprehensively. The occurrence of such a regulatory intervention becomes apparent, as current EU environmental law is not stepping in to fill the aforesaid regulatory gaps.

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[371] JONES Julia and LEWIS Simon, "Forest carbon offsets are failing. Analysis reveals emission reductions from forest conservation have been overestimated", Science, 24 august 2023, vol 381, Issue 6660, p.830-831. DOI: 10.1126/science.adj6951

[372] IBBOTT Samantha, « 3 things you should know about offsetting », European Environmental Bureau, the 19th July 2023. https://meta.eeb.org/2023/07/19/3-things-you-should-know-about-offsetting/

[373] ESPAGNOL S., « 3. Implementation of mitigation strategies in livestock chain: the case of "Label bas carbone" for pig production in France », *Animal - science proceedings*, 12, 2021.

[374] FOUCHEROT Claudine, BRÛLEZ Cyril et BELLASSEN Valentin, « Creation d'un cadre de certification carbone pour le secteur agricole », Hal INRAE, 25/11/2020. https://hal.inrae.fr/hal-03023107

[375] See the OPINION project from the EUROPEAN COMMITTEE OF THE REGIONS, from the 153th plenary session from the 8th and 9th of February 2023. "Strategies regionals d'adaptation pour parvenir à une agriculture bas carbone ». Rapporteur : Loïg Chesnais-Girard. COR-2022-03978-00-01-PAC-TRA (FR). https://cor.europa.eu/en/news/Documents/cor-2022-03978-00-01-pac-tra-fr.pdf For example, the 2023 reporting status under the national emission reduction Commitments Directive on air pollution in Europe States that the biggest challenge for MS's is to reduce ammonia emissions, from which the agricultural sector is the principal source (93%). https://www.eea.europa.eu/publications/national-emission-reduction-commitments-directive-2023

B) Indicators on the will to cover environmental law lacunae on soils with financial incentives.

164. As market-based approaches for soil health protection blossom, resorting to incentives such as the EU Taxonomy regulation seems ineluctable to uphold the Soil Health Law objectives **(1).** In addition, this approach is favored by stakeholders that are already investing in agricultural soil health, sometimes going further than SOC considerations, and calls for the establishment of harmonized standards to rationalize those initiatives and ensure their additionality **(2).**

1. The relay of market-based instruments for transformative change in soil management.

165. Since the 1970's, following liberal state policies and minimal market regulation, many observed what can be called the "economization of environmental law" in Western societies[376]. This mode of normative intervention focuses on favoring consensual obligations and incentives[377], grasping soils as resources necessary to economic activities, rather than establishing constraining obligations, such as on SSM, as traditional public law traditionally used to[378]. The establishment of the polluter's pay principle, marketable quotas, and certifications or payments for ecosystem services (PES) for improved practices reflect this economic way to grasp the reality of environmental decline by the law. Here environmental law deviates from its original purpose to "act for the gradual improvement of the environment" via constraining tools regarding the use of natural resources and entities[379]. Soil conservation then simply becomes a moral consideration to be contemplated by willing economic actors via incentive instruments, knowing that morality efficacity is contingent as practices become right or wrong instead of allowed or not.

166. As explained before, this is particularly true regarding soils, as the Soil Health Law proposition fails to enact prohibitions on unsustainable practices, even if it means not upholding the Soil Strategy ambitions. Therefore, this failure could logically be followed by the promotion of Market-Based Instruments (MBI's) as sustainable financing via the EU Taxonomy. This to obtain commitments from stakeholders as a reward for having contributed to the satisfaction of SSM principles and objectives. Consequently, these principles have been diminished to voluntary moral considerations rather than mandatory constraints, inconsistently with the vital importance of conserving a natural common like soil.

167. As explained by Broughton et al., the rise of MBI's is always founded on the same rhetoric: "the presumed inadequacy of regulatory and prescriptive instruments, and conversely, the

[376] For e.g., see LATOUR Bruno, in "La fabrique du droit, une ethnographie du Conseil d'État ». Paris, Éd. La Découverte, Poche, coll. Sciences humaines et sociales, 2004, 320p.
[377] As explained by ICHER Liliane, in "Public spending in the Environmental Field: The Case of Soil Protection" *Op. Cit.*
[378] Just as noted by LANGLAIS Alexandra on the logic behind PES, in « Les paiements pour services environnementaux, une nouvelle forme d'équité environnementale pour les agriculteurs ? Réflexions juridiques », *Droit rural*, n° 413, mai 2013, étude 7, And LANGLAIS(dir.), « L'agriculture et les paiements pour services environnementaux : quels questionnements juridiques ? », Presses universitaires de Rennes, 2017,
[379] PRIEUR Michel, « Droit de l'environnement », Dalloz, coll. Précis, 8è édition., 2019, page 8.

effectiveness of so-called market instruments, which are now presented as a more effective solution to the challenges of biodiversity (or soil) conservation than prescriptive, or so-called "command and control" instruments" [380]. Private actors, imbued by the search of profit, are presumed to be more efficient and as having the capacity to enable an "optimal allocation of efforts and a better revelation of information"[381]. Moreover, these instruments are also favored by public actors as they "have the capacity of relieving public spending, or of providing new sources of revenues", just as the EU Taxonomy.

168. The EU Taxonomy could then be seen as an interesting incentive as it supports whole sectors of activities and acts as a moral compass for SFI actors, establishing which activity and investment is right or wrong, sustainable or unsustainable. Conversely, the CAP doesn't allow this global view, as it supports agricultural activities plot by plot, looking at the specific practices implemented. The same goes for the CCR, which focuses solely on climate objectives. Thus the Taxonomy could be seen as a complementary tool to rethink and shape the agricultural sector under the scope of sustainability, with unified criteria, and address some behavioral biases from agricultural stakeholders via moral and financial incentives. Indeed, from the multiple "cross-cutting underlying causes" of agricultural soil decline, the Commission underlines "the limited rationality of certain stakeholders due to the complexity of the problem (…) the focus on short-term benefits without taking account of future costs, or income-related drivers"[382]. Although acknowledging the existence of "regulatory failures", the Commission also attributes a significant responsibility to "market failures", as "the cost of soil degradation is not fully internalized in prices" [383]. In this context, it could be inferred that these concerns might be effectively addressed through MBI's, aimed at rendering soil conservation financially more advantageous than its intensive exploitation via market incentives.

169. Ultimately, some argue that market-based approaches shouldn't necessarily be interpreted as a "rollback" of the state given that regulators play a significant role in shaping these instruments, framing them, monitoring effectivity, and sanctioning actors that don't comply with the corresponding obligations[384]. It could be fit to take on the role of a palliative instrument for the failings of the law, in a pragmatic approach to address the pressing need for enhancing agricultural soil health. This urgency, coupled with the unavoidable need to invest in agricultural soils, has captured the attention of numerous private stakeholders. They are operating within an unconsolidated framework that lacks security, which certainly calls for regulatory intervention.

[380] BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", Ifri, Paris, 2011. http://www.ifri.org/index.
[381] *Ibid.*
[382] COM/2021/699 final, *Op. Cit.*
[383] COM/2021/699 final, *Op. Cit*.
[384] BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", *Op. Cit.*

2. Rising investments in soil health calling for standards harmonization and a secured framework.

170. Many sustainable investing initiatives into agricultural soil health are developing outside the EU Taxonomy framework. Financial and agrifood stakeholders' interest in soil health is ever-growing, despite a conspicuous focus on climate and "carbon net-zero" considerations, as carbon certification schemes are potentially more profitable[385]. However, many uncertainties undermine the potential of those initiatives. To cite some of them, there is a clear lack of data and securities for investments in soil health, something that the soil monitoring directive could provide, as well as on the substance of future farm policies so that farmers can adapt and restructure their businesses[386].

171. Furthermore, these initiatives are evolving in the absence of common indicators framing soil health evaluations, which are needed to assess sustainability in agricultural activities as well as their impacts on soils[387]. Even though indicators and evaluations are mostly said to be following scientific protocols[388], these indicators are yet not standardized. In consequence, too much methodological freedom is given to service providers measuring soil health, which could lead to abuses.

172. Inadequately supervised assessments on soil health could result in the complacent issuance of certifications, such as for carbon capture or broader, driven by the potential associated financial gains. This situation might undermine or question the true additionality of those certifications, as well as allow deceptive offsets throughout the value chain. On the other hand, the absence of standards and securities regarding soil health could undermine investors' confidence and discourage them from investing. Furthermore, as for payments for ecosystem services, "some people could simply be volunteers because they have already adopted the

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[385] For example: « Investing in soil health to help transform food and agriculture systems », sur *World Business Council for Sustainable Development (WBCSD)* [online], [consulted the 19th august 2023]. https://www.wbcsd.org/Programs/Food-and-Nature/Food-Land-Use/Scaling-Positive-Agriculture/News/Investing-in-soil-health-to-help-transform-food-and-agriculture-systems
« Lloyds Bank and Soil Association unveil new sustainability support », https://www.farminguk.com/news/lloyds-bank-and-soil-association-unveil-new-sustainability-support_61384.html [consulted the 19th august 2023].
« Barclays launches £250 million in financial support to help farmers drive Sustainability through Agri-Tech | Barclays » https://home.barclays/news/press-releases/2020/10/barclays-launches-p250-million-to-support-farmers-drive-sustaina/ , [consulted the 19th august 2023].
SCHINDLER Walter, « Council Post », sur *Forbes* [online], On why to invest in agricultural soil health. https://www.forbes.com/sites/forbesbusinesscouncil/2020/10/23/healthy-soil-why-and-how-to-invest-in-this-sustainable-opportunity/?sh=44d60d536549 [consulted the 19th august 2023].
As well as the Nestlé "living soils initiative" « Accompagner la transition de nos agriculteurs partenaires », sur *Nestlé* [online], [consulted the 19th august 2023].

[386] As underlined by the FOOF AND FARMING& CONTRYSIDE COMMISSION, "Finding the finance for growth: Headlines and summary from the Farming Leadership Group Symposium Series", 2023. https://cdn2.assets-servd.host/ffcc-uk/production/assets/downloads/FFCC-Briefing-Paper-Finding-the-finance-for-growth-March-2023.pdf
And FURNESS Virginia, « UK farmers hungry for climate finance but banks want more data », sur *Capital Monitor* [online], published the 25 January 2022, [consulted the 8 june 2023].

[387] RENAULT Pierre, *et al.*, "From soil properties to quality indicators to support public policies and meet the needs of society", *Op. Cit.*

[388] As for the leading soil notation Company GENESIS in France, See SANNIÉ Quentin, "Why note the state of soil Health", April 17, 2023, https://en.genesis.live/post/pourquoi-noter-les-sols [Accessed the 8th of August 2023]

encouraged behaviors without being asked for it"[389]. Hence, the investment or public expenditure "would be useless since the State or the local government (or investor) would pay to maintain a *status quo*"[390].

173. Hence, as business models for agricultural soil health emerge, from farmers to monitoring service providers, harmonized indicators on soil health, such as those provided by the Soil Monitoring directive, could frame such activities more comprehensively when diagnosing and certifying improvements. Then, the Taxonomy delegated acts on agricultural activities could implement these criteria to ensure the additionality of activities claiming to foster agricultural soil health, as well as to provide securities and incentivize investments.

174. To conclude this chapter, in light of the presented evidence it seems that the complementarity between the EU Taxonomy and the emerging EU Soil Health Laws cannot be ignored for long. Nonetheless, the lack of a clear identification of their synergies by positive law casts a shadow of uncertainty over this potential collaboration. Both texts would require revisions or supplementary provisions through delegated acts to enable their harmonious coexistence.

175. Nonetheless, we also might need to go further than the presented normative framework, in order to effectively support the best practices for agricultural soil health. Thus, we will try to envision how this synergy could be materialized, *de lege ferenda*, with supplementary safeguards as well as acknowledging the limitations of this approach.

[389] ICHER Liliane, "Public Spending in the Environmental Field: The Case of Soil Protection", *Op. Cit.*
[390] *Ibid.*

PART 2: Regulatory requisites and limiting factors to build an effective cooperation between the Taxonomy and Soil Health Laws.

176. The EU Taxonomy has yet not "matured" and does not allow, *de lege data*, to identify and channel sustainable investments towards the most sustainable activities fostering agricultural soil health to fill the gaps in environmental law. Therefore, its internal effectivity could be reinforced using SSM standards and indicators from the EU soil health law, as well as strengthening its normative scope and force by using it as a constraining referential for public actors **(Chapter 1)**. However, this potential EU Taxonomy and EU Soil Health law synergy has to be gauged cautiously. Indeed, several limitations and risks may hinder its capacity to drive an equitable and ensuring transition within the agrifood sector for lasting soil health improvements. We will try to identify the most pertinent constraints, to subsequently devise effective safeguards **(Chapter 2).**

177. It's also important to note that pursuant to article 20 of the Soil Monitoring directive proposition, under its current version, the power to adopt delegated acts is conferred to the Commission to modify articles 8, 10, 15, and 16. We will be particularly interested in article 8, which refers to measurements and methodologies (as for soil indicators), and in article 10 as it refers to the SSM practices and principles. Additionally, pursuant to article 20 of the EU Taxonomy regulation, the Commission has the power to adopt delegated acts referred to in Articles 8(4), 10(3), 11(3), 12(2), 13(2), 14(2) and 15(2). On this basis, the Commission has the power to supplement the criteria for determining the conditions under which specific activity qualifies as "contributing substantially", or "causing significant harm", to the Taxonomy environmental objectives. Shaping these criteria adequately will be instrumental in properly integrating agricultural activities under the Taxonomy, establishing safeguards, and allow investors to identify the most promising activities.

Chapter 1: Reinforcing the Taxonomy regulatory framework to foster and secure investments in agricultural soil health.

178. Regulatory measures have the potential to improve the alignment between rules governing public and private investments and the EU Taxonomy, bolstering the most promising "sustainable" undertakings. This alignment could instigate a "virtuous circle" of investments towards these endeavors, thereby mitigating investment risks and strengthening the EU Taxonomy-aligned activities within the agri-food sector. Nonetheless, to be effective and particularly support the most auspicious activities for soil health, the "sustainable" qualification could be nuanced, and soil considerations extended by using the Soil Monitoring directive. This could also allow us to imagine what "sustainable" business models for soil health could be in all their diversity, and secure investments as well as their additionality **(I).** Then, in accordance with these specified criteria, EU and MS's budget arbitration could also exhibit greater alignment with EU Taxonomy goals for agricultural soil health, to further support these endeavors **(II).**

I) Toward more internal investment security: qualification and guarantees needs for the EU Taxonomy to foster agricultural activities for soil health.

179. Soil health, as an environmental component, is currently grasped and evaluated through the use of soil indicators and soil management practices shaping soils, as framed in the EU Soil Health Law. Whereas undertakings under the EU Taxonomy, which could include the agrifood sector, are considered more broadly in terms of their sustainability and their contribution to ESG challenges, to impulse transformative change by supporting sustainable activities and undermining non-aligned undertakings.

180. Thus, a potential synergy between those regulations could facilitate improving considerations for soils as an ecological entity, concurrently addressing agricultural activities' needs and aspirations in their journey toward sustainability. This overlap could be done through the use of SSM standards[391] while allowing the qualification of various degrees of sustainability in agrifood activities depending in its variable potential to contribute to the agroecological transition **(A).** Moreover, implementing soil indicators to measure SSM practice's additionality, hence their contribution to ESG goals could also help secure and encourage investments fostering agricultural soil health **(B).**

181. Précised information on sustainability, along with added securities for investments is much needed to "avoid the risk of undermining precarious public confidence by putting 'official' green stickers on existing funding and investments" with no additionality while making us lose "precious years that we do not have to spare"[392]. In fact, some contentious activities, with regard to their "sustainability", have been included in the EU Taxonomy, and thus might benefit from sustainable investments.

182. A notorious example is the aviation sector, with a proposition from the Commission to include it as a transitional activity[393]. Also, nuclear energy generation activities have been included, using the sledgehammer argument of their potential to contribute to the decarbonization of the EU energy sector while disregarding the compliance to the DNSH criteria of the whole nuclear life cycle (especially on nuclear waste)[394]. Without delving into the pertinence of such qualifications, they can make us question whether undertakings from the aviation sector and, for example, afforestation activities should be put on the same pedestal. Hence, the case could be made that those activities do not contribute to environmental objectives as much as other transitional or substantially contributing activities, and therefore should not be placed on an equal footing with transitional activities having reasonable perspectives to be completely aligned, or with substantially contributing activities that surely DNSH.

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[391] See *Supra*, §From 122.

[392] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit.*

[393] See the Draft : COMMISSION DELEGATED REGULATION proposition of the 27.6.2023 amending Delegated Regulation (EU) 2021/2139. C(2023)3850 final, 2023.

[394] Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities (Text with EEA relevance) C/2022/631, 2022.

183. Therefore, added safeguards and a gradation in "sustainability" could further legitimize the Taxonomy framework by allowing the identification and the support of undertakings proportionally to their contribution to the Taxonomy environmental goals.

A) A need for nuance when qualifying agricultural activities "sustainability".

184. Not all agricultural practices are created equal. Therefore, some could argue that activities from the agri-food sector shouldn't all be able to claim the same degree of sustainability. In consequence, the current framework could be modified to allow a gradation of agricultural activities' sustainability in correlation to their additionality regarding soil health enhancement or conservation **(1).** Then, we could try to envision how could this proportional qualification be materialized through a noted gradation of agricultural undertakings additionality **(2).**

1. The limited gradation of the "sustainable" qualification in the EU Taxonomy.

185. The current Taxonomy framework only allows a binary qualification. Currently, an economic activity can only be considered as being "sustainable" or not "sustainable". This if it does not comply with the criterion established in Article 3 of the EU Taxonomy[395], even though we can find a limited gradation through transitional activities. However, as beforementioned, while some agricultural activities do contribute to environmental objectives, not all of them provide the same prospects in terms of agricultural soil health enhancement or conservation. For example, reduced emissions in livestock productions do contribute to climate objectives[396], but concurrently these producers "have limits on how far they can reduce impacts", to avoid "significant harm", such as with associated water bodies pollution, needs in UAA to support production, GHG emissions (further than carbon), etc.[397]. This while knowing that "the impacts of the lowest-impact animal products exceed average impacts of substitute vegetable proteins", even though not all vegetable productions "do no significant harm"[398].

186. To overcome this binarity, which neglects the complexity of environmental issues, A. Sotiropoulou suggests establishing a scale of sustainability to establish different "degrees of sustainability" for economic activities under the EU Taxonomy[399]. She states that "such a classification, modeled as the ones used for energy consumption or nutritional labeling could have beneficial effects for both companies and investors". Therefore she suggests a Taxonomy green (most contributing), yellow (mildly contributing), and red (doing significant harm) sustainability label, a rating established proportionally to the potential environmental additionality of the targeted (agricultural) activities.

187. A sustainability scale could also help to avoid a "greenwashed delegated act on agriculture" with a low common denominator of requirements to access the full "sustainable"

[395] See *Supra*, §74.
[396] See *Supra*, §161.
[397] POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op. Cit.*
[398] *Ibid*. For example, nut production or cereal production as they require a lot of resources and harmful inputs.
[399] SOTIROPOULOU A., "Sustainable investments in European Union Law", *Op. Cit.*

qualification[400]. This as contributing activities doing significant harm (such as livestock production, or in some cases nut and cereal production) could be differentiated from solely contributing activities. Indeed, undertakings from the agrifood sector would need a more precise evaluation of the environmental impacts of their suppliers and value chains, to adapt their demand and production methods accordingly, and thus improve their sustainability.

188. Also, this gradation and added transparency could allow investors (public and private) to focus on economic models that contribute the most to the agroecological transition while improving confidence when investing and limiting greenwashing. Moreover, it could allow recompensating the most virtuous undertakings, whose efforts are often correlated with added costs, as well as offering a path and an aim for less "sustainable" activities. This by encouraging the latter to improve practices, to upgrade their "sustainability" rating, and therefore their prospects to be recipients of sustainable investments[401].

189. Graduate scales to rate sustainability already exist, as "holistic metrics" emerge from private financial stakeholders to provide more granularity for investors when evaluating sustainability[402]. This granularity could be included in the EU Taxonomy, to improve its potential to succeed regarding its aim to impulse transformative change. This is why we could try to envision how this gradation in sustainability could be materialized in the Taxonomy delegated Act establishing the technical screening criteria in the agricultural sector, for undertakings fostering, or harming, agricultural soil health.

2. Using the Soil Health Law to build a "sustainability" scale for activities affecting agricultural soil health.

190. Basche et al. have detailed at least 28 SSM practices providing additionality when trying to improve agricultural soil health[403]. For simplification purposes, as the authors, we will focus on those established as having the greatest potential to improve soil and environmental health, especially the 12 SSM principles from the Soil Monitoring Directive objectives. These principles include most of these promising practices and could be easily established in the Taxonomy delegated acts to rate undertakings' sustainability[404]. Additionally, and following the

[400]This concern was raised by many NGO's, see *Ibid*; Letter to Commission on Taxonomy Regulation from 25 civil society organizations, Brussels, 8 March 2023, About the "Forthcoming Taxonomy Delegated Act on agriculture", *Op. Cit.*

Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* (11). And by greenwashing we mean: "gaining an unfair competitive advantage by marketing a financial product as environmentally friendly, when in fact basic environmental standards have not been met.". Noting that such allegations can sometimes expose their perpetrators to contentious risks. For example, in France article L.213-1 of the Consumption code establishes that "anyone, whether or not a party to the contract, who deceives or attempts to deceive the contracting party, by any means or process whatsoever, even though the intermediary of a third party, will be liable to imprisonment for up to two years a nd a fine of 300,000 euros". Translated by us.

[401] SOTIROPOULOU A., "Sustainable investments in European Union Law", *Op. Cit.*

[402] See for e.g. « Holistic environmental metric », on *NEC* [online], [Accessed the 8th of August 2023]. https://www.nec-initiative.com/ Ratings here evaluate environmental impacts from 100% (to -100%.

[403] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health.", *Op. Cit.*

[404] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* ANNEXES 1 to 7, to the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law). https://environment.ec.europa.eu/system/files/2023-

broader scope of the EU Taxonomy, the environmental impacts of such activities such be considered more comprehensively (especially indirect impacts), knowing that a rating solely based on compliance with the SSM principles would be very limited.

191. To give an illustration of SSM "optimal practices", they can refer to permanent cover crops (principle (a)); reduced tillage[405] and the reduction of the use of inorganic fertilizers (principles (b) and (c))[406]; crop rotation and diversification (principle (j)); extensive livestock production and adapted grazing (principle (k)); agroforestry practices[407]; ecosystem (and soils) restoration (principle l); reducing pesticide uses (and reinforcing biological response to pests), implementing structural landscape features, using composted manure to increase SOC, etc.[408]. Based on those principles, two types of agricultural productions would seem to comply to SSM requirements. The most broadly recognized, is organic farming (OF) [409], even though other practices such as agroforestry should be considered. Then, "conservation agriculture could seem to also comply with most SSM requirements and could be a great entry point for "conventional" farmers willing to improve their practices and access to SFI providers, even if most of the time they are dealing with larger surfaces than regular OF farmers and the related costs[410]. Regarding livestock production, besides SSM principles (such as the aforementioned principle (k)), related impacts on UAA and natural resources consumption (for fodder provision) and GHG emissions should also be quantified and taken into account.

192. Without delving into the potential detailed requirements for all agricultural undertakings inside this scale of sustainability, it would not seem unreasonable to grant OF undertakings the green Taxonomy label. As for their suppliers, converters, packaging companies, distributors, and retailers, they could also benefit from a presumption of satisfaction with the green label criteria, provided that most of the producers they work with have it, and that they comply with

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07/ANNEXES%20to%20the%20proposal%20for%20a%20Directive%20of%20the%20European%20Parliament%20and%20of%20the%20Council_COM_2023_416_final.pdf. Thus, we could rate already activities contribution for agricultural soil health from 1 to 12, while repercussing those ratings up the value chain for related agrifood activities.

[405] Knowing that it is a cornerstone practice in conservation agriculture to reduce soil erosion and improve biological porosity to retain water and nutrients. See FIREDRICH T., DERPSCH R., KASSAM A., "Overview of the global spread of conservation agriculture". *Field Actions Science Reports. The Journal of Field Actions*, Special Issue 6, 0-7, 2012.

[406] KRAUSS Maike, BERNER Alfred, PERROCHET Frédéric *et al.*, « Enhanced soil quality with reduced tillage and solid manures in organic farming – a synthesis of 15 years », *Sci Rep*, 10, Nature Publishing Group, 2020.

[407]See the articles form GUILLOT E. *et al.* and D'HERVILLY C. et al. (2022/2021/2020) conducted under the French INRAE on the topic of : « De l'influence des pratiques d'agroforesterie sur les sols », on INRAE Institutionnel [online], [Accessed the 8th of August 2023], 2022. https://www.inrae.fr/actualites/linfluence-pratiques-dagroforesterie-sols.

[408] STRAUSS Veronika, PAUL Carsten, DÖNMEZ Cenk *et al.*, « Sustainable soil management measures: a synthesis of stakeholder recommendations », *Op. Cit.* Those recommendations are also found under the SSM principles.

[409] For example, article 6 of the EU regulation on OF clearly establishes the maintenance and enhancement of soil life and structure at the center of its requirements (see (a)) as well as other SSM principles and a more comprehensive apprehension of related ESG risks. See Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007 PE/62/2017/REV/1 *OJ L 150, 14.6.2018, p. 1–92.*

[410] CHABERT Ariane, SARTHOU Jean-Pierre, "Ecosystem services delivered by soils, from an agronomic perspective: The case of conservation agriculture.", *Op. Cit.*

the afferent Taxonomy criteria for such undertakings after a life cycle analysis on production. Moreover, as you can guess, the same reasoning could be applied to conservation or regenerative agriculture undertakings[411], by granting them the yellow label, as well as for afferent activities.

193. Then, to provide reasonable perspectives for agricultural undertakings to attain the green label, as well as to limit the nutrient shortage occurrence in OF and diminish the yield gap[412](among other challenges), progressively converging some conventional and OF requirements is sometimes enounced as a good opportunity. Indeed this convergence, supported by broader SSM requirements on conventional while reducing some nutrient management requirements for OF, is said to have a great potential to "positively affect soil health" and deal with "the immense future (environmental and social) challenges in the agricultural sector"[413]. Such convergence could go towards what some call an "ecologically intensive agriculture" which is "the process by which ecological functionalities can be intensified to obtain higher biomass production from agroecosystems (…) and in a way that has to be compatible with ecological viability principles", through comprehensive global SSM standards[414]. This kind of agriculture makes "intensive use of ecological and biological processes as a priority, without rejecting conventional inputs provided that their use is subsidiary and consistent with the ecological and biological rationale behind the evolution of production systems", thus improving soil health[415].

194. However, we have to remain very prudent on this kind of proposition before intending any systematic implementation. As Christian Erard underlined well, "while the general principles of ecosystem functioning now seem to be well established, there are still many unknowns, particularly in view of current and future climate change and the rapid transformation of natural environments under direct or indirect human influence"[416]. Those challenges should be addressed through the DNSH criteria, with requirements proportional to the risks involved and in accordance with the prevention and precautionary principles[417].

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[411] For a comprehensive review of regenerative agriculture see: KHANGURA Ravjit, FERRIS David, WAGG Cameron *et al.*, « Regenerative Agriculture—A Literature Review on the Practices and Mechanisms Used to Improve Soil Health », *Op. Cit.*

[412] As it is estimated that OF and soil conservation delivers a yield loss of at least 2.5% compared to conventional agriculture. See : PITTELKOW C.M., LIANG X., LINQUIST B.A. *et. al.* "Productivity limits and potentials of the principles of conservation agriculture". Nature, 517, 365-368, 2014. However, this affirmation is not tru in contexts of hydric stress for example, an increasingly recuring situation with climate change, added to the debatable advantage of gaining 2.5% in yields if gauging the associated environmental and social costs of conventional agriculture.

[413] STUBENRAUCH Jessica, EKARDT Felix, HEYL Katharine *et al.*, « How to legally overcome the distinction between organic and conventional farming - Governance approaches for sustainable farming on 100% of the land »,*Op. Cit*.

[414] GRIFFON Michel, « Éléments théoriques en agroécologie », *OCL*, 24, EDP Sciences, 2017.

[415] *Ibid.*

[416] CHRISTIAN ERARD, « Griffon, M. — Qu'est-ce que l'agriculture écologiquement intensive ? Editions Quae, Versailles. 2013 », *Revue d'Écologie (La Terre et La Vie)*, 69, 2014.

[417] GUPTA Joyeeta et SCHMEIER Susanne, « Future proofing the principle of no significant harm », *Int Environ Agreements*, 20, 2020.

195. Indeed, a great deal of attention should be put into the risks, as under conservation agriculture, of retreating from tillage to minimize physical soil disturbance, as it is largely used for weed control and can sometimes lead to an increased use of pesticides[418]. The same could be said about replacing synthetic fertilizers with organic manure, as it can also affect soil health and water bodies[419]. As a safeguard, we could take the example of the proposed technical screening criteria for the activities allowing the reuse of wastewater in agriculture. In this delegated act, the framework directive on water policies (directive 2000/60/EC) has been used to establish the requirements prohibiting the deterioration of water bodies by such undertakings[420].

196. In our case, this could be done by directly inserting improved requirements on agricultural inputs into agricultural delegated acts through the use of afferent regulations[421]. Furthermore, as required under the CAP and its statutory management requirements (SMR), it's important that farmers accessing the first degree of sustainability comply and go beyond what's required from the CAP conditionality[422]. Also, proper safeguards for the complex issue of double payments by CAP subsidies and sustainable investing should be established[423]

197. Finally, precisely identifying the most promising practices through the suggested gradation could allow policymakers, or investors, to "prioritize funding and outreach efforts to promote this set of optimal practices where applicable, in order to increase return on public (or private) investment in conservation incentives (…) and to better support management of ongoing and future climate risks"[424]. Then, SSM practices could be evaluated and secured through a comprehensive set of indicators, as safeguards completing the criteria of the

[418] In contradiction with the EU Zero pollution Action Plan and its Biodiversity Strategy. See : CHABERT Ariane, SARTHOU Jean-Pierre, "Ecosystem services delivered by soils, from an agronomic perspective: The case of conservation agriculture.", *Op. Cit.*

[419] Indeed if organic amendments have a huge potential to improve soil organic matter as well as soil resilience through adverse conditions, such as with droughts, the can also be a cause of acidification and pollution in agroecosystems. HUESO S., HERNÁNDEZ T. et GARCÍA C., « Resistance and resilience of the soil microbial biomass to severe drought in semiarid soils: The importance of organic amendments », *Applied Soil Ecology*, 50, 2011.

[420]EUROPEAN COMMISSION C(2023) 3851 final ANNEX to the COMMISSION DELEGATED REGULATION (EU) …/... supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to the sustainable use and protection of water and marine resources (…) amending Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities, Brussels, 27.6.2023. https://finance.ec.europa.eu/system/files/2023-06/taxonomy-regulation-delegated-act-2022-environmental-annex-1_en_0.pdf

[421] As for example concerning pesticides, the Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides (Text with EEA relevance) *OJ L 309, 24.11.2009, p. 71–86.* More with the fact that this directive is bound to be amended very soon as a proposal "for a regulation on the sustainable use of plant protection products has been made under the EGD. Also see *Supra*, §93.

[422]As obligations from statutory management requirements, eco-schemes, and good agricultural and environmental conditions. For a detailled explanation on the 202372027 conditionality see : AUBRY CAILLAUD Florence, « PSN et normativité environnementale : des avancées à relativiser », Revue de l'Union européenne – 663, : « La place de l'agroécologie dans la nouvelle PAC 2023-2027 », décembre 2022.

[423] See *Infra*, §267.

[424] BASCHE Andrea, TULLY Katherine, ÁLVAREZ-BERRÍOS Nora L. *et al.*, "Evaluating the Untapped Potential of U.S. Conservation Investments to Improve Soil and Environmental Health.", *Op. Cit.*

sustainability scale for soils. This could also serve to inform authorities and stakeholders on the precise additionality of the concerned undertakings, especially in order to market certifications or to secure labels.

B) Using Soil Health Law indicators as safeguards to build sustainable investment criteria in agriculture.

198. Currently, there seems to be a lack of harmonized indicators on agricultural soil health, making it "difficult to quantify" soil functions, stability, and evolution[425]. Such a hurdle arises from the fact that such indicators reflect intrinsic qualities from soils which have a multitude of functions and characteristics about which little is known. This diversity makes it difficult for pedologists to find a harmonized proposition of indicators on soil health and should make us apprehend this complex object with even more precaution [426]. Such a difficulty is sometimes reflected in regulations that focus especially on one of the many indicators of soil health SOC, a tropism that, from a utilitarian point of view, makes it easier to promote soil health[427]. Still, despite its undoubted importance, SOC is only one of the main indicators of soil health, among soil biological activity, soil physical properties (granulometry, structure, etc.), soil contamination, productivity, etc.[428]

199. Here is where the soil monitoring directive proposition intervenes. Indeed, this directive could provide a comprehensive set of agricultural soil health indicators. to meet this need of criteria on soils and harmonize current practices and audits **(1).** However, these indicators could already be reinforced in application of the precautionary principle and the principle of preventive action **(2)**[429]. Furthermore, in the rise of promising innovative contract solutions, these tools could also be used to secure the implementation of SSM practices and the expected results in the long term and with their afferent indicators **(3).**

1. A mixed success in harmonizing the criteria for healthy soil in agriculture.

200. As provided by article 7 of the draft and as complemented in its Annex I, States shall apply a set of established soil descriptors, and indicators and use the afferent criteria to monitor and assess if a soil is, or not, in a healthy state[430]. We shall remember that the established thresholds to attain healthy soil are only indicative, not mandatory. Without becoming mired in specifics, let's take the issue of excess nutrient content in soils to illustrate our explanation. This excess is estimated through the analysis of the extractable phosphorus on soils (mg per kg). Then, the

[425] VOGEL Hans-Jörg, EBERHARDT Einar, FRANKO Uwe *et al.*, « Quantitative Evaluation of Soil Functions », *Frontiers in Environmental Science*, 7, 2019. https://www.frontiersin.org/articles/10.3389/fenvs.2019.00164/full
[426] RENAULT Pierre, *et al.*, "From soil properties to quality indicators to support public policies and meet the needs of society", *Op. Cit.*
[427] See *Supra*, §151.
[428]RENAULT Pierre, *et al.*, "From soil properties to quality indicators to support public policies and meet the needs of society", *Op. Cit*
See also the FAO,"Voluntary Guidelines for Sustainable Soil Management Food and Agriculture Organization of the United Nations Rome", Italy, 2017. https://www.fao.org/3/i6874e/i6874e.pdf.
[429] Article 191 TFEU, (2).
[430] See COM(2023) 416 final ANNEXES 1 to 7, to the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law). See Annex 1.

criteria establishing thresholds for healthy soil conditions deems that healthy soil shall have a maximum value of between 30 to 50 mg/kg^{-1}, as MS's have the flexibility to establish the precise criteria. Finally, corrective factors are sometimes implemented to exclude some lands from the objective to attain the said criteria (as it might not be relevant for all land), which is not the case for nutrients. As an example, regarding soil salinization, naturally saline land areas shall be excluded from these criteria.

201. However, as exposed for nutrients excess, several of the criteria to qualify soils as being healthy remain under the jurisdiction of MS's. Further, in some cases, MS's have full freedom to establish the criteria for healthy soil, even for vital indicators such as soil acidification, loss of soil biodiversity, and topsoil compaction[431]. Consequently, combined with MS's latitude in transposing the directive, contrary to a regulation, EU State members could potentially retain disparate criteria to qualify and define healthy soil in agriculture. This could complicate the process of determining the level of sustainability in agricultural activities, when transposing such indicators and criteria into the Taxonomy technical screening, thus impeding the focused promotion of optimal practices. Moreover, it could also undermine the additionality of investments and the confidence of providers when supporting such undertakings.

202. Such flexibility also disregards the available scientific literature which is making significant progress in identifying comprehensive indicators and thresholds for soil health[432]. This deficiency could hopefully be improved via delegated acts in the future. It could notably help limit the focus on indicators and associated ecosystem services with the most marketable potential, such as SOC, while disregarding the protection of other less marketable soil elements and ecosystem services that are also necessary to attain healthy soils in Europe[433].

203. Notwithstanding, when transposing the directive MS's are not prevented from introducing "more stringent protective measures"[434]. Making use of the precautionary and the principle of preventive action, justified by all the unknowns on soils, MS's could therefore adopt more comprehensive criteria to establish soil healthiness, especially through a more extensive use of central indicators. Proxies such as soil biodiversity, already provide insights to effectively grasp agricultural soil global stability, resilience, and health. Although soil biodiversity has been neglected in agricultural soil conservation[435], it is a promising indicator

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[431] *Ibid.*

[432] As started with the new "Infrasol" research project, in France, presented in: RENAULT Pierre, *et al.*, "From soil properties to quality indicators to support public policies and meet the needs of society", *Op. Cit.*

[433] HERMON Carole, "Soil protection in Law", *Op. Cit.*

[434] Pursuant article 193 of the TFEU.

[435] COMMISSION STAFF WORKING DOCUMENT […] Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Soil Strategy for 2030Reaping the benefits of healthy soils for people, food, nature and climate {COM(2021) 699 final}, SWD(2021), Brussels, 17.11.2021. As underlined in the Soil Strategy Synopsis report of the open public consultation, this lack of biodiversity focus dates way back from the 2006 Soil Strategy and persists until this day. Additionnaly, some papers from this consultation suggested to focus more on humus build-up and soil fertility indicators as they could be more representative of soil health, while suggesting the non-feasibility of the 4 per 1000 initiative. (starts page 45 - Commission consults on new EU Soil Strategy. https://ec.europa.eu/environment/news/commission-consults-new-eu-soil-strategy-2021-02-02_en)

to reinforce at the EU level as it is said to constitute the backbone of agroecosystem health, by "regulating the processes that underpin the delivery of ecosystem goods and services in terrestrial ecosystems" [436]. Therefore, soil biodiversity could be established as a unified and securing indicator, providing a holistic view when assessing the additionality of the practices implemented, as well as providing much-needed clarity when investing in agriculture[437].

2. Stability through soil biodiversity as a promising proxy indicator[438] for agricultural soil health.

204. Soils, as the largest habitat on Earth[439], are "crucial for enhancing biodiversity and the stability of ecosystems"[440]. Despite this, soil biodiversity, and biodiversity considerations in general, have been "accessorized" when protecting ecosystems. through the "hierarchization of (environmental) challenges", with Climate Change (and thus SOC considerations) at the forefront regardless of their common interdependencies to reach their respective objectives[441].

205. However, biodiversity (in agroecosystems and soils) provides a promising prospect for a holistic and appropriate indicator for agricultural soil health. This by considering soil biodiversity, with its microbes, elements, fauna, and fungi as powerful actants and protectors of ecosystem networks that could help us to navigate and govern through the uncertainty of soil unknowns[442]. As explained by Alix Vollet, focusing on enhanced biodiversity through the notion of ecosystem stability as a legal security on additionality might be pertinent, as it can reinforce ecosystem stability in a changing environment[443]. This knowing that all "ecosystems services will be threatened if the rate of extinctions continues to increase" [444]. Further, enhanced biodiversity ensures the resistance and resilience of such agroecosystems[445], thus the perdurable

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[436] TSIAFOULI Maria A., THÉBAULT Elisa, SGARDELIS Stefanos P. *et al.*, « Intensive agriculture reduces soil biodiversity across Europe », *Global Change Biology*, 21, 2015.

[437] Indeed, "defining investments for agriculture and climate change mitigation has been hampered by a lack of simple criteria" as enounced in the CGIAR Research Program on Climate Change, Agriculture and Food Security. 2020. Climate Bonds Initiative (CBI), EU Taxonomy for Sustainable Finance, and Multilateral Development Banks (MDBs) integrate agriculture criteria and targets for finance assessment. Reported in Climate Change, Agriculture and Food Security Annual Report 2020. Outcome Impact Case Report, 2020. https://cgspace.cgiar.org/bitstream/handle/10568/121214/OutcomesCaseStudySummary-CCAFS-P267-OICS3853.pdf?sequence=1&isAllowed=y

[438] We can define proxies as common context indicators, variable measurements, used to measure additionality when direct indicators or more precise and representative variables and data are not available, or too difficult and too expensive to obtain. Taking an example from soils, proxies as clay content are sometimes used to make estimations on soil structure and evolution.

[439]ANTHONY Mark A., BENDER S. Franz et VAN DER HEIJDEN Marcel G. A., « Enumerating soil biodiversity », *Op. Cit.*

[440] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*

[441] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques » *Op. Cit.* Translated by us.

[442] JASANOFF Sheila, "Future Imperfect: Science, Technology and the Imaginations of Modernity". From "Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power", Edited by Sheila Jasanoff and Sang-Hyun Kim. The University of Chicago Press, Chicago and London, 2015.

[443] VOLLET Alix « Approches juridiques du concept d'infrastructures vertes ». Chapitre 1, Titre 2 partie 2. To be published.

[444] RIDDER B., « Questioning the ecosystem services argument for biodiversity conservation », *Biodiversity and Conservation*, 17, 2008, p. 786.

[445] GRIFFITHS B. S, BONKOWSKI M, ROY J *et al.*, «Functional stability, substrate utilisation and biological indicators of soils following environmental impacts », *Applied Soil Ecology*, 16, 2001. Here the authors explain

delivery of ecosystem services by soils[446]. Hence, as an indicator, agroecosystems or soil biodiversity can act as an "insurance" for investors (public and private) to secure the stable provision of the expected ecosystem services, further than carbon absorption[447].

206. This vision has been endorsed by the EU, as the European Parliament recognized that biodiversity is an essential element to ensure ecosystem stability, as well as "a prerequisite for the sustainable protection of (natural) resources" [448]. Further, the European Parliament recalled that "the precautionary principle constitutes a legal basis to be applied in all legislation and decisions affecting biodiversity"[449], as for soils. This, especially to apprehend uncertainty when deciding as the "lack of adequate scientific data should not be used as an excuse for inaction", a quote to be remembered when appreciating the Soil Monitoring directive[450]. Furthermore, the notion of stability is very close to the notion of "ecosystem integrity", enshrined in the Paris Agreement from 2015[451], which could also be used as "a safeguard to preserve biodiversity" and the delivery of ecosystem services, especially when the promoted practices don't take into account environmental challenges comprehensively (such as with carbon capture)[452].

207. Such affirmations could be materialized by broader certifications and labels[453] regarding products fostering agricultural soil health. This by establishing the enhancement and conservation of biodiversity as a central indicator and requirement on the specifications to be upheld, which would then be approved by a certification body, in order to be granted those production labels or the capacity to produce certifications on soil health[454]. As suggested by the Commission, a system of "soil health" certificates could be established to be marketed and help

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that "Resistance is defined as the ability of the soil to withstand the immediate effects of perturbation, and resilience the ability of the soil to recover from perturbation." Contrary to resilience which is the capacity to recover after a perturbation. Also, "functionnal stability is used here to describe the stability of biological funciton to perturbation, rather than the stability of physical structure or chemical properties". https://www.sciencedirect.com/science/article/abs/pii/S0929139300000810

[446] SWIFT M. J., IZAC A.-M. N. et VAN NOORDWIJK M., " Biodiversity and ecosystem services in agricultural landscapes - are we asking the right questions? ", *Agriculture, Ecosystems & Environment*, 104, 2004. p. 121.
While knowing that large areas are showing symptoms of resilience loss: Rocha, J. C. Ecosystems are showing symptoms of resilience loss. *Environ. Res. Lett.* **17**, 065013, 2022.

[447] SCHNEIDERS A. et al., « Biodiversity and ecosystem services: Complementary approach management? », Ecological Indicators, 21, 2012, p. 124.
This could be particularly interesting for insurance companies as costs of agricultural losses, related to environmental hazards are getting more and more unpredictable and serious. See: LE MONDE, mardi 9 juillet 2023 1296 mots, p. 18,19 "La menace d'une France inassurable." https://www.lemonde.fr/planete/visuel/2023/07/09/la-menace-d-une-france-inassurable_6181200_3244.html

[448] JAX K. et HEINK U., "Searching for the place of biodiversity in the ecosystem discourse", *Biological Conservation*, 191, 2015, p. 203. As cited in European Parliament resolution of 20 April 2012 on our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011/2307(INI))OJ C 258E , 7.9.2013, p. 99–114.

[449] *Ibid,* Target 14.

[450] *Ibid.*

[451] Article 7, (9) of the Paris agreement (2015).

[452] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques » *Op. Cit.*

[453] Labels reward farmers through the market, as they inform consumers about the positive environmental impact of the product and allow them to pay a premium price for it, hence supporting more sustainable practices.

[454] As explained by Maylis Desrousseaux, knowing that such specifications already exist for OF and other labels such as the "Haute Valeur Environnementale" label (which is much more flexible) in France. . See also the article L.611 of the french rural code. DESROUSSEAUX Maylis, Thesis "La protection Juridique de la Qualité des Sols", *Op. Cit.*

valorize the efforts done by undertakings fostering soil and agroecosystems health, as well as "soil health passports" to ensure soil health when carrying land transactions, an initiative that could further promote soil health protection[455]. Furthermore, soil health certifications could be calibrated with the EU Ecolabel, a voluntary scheme that requires for example a minimum portfolio greenness threshold of 50 %, as measured by alignment with the EU Taxonomy, for financial providers, even though its scope of action is much broader[456].

208. Thus, this approach could provide incentives and a gateway for investors to foster agricultural soil health[457], knowing that issuers for soil health certificates could be further accompanied by tax of financial assistance such as for OF[458]. However, it's worth noting that this proposition has not been taken up by the Soil Monitoring directive and could therefore be further explored.

209. Nonetheless, as underlined by Alexandra Langlais, such approaches are mostly "modeled on the policies implemented to combat Climate change, such as with marketable biodiversity units following the example of carbon certifications"[459]. This could allow, as for carbon[460], the adoption of offset mechanisms for agricultural soil health and more broadly agroecosystems, altogether with the same associated hazards and risks of disengagements when the capacity to produce additional ecosystem services reaches its limits (as with SOC saturation)[461]. But to provide more effective safeguards for comprehensive protection and enhancement of agricultural soil health, innovative contracts[462] and real obligations provide a pathway to secure the long-lasting environmental additionality of such undertaking.

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[455] COM/2021/699 final, *Op. Cit.*Page 19.
Also, similar certifications are already being implemented in Germany for example for certified nature conservation projects which also allow crowdfunding or partnerships with companies. See PEÑALOZA Félix González, « AgoraNatura DE - novasoil », published 24 november 2022, under the NOVASOIL project [Accessed the 8th of August 2023].

[456] Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel (Text with EEA relevance) *OJ L 27, 30.1.2010, p. 1–19.* As further completed by the SFDR regulation on its requirements under article 8 and 9. See the report of the European Securities and Markets Authority (ESMA), "EU Ecolabel: Calibrating green criteria for retail funds". ESMA document number: 50-165-2329, (2022). ISBN 978-92-95202-50-4, 2010.

[457] As the Soil Monitoring directive proposition encourages MS's to do, to complement the CCR. See motive (28), Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.*

[458] Indeed, OF and similar undertakings are supported through the second pilar payments of the CAP and, in France at least, though tax credits amounting from 4500 to 5000 euros for undertakings granted with the certification provided in article 611-6 of the Rural Code. See article 84, (2) and (3) of the LOI n° 2021-1900 du 30 décembre 2021 de finances pour 2022 (1) NOR : ECOX2126830L ELI : https://www.legifrance.gouv.fr/eli/loi/2021/12/30/ECOX2126830L/jo/texte

[459] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques » *Op. Cit.*

[460] See *supra* paragraph (page 54).

[461] MORENO-MATEOS David, MARIS Virginie, BÉCHET Arnaud *et al.*, « The true loss caused by biodiversity offsets », *Biological Conservation*, 192, 2015.

[462] Defined as: "Contractual arrangements that incentivise farmers to produce environmental public goods alongside private goods, but which are (in part) still experimental and deviate from mainstream AECMs." By: KELEMEN Eszter, *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*

3. Perennity through innovative contracts as safeguards for sustainable investments in soil health.

210. The application of the precautionary principle and the principle of preventive action allows us to manage uncertainty. But they are vulnerable to circumstances shifts affecting stakeholders involved in fostering soil health. It these stakeholders were to withdraw their involvement it could reverse all the gains made for the soil by reinstating detrimental practices and their associated drawbacks. For example, going back to tillage after practicing SSM would deplete most of the SOC absorbed as well as undermine the progress made regarding soil structure. Thus it could empty the certifications produced of all their substance in terms of additionality. This has been identified as a major hurdle in agri-environmental contracts to provide effective long-term environmental benefits as, taking the example of the CAP, the obligations established therein are for a limited period[463].

211. However, innovative contracts present a hopeful potential remedy, especially to establish enduring obligations, that could therefore be directly linked to the property to be protected, in this case, agricultural land[464]. They are presented as "a pertinent means of action in a society that protects individual rights" altogether with the progressive "contractualization" of environmental law, with engagements from proprietors and land managers that could complete the lack of public action on establishing enduring obligations on soil management[465]. As exposed in the comprehensive review of the European CONSOLE report, those contracts can take multiple forms depending on the State legal system and can be adapted to different kinds of environmental goods or services to be delivered, the contracting parties, etc.[466] Such flexibility is combined with the binding nature of such agreements following the *"pacta sunt servanda"* rule (agreements must be executed and in good faith).

212. For example, among many other possibilities, to ensure that undertakings all along the value chain take responsibility[467], value chain contracts have emerged as a promising and welcomed tools, for stakeholders, combined with labeling and certification schemes, to distribute more equally the benefits resulting from the implemented practices, as well as to mobilize the contributory capacities of stakeholders along the value chains[468]. Indeed, in such contracts the production of environmental services and goods "is achieved through specific obligations included in contracts for agricultural or forestry between primary producers and processors or retailers" [469]. These commitments require that all actors within the value chain endorse SSM practices of primary producers by paying them a more proportionate share of the

[463] ROBINSON Brian E., MASUDA Yuta J., KELLY Allison *et al.*, « Incorporating Land Tenure Security into Conservation », *Conservation Letters*, 11, 2018.
[464] For a comprehensive review see: KELEMEN Eszter, MEGYESI Boldizsár, MATZDORF Bettina *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*
[465] BENEZECH-SARRON Patricia, "La protection contractuelle des sols : Contribution à l'étude des contrats affectant la propriété foncière à la protection de l'environnement »,*Op. Cit*.
[466] LANGLAIS Alexandra, *et al.* « Report on Legal Aspects on Contractual solutions for the delivery of public goods", *Op. Cit.*
[467] See *Supra*, §141.
[468] LANGLAIS Alexandra, *et al.* « Report on Legal Aspects on Contractual solutions for the delivery of public goods", *Op. Cit.*
[469] *Ibid.*

value obtained on sale, reflecting the premium prices that end consumers pay to acquire more sustainable products. Hence, the financial burden of implementing SSM practices is more effectively distributed, enhancing farmers' ability to uphold these practices along with the delivery of associated ecosystem services, even during periods of transient economic challenges.

213. From another angle, collaborative schemes, such as with land tenure contract solutions on a landscape scale, could allow for collective SSM implementation, consequentially improving the delivery of ecosystem services as agroecosystem enhancement is optimized[470]. More audacious, the emergence of "real covenants"[471] should also be considered in soil conservation. Indeed, real obligations, like those established in France following the model of US conservation easements, aim to prohibit certain uses of the land for all proprietors and tenants (present and future)[472] such as the destruction of trees or depleting soil functionality through unsustainable management. Hence it allows land assets "to be earmarked for environmental protection" for a long duration by proprietors establishing such obligations (as they are voluntary contractual tools)[473]. In France, contrary to the US, those real obligations cannot be perpetual (as perpetual agreements are forbidden) but can last up to 99 years which is already a good guarantee for durability in SSM. At last, such contracts do not benefit a dominant estate, unlike easements, but a public authority or a private legal entity acting for environmental protection that will ensure that the commitments are respected and will sometimes assist proprietors to do so.

214. Finally, those novel contractual solutions are sometimes "considered to support sustainable agriculture more effectively than mainstream AECM contracts"[474]. This as they provide a larger room for negotiation while still being bound by regulatory constraints as the obligation to go beyond pre-existing regulatory standards (As SMR from the CAP). However, this flexibility can also lead to a reduction of requirements to convince the producer concerned to enter into a contract, as opposed to traditional binding and descending obligations. Nonetheless, knowing that the biggest barrier to setting up such schemes, for SSM, monitoring, and training, is the lack of investments to support them, as tax incentives are sometimes insufficient[475], SFI providers could be of huge help.

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[470] KELEMEN Eszter, *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*

[471]Real covenants establish real obligations. And we understand a real obligation as one which is linked to a material object (the land) and not to the debtor. A *propter rem* obligation. Therefore, if the debtor abandons his ownership of the concerned property, he can be released from its *propter rem* obligation. Moreover, as the obligation is bound to the material object (for example of safeguarding the property's' ecological functionality), it remains linked to it even after a transfer of property, thus bounding the new owner (to preserve the land here).

[472] See article L 132-3 of the French Code of the environment.

[473] BENEZECH-SARRON Patricia, "La protection contractuelle des sols : Contribution à l'étude des contrats affectant la propriété foncière à la protection de l'environnement », *Op. Cit.*Translated by us.

[474] KELEMEN Eszter, *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*

[475]As for real covenants in France. CIZEL O., « Quel bilan pour les obligations réelles environnementales ?» Dalloz actualité 15 juin 2021, 2021.

215. Indeed, through green bonds of community funds SFI providers could help set up those schemes[476]. In exchange, these schemes could be established and displayed as guarantees ensuring their investments as well as the credibility and additionality of the products resulting from such investments (as certificates). Likewise, in light of the unknowns we could be dealing with soils, the unpredictability of future challenges in a changing world, and the contextual heterogeneity in Europe[477], the adaptative dimension of those contracts should not be neglected in order to adapt to the aforesaid challenges[478].

216. In consequence, stability requirements through biodiversity-based indicators on soil health could be inserted into the future technical screening criteria of the EU Taxonomy for agricultural activities to ensure additionality. Furthermore, establishing real covenants or other innovative contracts and tools could be suggested or even required for agricultural undertakings implementing SSM, to ensure their long-lasting contribution to the Taxonomy environmental goals on soils, biodiversity, and climate.

217. On the other hand, public subsidies and aids could also provide more financial securities to support farmers willing to transition as well as to help them face such challenges. Even if the Taxonomy framework could be modeled in a way that investments are channeled towards undertakings with optimal practices, public interventions, and investments could enable the Taxonomy transformative initiative to gain momentum by initiating Taxonomy-aligned investments for soil health and thus reducing the risks associated with such novel investments. This could be done by integrating the EU Taxonomy as a constraining referential for public investments while compensating for the Taxonomy biases with a more comprehensive support of the agroecological transition.

II) Towards a more external effectivity of the Taxonomy: building the synergy between public investments, the Taxonomy, and the Soil Health Law.

218. As a reminder, the Action Plan on Financing Sustainable Growth broadly aims to integrate sustainability considerations in the investment decision-making process, especially through the EU Taxonomy as a benchmark for sustainable finance policies[479]. In this case, investments can be broadly interpreted, as public investment policies could also fall into the scope of this regulation. Further, this benchmark could even be set as a more constraining framework for public authorities than for private endeavors, since investing in sustainable activities (fostering agricultural soil health) serves "the public interest" a notion that is at "the cornerstone of public action" and legitimizes State's normative constraints[480].

[476] SACHS Jeffrey D, *et al.* (dir.), "*Handbook of Green Finance*", *Op. Cit.*
[477] KELEMEN Eszter, *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*
[478] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques » *Op. Cit.*
[479] COM/2018/097 final, *Op. Cit.*
[480] As in France, and in many other countries as well. See : CONSELL D'ÉTAT, "Rapport public 1999". Jurisprudence et avis de 1998. L'intérêt général, La Documentation française, 1999, p. 245.

Therefore, public authorities could align their investments with the Taxonomy when financing agricultural undertakings and further support optimal practices for soils, in light of the Soil Monitoring directive propositions. This is especially crucial to validate and establish the credibility of this normative framework, with a better coherence between agricultural policies and the EU Taxonomy. It could also support and secure the channeling of flows towards sustainable activities fostering agricultural soil health, to accelerate the process of making sustainable finance the norm across Europe, which is expected to "take years, if not decades" despite the urgency[481].

219. As it seems that the evolution of European SFI regulations "reflects a will to progressively impose sustainability standards", public providers could lead the way by going further than "voluntary submission(s)" [482] when engaging in SFI[483]. EU regulations and especially CAP investment rules in agriculture could pilot this change of direction regarding investments affecting soil health with the guidance of the criteria that emerge from the Soil Monitoring Directive proposition **(A).** Aside from naturally interlacing the EU Taxonomy and the Soil monitoring directive, this initiative could contribute to reinforcing the Taxonomy regulation "normativity"[484]. Thus it could allow this "completed" EU Taxonomy to be constituted as an authoritative benchmark for public investments in soil health, without failing to cover potential gaps **(B).**

A) Aligning European CAP investments with the EU taxonomy objectives.

220. Certainly, both EU authorities and MS's are far from being completely aligned with the Taxonomy benchmark when determining the distribution of the EU budget in agriculture, as harmful activities are still very much supported **(1).** However, even if the EU Taxonomy takes more of a "positive screening" approach as an incentive tool, its normativity could be reinforced, and "negative screening"[485] could be seen as a promising pathway in agriculture to ban the support for unsustainable practices[486]. And now that the evaluation of which activities should be excluded could be facilitated by the Taxonomy and the Soil Monitoring directive, it wouldn't seem unreasonable to impose further restrictions to receive public financing for agricultural activities that "do significant harm" to soil health, to focus on supporting Taxonomy aligned undertakings **(2).**

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[481] EU HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE, "Financing a sustainable european economy", Final report, 2018. https://finance.ec.europa.eu/system/files/2018-01/180131-sustainable-finance-final-report_en.pdf

[482] Taking the expression of :JOULE R-V, BEAUVOIS J-L., "La soumission librement consentie", PUF 1998.

[483] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.*

[484] Normativity is "the quality attached to a statement aimed at imposing a certain behaviour by means of constraint". SIRINELLI J., « L'incertitude normative en droit de l'Union européenne », Annuaire de droit de l'Union européenne 2011, éd. Panthéon-Assas, 2013. 91, spéc. p. 92

[485] This "negative screening" approach has been emerging at the initiative of some European States and consists on excluding unsustainable activities from being recipients of public investments For example, via excluding coal related activities from getting public or sovereing funds support. As in Finland : NOVETHIC, « Le fonds norvégien va exclure le charbon », disponible sur : https://www.novethic.fr/actualite/finance-durable/isr-rse/climat-le-fonds-norvegien-va-exclure-le-charbon-143343.html , [Accessed the 8th of August 2023]

[486]CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.*

1. The limited support of Taxonomy-aligned activities by CAP subsidies.

221. Firstly, it is important to acknowledge that the CAP is "the main tool for guiding and supporting European agricultural productions towards increasingly resilient and sustainable systems"[487]. However, as structured with the current normative framing, the CAP is very much shaped by MS's through national strategic plans (NSP)[488]. NSP's give MS's an added flexibility when arbitrating the national CAP budget, and sometimes allow them to keep financing business as usual in agriculture as the constraints to strive for increasing sustainable investments in agriculture (assimilated here to subsidies) are not sufficient[489]. This despite de fact that MS's shall ensure that "all agricultural areas are maintained in good agricultural and environmental condition", which is not the case today[490].

222. As recognized by farmers and non-farmers, the CAP "does not enough to address ongoing environmental degradation" despite its "greening"[491]. Indeed, there is still a clear uneven distribution between payments under Pillar 1 (direct payments), mostly supporting conventional farmers and which is consistently allocated with the majority of the CAP budget, and payments under Pillar 2, which mostly supports sustainable practices such as agri-environmental measures, OF, etc.[492]. As a result, the CAP has not succeeded in mitigating the impacts of agricultural activities on biodiversity[493] and even climate, although half of the EU's climate-related expenditures are from the CAP [494].

223. To reverse this tendency, EU policymakers could "set targets on environmental indicators and incentivize them by providing producers with credit or tax breaks or by reallocating agricultural subsidies" [495]. Such targets and indicators could be drawn from the Soil Monitoring directive, as beforementioned, using guidelines and goals of the EU Taxonomy in the event of the adoption of a delegated act on agriculture taking full account of the provisions of the directive. Moreover, the Soil Monitoring directive already underlined that MS's should "ensure synergies between the different measures adopted under other EU legislation that may have an

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[487] COMMITTEE OF THE REGIONS, opinion 8-9 february, COR-2022-03978-00-01-PAC-TRA. *Op. Cit.*

[488] Regulation (EU) 2021/2115. *Op. Cit.*

[489] Taking the example of the French government, as explained by GADBIN Daniel, « Droit de l'Union européenne - Réforme de la PAC à la française : peut-on échapper à l'immobilisme ? - Repère par Daniel GADBIN - Lexis 360 Intelligence », 2022.

[490]As set in article 13 of the: Regulation (EU) 2021/2116 of the European Parliament and of the Council of 2 December 2021 on the financing, management and monitoring of the common agricultural policy and repealing Regulation (EU) No 1306/2013, OJ L, 2021. Specially from article 12 and 13.

[491] PE'ER Guy, ZINNGREBE Yves, MOREIRA Francisco *et al.*, « A greener path for the EU Common Agricultural Policy », *Science*, 365, American Association for the Advancement of Science, 2019.

[492] *Ibid.*

[493] PETIT Yves, « Pacte vert, PAC et biodiversité : la nécessité d'une entente plus cordiale », Revue de droit rural, 486, octobre 2020, p. 23-27. The author even underlines that the CAP has contributed to biodiversity decline.
See the also EUROPEAN COURT OF AUDITORS, Special Report 13/2020: "Biodiversity on farmland: CAP contribution has not halted the decline" *Op. Cit.*

[494] EUROPEAN COURT OF AUDITORS, Special Report 16/2021, *Op. Cit.*

[495] POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op. Cit.* The authors underline that agricultural subsidies now exceed half a trillion dollars a year worldwide, using the data provided by the Organization for Economic Co-operation and Development (OECD), in the"Agriculture policy monitoring and evaluation 2017".

impact on soil health", such as the upcoming Nature Restoration Law, the CAP, and the Taxonomy to support the coherent implementation of SSM and regeneration practices[496].

224. In consequence, using the completed DNSH criteria as a source of "normative exclusions"[497] for CAP subsidies, through the implementation of the Soil Monitoring Directive proposition SSM principles and indicators on soil healthiness, could be an interesting path to channel investments toward sustainable undertakings in agriculture and have a systemic impact to improve agricultural soil health. Such requirements could also be implemented in the rules governing the use of CAP funds under the scope of the conditionality of CAP payments, by implementing SSM under Statutory management requirements (SMR) or Good agricultural and environmental conditions standards (GAEC) which condition access to CAP subsidies. This through the amendable annex III of the regulation (EU) 2021/2116[498]regarding the financing rules of the CAP as well as through the amendable annex III of the regulation (EU) 2021/2115[499] which governs the establishment of NSP from the CAP.

2. Supporting most promising SSM practices via CAP investments.

225. As explained by M. Chaaben, this normative exclusion can take two forms[500]. Firstly by excluding a whole branch of a sector, if deemed unsustainable. Secondly, it can be done with a nuanced exclusion by establishing a threshold of sustainability (for example 50% or 40% of alignment in the value chain) above which the branch is excluded. However, if the latter might suit best the agricultural sector, it could be expected to be difficult to implement knowing the difficulties in precisely evaluating each undertaking's degree of sustainability. This further emphasizes the need for broader enforcement of non-financial disclosures requirements in the agrifood sector[501] as well as on the need to monitor soil healthiness through comprehensive indicators to properly evaluate each branch's potential for additionality.

226. Using the aforesaid scale of sustainability[502], the progressive diminishing of unsustainable subsidies could be imagined, proportionally to the score obtained in the scale of sustainability[503]. But as the allocation of CAP subsidies is mostly decided by MS's since the « renationalization » of the CAP by SNP's, this could be done through sanctioning rules from the EU. Certainly, even though there is growing pressure on MS's to refrain from allocating EU

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[496] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit*. Still, we have to underline that despite its potential support on agricultural activities fostering soil health, the Taxonomy is not mentioned within the proposition.
[497] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.*
[498] Regulation (EU) 2021/2116 of the European Parliament and of the Council of 2 December 2021 on the financing, management and monitoring of the common agricultural policy and repealing Regulation (EU) No 1306/2013, OJ L, 2021, [Accessed the 8th of August 2023]. Specially from article 12 and 13.
[499] Regulation (EU) 2021/2115. *Op. Cit.*
[500] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.*
[501] See *Supra*, §136.
[502] See *Supra*, §192.
[503] As suggested through the synopsis report of the open public consultation for the Soil action Plan when enouncing the possibility to "cut-off funding for unsustainable agriculture through the CAP." Synopsis report of the open public consultation, CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* (starts page 45 - Commission consults on new EU Soil Strategy). https://ec.europa.eu/environment/news/commission-consults-new-eu-soil-strategy-2021-02-02_en

funds to provide support for unsustainable agricultural undertakings, it appears that the discipline in adhering to such directives is still lacking among them[504].

227. As a consequence, the EU could reduce part of the allocated CAP budget, proportionally to the volume of CAP investments granted by the MS falling under the "red" label[505] as a deterrent to discipline MS's to better allocate CAP investments. Ergo, CAP investments could be channeled towards more sustainable (granted with the yellow label) or "best in class" undertakings (falling under the green label)[506]. Nevertheless, a transitional period could be strategically scheduled and planned to facilitate such a restructuring. On the other hand, improving the allocation of CAP budgets could also allow for covering potential gaps.

228. These gaps emerge from the adoption of an approach that relies, at least partially, on selling certifications related to soil health. As explained by Alexandra Langlais in her analysis of carbon certificate schemes, implementing SMM practices (for carbon absorption here) can be done in two ways[507]. First, through result-based schemes, as farmers will only be able to be compensated for SSM if they effectively manage to absorb enough carbon or reduce their emissions to allow them to produce certificates, knowing that SSM can take time to deliver results. If this hurdle can be mitigated, for example by contracts implementing "top-ups which complement the flat payments (if results are not met, farmers lose only the top-up)" or "force majeure budgets (if a justified external reason prevents the delivery of the expected results)"[508], the CAP could have an important role to compensate the hindrances of result-based schemes. Indeed, the second approach relies on implementing practice-based schemes. Here farmers are compensated solely for the implementation of good practices, as with the CAP, recognizing their potential additionality in the long term.

229. In consequence, CAP payments can cover such loopholes by acting as a safety net, through practice base payments, to ensure revenues for farmers exposed to such income difficulties when they are impeded from delivering the expected results. More importantly, this safety net should be mobilized to support farmers who simply cannot access these kinds of financing[509]. For example, when soil granularity doesn't allow for effective retention of nutrients and water

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[504] In fact, regulation 2021/2115 (90) explicitly stipulates that: "The EAFRD should not provide support for investments that would harm the environment. Hence, it is necessary to provide in this Regulation a number of exclusion rules." However, this directive is often not honored, as shown by the exposed mixed results of the CAP on biodiversity and climate issues (See *Supra*, §222).

[505] See *Supra*, §193.

[506] NOVETHIC, Lexique, *Best-in-class*, V. : https://www.novethic.fr/lexique/detail/best-in-class.html , [Accessed the 8th of August 2023].

[507] LANGLAIS Alexandra, "Legal issues of implementing agricultural soil organic sequestration as negative emission technology", Chapter taken from: Rumpel, C. (ed.), Understanding and fostering soil carbon sequestration, pp.851–876, Burleigh Dodds Science Publishing, Cambridge, UK, 2023, (ISBN: 978 1 78676 969 5; www.bdspublishing.com).

[508] KELEMEN Eszter, *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*.

[509] STRINGER L. C., FRASER E. D. G., HARRIS D. *et al.*, « Adaptation and development pathways for different types of farmers », *Environmental Science & Policy*, 104, 2020. This paper recognizes the variety of starting points for farmers when accessing to such schemes, since their capability to access them will depend on farm size, soil type, infrastructure and technology disponible, access to credit and market access etc.

or to improve SOC stocks, undertakings could have a limited capacity to produce soil health or carbon certificates. Also, some farmers could simply not have the means to deal with the associated administrative burden, knowing that result-based schemes may require costly monitoring and audit procedures, altogether affecting social justice among farmers.

230. Moreover, funds withdrawn from unsustainable activities could be partially reallocated into an adapted EU Just Transition Fund[510], to allow agricultural undertakings to shift towards more sustainable practices or activities while being equipped with suitable resources and training.

231. These funds should pay particular attention to supporting the animal production sector in its transition and exploration of alternatives considering that, for most productions, it may have a limited capacity to comply with the DNSH criteria. If viable animal production could be supported, animal product consumption and production must be discussed, being the branch of the agricultural sector that presents the majority of the associated environmental issues[511]. Certainly, there is a growing consensus in the scientific community on the need for dietary change, with reduced financial support in animal protein production since the "dietary change can deliver environmental benefits on a scale not achievable by producers"[512]. Also, a huge part of those vital benefits could be achieved only by halving the consumption of animal products, knowing that European animal protean consumption averages a surplus of 200% in dietary needs[513]. Furthermore, this transition could potentially free up significant portions of the UAA, which may be required for restoration endeavors and sustainable agriculture[514]. This knowing that a primary contention against adopting sustainable farming practices is the need for larger surfaces to attain yields on par with those in the conventional sector.

232. However, opprobrium on all livestock farming should not be so easily bestowed. Indeed, extensive livestock farming provides a unique opportunity to use and maintain environmental health in specific kinds of soils. In fact, some "mors" and "moders" soils could be specially used for livestock grazing, as they are particularly poor and humid, hence needing to be drained

[510] Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund, OJ L, 2021, [Accessed the 8th of August 2023]. This fund provides support for MS's being the most negatively impacted by the transition towards "climate-neutrality". Currently the Just transition fund is financed under the multiannual financial framework (for 7.5 billion EUR, see article 3) and under the Next Generation EU budget (10 billion EUR, see article 4). Agricultural needs could therefore be implemented as a third source of financing. However the scope of support of this regulation, established under article 8, should consequently include agricultural undertakings and further considerations on biodiversity.

[511] LEIP Adrian, BILLEN Gilles, GARNIER Josette *et al.*, « Impacts of European livestock production », *Environ. Res. Lett.*, 10, IOP Publishing, 2015. Withouth being extensive, and not lingering into the important issue of animal suffering, Livestock productions system occupy more than 65% of the UAA of the EU, and contributes (for the agricultural sector) for more than 78% of terrestrial biodiversity loss, 80% for soil acidifiaction and air pollution, 81% in GHG emissions, 73% in water pollution, etc...

[512] POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op. Cit.*

[513] WESTHOEK Henk, LESSCHEN Jan Peter, ROOD Trudy *et al.*, « Food choices, health and environment », *Global Environmental Change*, 26, 2014.

[514] AUBRON Claire, « Penser l'élevage à l'heure de l'anthropocene » [online], La Vie des idées, La Vie des idées, november 2021, [Accessed the 8th of August 2023]. https://laviedesidees.fr/Penser-l-elevage-a-l-heure-de-l-anthropocene.html

for cultivation, added to soils located unto uncultivable slopes[515]. Moreover, some livestock productions provide vital ecosystem services such as carbon sequestration, ecosystem preservation, and the provision of organic fertilizers, as well as maintaining soil health and enhancing biodiversity in specific areas (for example with silvopastoral systems). They could therefore be valorized, potentially as "substantially contributing" activities[516].

233. At last, when going beyond the CAP, the EU also seems to consider that sustainability criteria could be generally used for disciplining MS's public investment, as suggested through the EU State Aid Guidelines on Climate, Environmental Protection, and Energy (CEEAG).[517]

B) Improving the EU Taxonomy as a constraining referential for MS's public investments.

234. The CEEAG, which emerges from the European Green Deal, appears to trigger a shift in the State Aid regime and seems to be a corollary of the EU Taxonomy, as it aims to facilitate public investments (by MS) into sustainable activities. Even though it focuses on climate considerations, especially in GHG removal investments (potentially including carbon farming) or the exclusion of fossil fuels, its scope also integrates biodiversity damages, the transition towards a circular economy, etc. This intervention aims to address cases where the concentrated support for sustainable ventures might inadvertently lead to competition concerns[518].

235. Indeed, this regulation helps MS's to surmount potential constraints and thresholds related to EU State Aid regulations when providing public financial assistance to such activities. This with added flexibility and a simplified assessment for MS's "sustainable" State aids, appreciated in the light of the Taxonomy benchmark (but not exclusively), and excluding cases of disproportionate damages to trading conditions[519]. For example, aids might be granted without a competitive bidding process, even if the measures benefit a particularly limited number of beneficiaries (such as undertakings fostering soil health), if lowered transparency conditions are met, altogether making a justified, necessary, and appropriate contribution to the Taxonomy objectives (and further)[520].

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[515] SELOSSE M.A., "L'origine du Monde, Une Histoire naturelle du sol à l'intention de ceux qui le piétinent ». *Op. Cit.* Pages 224 to 226.

[516] BROOM D. M., GALINDO F. A. et MURGUEITIO E., « Sustainable, efficient livestock production with high biodiversity and good welfare for animals », *Proceedings of the Royal Society B: Biological Sciences*, 280, Royal Society, 2013.

[517] COMMUNICATION FROM THE COMMISSION – Guidelines on State aid for climate, environmental protection and energy 2022 C/2022/481. OJ C 80, 18.2.2022, p. 1–89.

[518] As a reminder, without delving into the afferent jurisprudence, article 107 (1) of the TFEU provides that "any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market".

[519] Ex explained by JOURDAN- ANDERSEN B. and SKJONBORG BRUNT « State Aid (CEEAG) and Taxonomy: Two Novel Pieces of Legislation at the Heart of Europe's Green Transition », *EStAL*, 2022/3, p. 266-277.

[520] COMMUNICATION FROM THE COMMISSION – Guidelines on State aid for climate, environmental protection and energy, *Op. Cit.* See (134) for this example, section 4.1.4. More broadly section 3 plans a common assessment for the Taxonomy and State aid under the CEEAG.

236. On the other hand, when "balancing the positive and negative effects of the aid, the Commission will pay particular attention to compliance with the 'do no significant harm' principle", thus limiting the possibility of supporting unsustainable activities[521]. Such an issue was notably raised regarding the rise of payments for environmental services (PSE's) to foster public investments for soil health, and it was partially addressed with added flexibility in payments contributing to agri-environmental and climate objectives[522]. Indeed, PSE's are mostly qualified as Services of General Economic Interest by the EU judges which provide more flexibility but "does not prevent the application of competition law", a hurdle that the CEEAG contributes to address[523].

237. Hence, this approach could be giving rise to a presumption of non-compliance with the EU State Aid regime when public investments are directed into non-aligned undertakings, with the "refrain or explain" principle as the counterpart of companies "comply or explain" principle[524]. Such reasoning is applicable to institutional investors, such as central banks, that could "develop micro-prudential regulations" restricting "the funding of polluting assets" or promote "low-cost green financing of commercial banks" to compel investments into soils health.[525]

238. In consequence, the implementation of the Soil Monitoring Directive proposition SSM principles and soil indicators in the technical screening of the EU Taxonomy will be crucial to further support sustainable activities for soil health, when guiding MS's State Aid policies. This particularly considering the resurgence of subsidies rewarding farmers for their environmental contributions occurring beyond the scope of the CAP[526]. As an example, MS's increasingly use public procurements and state aids to obtain environmental services from farmers, such as to improve the quality of the drinking water distributed to users (with upstream SSM)[527].

239. This strategy could also draw strength from instances of MS's or European agencies[528] putting such initiatives into action, contributing to establishing the EU Taxonomy as a global disciplining benchmark for public investments. For instance, Belgian public funds

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[521] JOURDAN- ANDERSEN B. and SKJONBORG BRUNT « State Aid (CEEAG) and Taxonomy: Two Novel Pieces of Legislation at the Heart of Europe's Green Transition », *Op. Cit.* Page 7.

[522] As thoroughly explained (with the relevant thresholds) by ICHER Liliane, "Public Spending in the Environmental Field: The Case of Soil Protection", *Op. Cit.*

[523] *Ibid.*

[524] Knowing that the current framework hasn't been able to stop MS's from increasing the financial support provided to activities doing significant harm to environmental objectives. In France this kind of spending even rose by 1 billion Euros from 2021 to 2023, knowing that the needs for the environmental transition are estimated at around 10 billion Euros. See the French COURT OF AUDITORS, "Apprécier la contribution de la dépense publique à la transition écologique", Notes Thématiques, July 2023. https://www.ccomptes.fr/system/files/2023-07/20230707-note-thematique-Apprecier-contribution-depense-publique-a-transition-ecologique.pdf

[525] SACHS Jeffrey D, et al. (dir.), "Handbook of Green Finance", Op. Cit.

[526] HERMON C., DE FONTAINE S., « Droit fiscal agricole - Les paiements pour services environnementaux saisis par le droit fiscal - Focus par Carole Hermon et Sophie de Fontaine », Lexis intelligence, Droit rural n° 503, Mai 2022, alerte 118.

[527] *Ibid.*

[528] See for example the guidance provided by the EUROPEAN INVESTMENT BANK, *European Investment Advisory Hub*, European Investment Bank, 2017. https://advisory.eib.org/. This hub constitutes an instrumental to crowd private investments towards strategic projects but could also contribute on our endeavors.

predominantly comprise sustainable assets or investments, surpassing the halfway mark, thereby establishing a precedent for other nations to follow[529]. Such adjustments could be based on the implementation of the integration principle[530], which would enable sustainability considerations to seamlessly permeate public investment rules and further discipline MS's on regarding the inclusion of soil (and environmental) protection requirements. Furthermore, sustainability investment rules could be put into synergy with emerging public "green accounting standards", to integrate the value of natural assets (as soils) in public accounting to assist public bodies decision-making[531]. Such standards would allow to rate and effectively quantify the evolution and the contribution of MS's investments to enhance and preserve soils, and to ensure "sound use of public money"(a standard enshrined by positive law) when providing financial support[532].

240. With the CEEAG and other emergent initiatives to frame public investments under the scope of sustainability, "one could argue that State aids (at least under the scope of CEEAG) in the future will have to be assessed and interlinked with the Taxonomy screening criteria" [533]. Indeed, State aids (and public procurements) could help cover the gaps of the Taxonomy and the CAP, including non-farming activities fostering agricultural soil health as monitoring services or SFI intermediaries, to implement "a safety net for global agriculture"[534].

241. In conclusion, the suggested method might altogether contribute to "reducing the cost of capital and the risk" of private investments in agricultural soil health, secure such endeavors with more granularity, appropriate indicators, and enduring engagements, therefore constituting an interesting lever to consider in order to channel investments towards activities fostering soil health[535].

242. Nonetheless, even though most of the detailed arguments suggest the potential pertinence of such an approach, the announced "dangers" and inherent contradictions in finance should be kept in mind to erect safeguards complementing the proposed "safety" measures[536]. Indeed, this financial approach is encumbered with many hindrances that should be taken into account, altogether calling for more constraining obligations on agricultural soils.

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[529] As evaluated by the Financial Services and Market Authority when examining their compliance with the SFDR. See : FSMA, « Belgian investment funds evolve toward sustainability | FSMA », published the 16th June 2021, [Accessed the 8th of August 2023]. https://www.fsma.be/en/news/belgian-investment-funds-evolve-toward-sustainability

[530] Article 11 of the TFEU: "Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development."

[531]For additional explanations, that we will not be able to provide here, see : ICHER Liliane, "Public Spending in the Environmental Field: The Case of Soil Protection", *Op. Cit.*
Knowing that green accounting standards are supported by the EU with, for example, the "KIP-INCA" project (Knowledge Innovation Project - Integrated system for Natural Capital and ecosystem services Accounting).

[532] *Ibid.*

[533] JOURDAN- ANDERSEN B. and SKJONBORG BRUNT « State Aid (CEEAG) and Taxonomy: Two Novel Pieces of Legislation at the Heart of Europe's Green Transition », *Op. Cit.* Page 7.

[534]As suggested by POORE Joseph et NEMECEK Thomas, « Reducing food's environmental impacts through producers and consumers », *Op.Cit.*

[535] DUCHÊNE Sébastien, « Review of Handbook of Green Finance », *Op. Cit*.

[536] See *Supra*, §104.

Chapter 2: Governance limitations and the risks of a financial approach to foster agricultural soil health.

243. One could argue that a synergy between the EU Soil Health Law proposition and the EU Taxonomy might have a restricted capacity in empowering farmers to durably engage in the agroecological transition. These perspectives highlight the need to rethink agricultural and financial governance to avoid a predominantly top-down approach with limited consideration of stakeholders' needs, as SFI recipients, and the potential neglection of SFI beneficiaries, like soils *per se* and more broadly environmental entities[537] **(I).** Further, many underlined that market-driven methods have demonstrated limited effectiveness and, in some cases, excessive risks, when aiming to deliver enduring outcomes to support agricultural soil health **(II).**

I) Limitations on the Taxonomy financial governance[538] to establish and apply investment criteria on agricultural soil health.

244. If sustainability criteria for agricultural undertakings are integrated into the EU Taxonomy, relevant stakeholders might have a limited capacity to shape these criteria, even if they have been constructed by following the model provided by the Soil Health Law. These concerns arise regarding the need for adaptability and impartiality when dealing with such intricate environmental matters, and to compensate for the imbalances of a potential restructuring of the agricultural sector **(A).** Additionally, it's essential to acknowledge limitations within local governance and potential avenues for enhancement when implementing the proposed framework **(B).** Especially when knowing that the use of Market-Based mechanisms, as instruments of public policy, sometimes achieves a "transfer of decision-making power from public agents to private agents", in particular for the definition of "environmental objectives; the choice and design of instruments; and concrete decisions on the field".[539]

A) A limited role for agricultural soil health stakeholders in the governance of the sustainability criteria.

245. First and foremost, how are established the technical screening criteria for the environmental objectives of the EU Taxonomy? Article 20 of the Taxonomy mandates a Technical Expert Group[540], now named "The Platform on Sustainable Finance", to "advise the Commission on the technical screening criteria referred to in Article 19[541], as well as on the

[537] A shortcoming underlined by CUNHA F. et. al. , « Sustainable finance and investment », *Op. Cit.*

[538] We define governance in contrast to the vertical decision-making power of the State. It characterizes "the relationships between a set of institutions and players, both public and private, rather than the activity of a body centralizing executive authority"(BALME R., CHABANET D., WRIGHT V. (dir.), *L'action collective en Europe / Collective Action in Europe*, Paris, Presses de Sciences Po, 2002, p. 108.). Indeed, faced with the "disenchantment of politics", and the retreat of "bottom-down" interventions in favor of more consensualism and less constraint, governance approaches are often characterized by the "weakening of the public-private hierarchy" in favor of more horizontality in decision-making (HERMET Guy , KAZANCIGIL Ali, PRUD'HOMME JeanFrançois (dir.) *La gouvernance : Un concept et ses applications*, Collection Recherches internationales, Karthala, 2005, p. 232.).

[539] BROUGHTON, E., PIRARD, R., "What's in a name? Market-based Instruments for Biodiversity", *Op. Cit*. The authors underline that the last level, i.e. the decisions taken at the end of the chain by the agents, especially shows this transfer, and that this observation is sometimes less true for the other levels.

[540] Established by the Action Plan on Financing Sustainable growth (COM/2018/097 final, *Op. Cit.)* in July 2018.

[541] Including the technical screening criteria, the DNSH criteria and minimum safeguards.

need to update those criteria"[542]. The Platform builds on a prioritization of the economic activities with the biggest potential to contribute to the Taxonomy environmental objectives. Thus, as beforementioned, they could include activities fostering agricultural soil.

246. Then, the propositions of the Platform are published in the form of draft technical screening criteria for stakeholders' feedback. Additionally, they are discussed by the Member States Expert Group on Sustainable Finance and may even include ad hoc discussions with the Members of the European Parliament. Then, based on these examinations, those of the Commission, and after receiving targeted calibrations as well as technical modifications, the final delegated act is adopted by the Commission. Finally, it will be transmitted to the European Parliament and the Council for scrutiny, which may last between four to six months, and will then be adopted or rejected, but cannot be amended.

247. In consequence, the Platform plays a key role regarding the governance of the sustainability criteria. This Platform is constituted of representatives of the EU, experts representing relevant private stakeholders, civil society, and experts with proven knowledge and experience (including academia)[543]. However, when further examining the permanent Members and Observers of the Platform plenary, there is a clear predominance of corporate financial and industrial stakeholders, as well as a lack of biodiversity and agroecosystems experts[544]. All while knowing that such "experts are indispensable to the politics of knowledge societies, (since) they tame the ignorance and uncertainty that are endemic to modernity and pose threats to modernity's democratic and managerial pretensions."[545] This may raise doubts on the capacity of agricultural soil health and biodiversity considerations to permeate the sustainability criteria as they are less represented. Similarly, this gap may affect the capacity for farmers to obtain the adaptability required for agricultural endeavors in a changing world, along with an enhanced recognition of soil health and biodiversity as fragile actants whose decline could impact the intricate interconnectedness of living systems that sustain our societies[546].

248. Nonetheless, due to the objectivity and transparency measures established in the Taxonomy regulation[547] we may presume that the technical screening criteria are founded upon relevant sector-specific and scientific literature on which there is a consensus[548]. However, this

[542] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.*Especially see Article 20, (2), (a) and following.
[543] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* See article 20.
[544] Despite including the European Environment Agency, the EU Agency for fundamental rights or the European Network of the Heads of Environment Protection agencies, we could only identify one member that might be specialized in agricultural and biodiversity challenges (the NGO "Agent Green") among sixteen private members. See: https://finance.ec.europa.eu/system/files/2023-05/eu-platform-on-sustainable-finance-members_en.pdf
[545] JASANOFF SHEILA, "Designs on nature: science and democracy in Europe and United States", ISBN 0-691-11811-6, Princeton University Press, 2005.
[546] JASANOFF Sheila, "Future Imperfect: Science, Technology and the Imaginations of Modernity". *Op. Cit.*
[547] See article 19 and 20. Regulation (EU) 2020/852.
[548] LUCARELLI Caterina, MAZZOLI Camilla, RANCAN Michela *et al.*, « Classification of Sustainable Activities », *Sustainability*, 12, Multidisciplinary Digital Publishing Institute, 2020. This claim may be true when establishing the technical criteria for specific sectors that draw less controversy such as the renewable energy sector. However, even if the majority of scientific papers relating to the Taxonomy are on Agricultural and biodiversity/ecosystem topics (behind Water and Marine resources and accounting altogether for 94% of the

is not always the case, as in some cases legal criteria might diverge from the core objectives and the accompanying scientific consensus.

249. This discrepancy can arise from the necessity to accommodate the specific requirements of the relevant sector and MS's requests. Apart from the example of the aviation sector[549], some authors underlined that the criterion for inclusion is not always based on scientific evidence as it should "to protect the integrity of the Taxonomy"[550]. For example, (industrial) "Carbon Capture and storage is included in the Taxonomy despite being an unproven technology at scale"[551]. The same is true regarding Gas, despite being a fossil fuel, whose inclusion is justified by the circumstances of the energy crisis (started with the Russian military aggression in Ukraine) and the pressure of many MS's, rather than by a scientific consensus on this matter[552].

250. The same may also occur for the agricultural sector sustainability criteria, with productivism being currently in vogue in agriculture, as the EU and MS's manifested a "desire to free up the production potential", while disregarding environmental concerns, "in order to compensate for the reduction in imports and contain prices" emerging from the war in Ukraine[553]. The absence of considerations for long-term environmental challenges, even if justified by this major conflict, may pose a hurdle when attempting to incorporate elements of longevity in supporting agricultural endeavors.

251. Acknowledging some of these hindrances, the European Economic and Social Committee has proposed the establishment of a "European Food Policy Council."[554] This body would aim to engage local stakeholders within the food system governance and incorporate the representation of regional rural environmental concerns, alongside the representation of academic experts, scientists, and civil society organizations, among others. By incorporating akin instances in the Platform, coupled with an increased involvement from environmental

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sample), these challenges have not been followed by a proportional interest by the Taxonomy delegated acts, with appropriate sustainability and DNSH standards. In fact, climate related criteria draws most of the attention despite the absence of scientific consensus on these topics, as it may have the most potential to draw profit (See *Supra*, §157)

[549] Indeed, despite the tremendous complexity in reducing ESG impacts to achieve a sustainable life cycle in this sector it has been included into the Taxonomy criteria before agricultural undertakings (See also *Supra*, §182) See: KEISER Dennis, SCHNOOR Lars Henrik, PUPKES Birte *et al.*, « Life cycle assessment in aviation », *Journal of Air Transport Management*, 110, 2023.

[550] LYNAS Mark, "EU Taxonomy and Nuclear Energy: How to Fix Europe's Energy Crisis while also Achieving Climate Neutrality" EU Policy Review, Volume 1, 2021. Pages 211 to 219. https://www.researchgate.net/profile/AntoniosNestoras/publication/358637639_EU_Policy_Review/links/620cbf8827a9681ee185f506/EU-Policy-Review.pdf#page=227

[551] *Ibid.*

[552] Delegated regulation (EU) 2021/2139, *Op. Cit*., See §28.

[553] GADBIN Daniel, « La sécurité alimentaire dans tous ses états : le besoin de politique agricole commune. » November 2022, Revue de Droit rural, n.507. Translated by us. This will mainly be done by the recultivation of fallow (which is necessary foil soil health). Some authors even identified the risk of "a step backwards in relation to the ambitions of the Green Deal" regarding agriculture (PETIT Yves, "Le crime d'agression russe en Ukraine un coup de semonce pour l'agriculture européenne"- Focus - Revue de Droit Rural n° 502, April 2022, alerte 91).

[554] KALLAY Piroska (Rapporteur), "Towards a European Food Policy council as a new governance model in the future EU Framework on Sustainable Food Systems", European Economic and Social Committee, Plenary session 579, 14th of June 2023.

entities representatives, the comprehensive integration of the SSM principles and soil health indicators outlined in the EU Soil Monitoring Directive proposition could be reinforced[555].

252. Recognizing that "policy documents, no less than judicial opinions, can be mined for insights into the framing of desirable futures", enhancing the considerations on the long-term needs of agroecosystem and soils in governance rules, along with addressing rural needs, could contribute to charting a desirable and sustainable trajectory for the agroecological transition[556].

253. On the other hand, the challenges associated with assessing (or enforcing) adherence to additionality requirements in agriculture, which stem from an apparent lack of transparency in EU agricultural governance[557], need also to be confronted in light of the new perspectives opened by the Soil monitoring directive.

B) Establishing local governance to benchmark compliance and performance on SSM investments in agriculture.

254. Without delving into details, finding the competent authorities designated to monitor the compliance of financial undertakings with extra-financial disclosure rules and Taxonomy requirements can be a difficult task[558]. The same is true regarding the verification of farmers' compliance with contracted SSM practices, and the evaluation of their additionality[559]. Hence, from a pragmatic perspective, thoughtful governance in these domains should be contemplated to offer valuable insights into the practical execution of the sustainability criteria concerning soil health in agriculture. In this sense, the Soil Monitoring Directive proposition provides some avenues for thought.

255. According to the directive proposition, to ensure "an appropriate governance on soils" MS's shall establish "soil districts" and appoint a competent authority for each district[560]. Soil

[555] This approach, which tries to value the role of ecological entities in governance processes as they might be particularly affected, build on the concept of "eco determination" developed by BAUDOUIN Valentin, "Étude juridique sur les petites et moyennes société commercialese en transition écologique: l'entreprise sobre en contribution à une nouvelle approche de la RSE", Soutenue le 19/06/2019.

[556] JASANOFF Sheila, "Future Imperfect: Science, Technology and the Imaginations of Modernity". *Op. Cit.*

[557] EUROPEAN OMBUDSMAN, Case SI/2/2022/LDS, « Ombudsman asks Commission how it is ensuring transparency in relation to farming policy », 2022. https://www.ombudsman.europa.eu/en/news-document/en/152433

[558] For e.g., regarding financial undertakings, Article 21 (1) of the EU Taxonomy, refers to article 14 (1) of the Regulation (EU) 2019/2088 which refers to article 6 (3) of the same regulation which enounces a set of several directives to refer to depending on the qualification of the undertaking (venture capital fund, IORPs, AIFMs, insurance undertakings etc.) altogether contributing to the dilution of responsibilities in finance.

[559] For e.g., regarding agriculture, cross-compliance to a large set of Statutory management requirements and good agricultural and environmental conditions is governed mainly by the Regulation (EU) nº 1306/2013 and its delegated and implementing regulations. According to article 58 and 59, MS's shall set efficient local management and control systems in order to ensure compliance and minimize the risk of financial damage. MS's doesn't seem to have complied with those requirements as shown by the environmental results of the CAP (See *Supra* §222). This may explain the substantial reduction of the CAP funding in the 2021-2027 pluriannual budget of the EU as an implicit sanctioning of MS's deficiencies. On the new compliance measures implemented under the 2023-2027 CAP, See: AUBIN-BROUTÉ Raphaèle-Jeanne, « Suivi et évaluation de la politique agroécologique de la PAC par l'Union européenne » : Revue de l'Union européenne –663, décembre 2022

[560] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* Article 5.

districts are aimed to constitute "basic governance units (…) in particular with regard to the monitoring and the assessment of soil health"[561]. These local governance units are thought to allow the identification of "the appropriate measures to maintain or regenerate soil health" depending on "the variety of soil types, the specific local and climatic conditions and the land use or the land cover"[562]. Then, MS'S shall appoint a minimum number of soil districts corresponding to the number of the established NUTS 1 territorial units[563].

256. The NUTS administrative units subdivide the economic territory of MS's into territorial units, using existing administrative districts within the MS[564]. Moreover, the classification criteria for the NUTS levels are established by population thresholds, depending on the number of individuals having their usual place of residence[565]. However, even though it is easier to use established administrative territorial units, this administrative division has been established to collect data for statistics and could be sometimes be inappropriate for soil conservation.

257. Indeed, knowing the variability of soils, climate, biodiversity, etc., situations may differ greatly between smaller localities. This is especially the case in rural areas where the population density is lower, which may imply larger constituencies encompassing several agroecological realities. This may lead, for agricultural soil health, to an inadequacy between the established territorial competencies and the competencies needed to contribute to the implementation of SSM locally. Especially if the minimum NUTS requirements are not harmonized (such as when considering soil variability, climate, etc.) and the homogeneity within soil districts and environmental parameters is left for MS's to consider. In fact, the basic NUTS divisions could hardly make it possible to have a comprehensive apprehension of soil indicators evolution and SSM compliance. Taking the opportunity of the implementation of a new governance framework for soil, a more comprehensive approach could be envisioned, potentially leveraging the proposition for a "European Food Policy Council", for an improved inclusion of stakeholders and environmental specificities[566]. In this sense, for example, NUTS 1 could be established based on pedoclimatic specificities, then, NUTS 2 based on agricultural production "basins" and finally NUTS 3 based on consumption "basins"[567].

258. For the same reasons, the framing of technical reports (TR) should also be carefully considered, TR referring to the testing step-by-step of soil health indicators to evaluate

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[561] *Ibid.* Article 4.
[562] *Ibid.*
[563] Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS), OJ L 154, 21.6.2003.
[564] *Ibid.* See article 2 and 3 disposing that "to this end, 'administrative unit' shall mean a geographical area with an administrative authority that has the power to take administrative or policy decisions for that area within the legal and institutional framework of the Member State".
[565] For e.g. the NUTS 1 level administrative unit shall comprise between 3 to 7 million permanent residents. NUTS 2 level between 800 000 to 3 million and NUTS 3 between 150 000 to 800 000.
[566] See *Supra*, §251.
[567] SARRAZIN François, « L'objet bassin de production agricole », in *La construction sociale des bassins de production agricole*, Éditions Quæ, 2016. We understand a « basin » as a locality, which could be defined, as proposed by the authors and in addition to pedoclimatic specificities, by the "sociotechnical system, its employment system, its technical framing system (depending on agricultural practices), its local market system, agritourist routes, social and professional identities, its local politico-administrative system", etc.

improvements (or deteriorations). TR's are used to monitor additionality and compliance with SSM engagements to allow the subsequent delivery of soil health/carbon certificates. According to the Soil Monitoring directive proposition, monitoring shall be based on the established soil indicators and the soil health criteria which in some cases will be carried out by the Commission[568]. The collected data, which "shall leverage existing space-based data and products" delivered under the Copernicus program as well as the LUCAS survey (Land Use/Cover Area frame statistical Survey), should also be made available for "relevant stakeholders"[569]. Nonetheless, the task of soil monitoring is intricate in its execution, given its potentially high costs, which can pose challenges for certain regions and projects. This shortfall could potentially be mitigated by seeking increased support from SFI providers to fund monitoring endeavors.

259. However, before that, let's furnish some examples to better envision how this monitoring could carried out. TR1 could be conducted by remote sensing of soils through satellites, as for the CAP[570], to see the vegetated surface and verify compliance with no tillage requirements, for example, or the implementation of landscape features. Then, in TR2 the butterfly or farmland birds index could be used for evaluation, as the nature restoration law underlines that they "are well-known and widely recognized key indicators of the health of agricultural ecosystems"[571]. Finally, in TR3 we could envision the measuring of Soil biodiversity, or SOC (among other indicators) at plot level, to get full payment and the capacity to produce certificates. This is where the involvement of supporting undertaking under the EU Taxonomy becomes relevant, in conjunction with SFI provider's funding, as they could be responsible for carrying out soil health audits, particularly for TR2 and TR3, under supervision and in collaboration with local authorities.

260. To do so, undertakings monitoring soil health and auditing farmers' additionality, to market soil health or carbon capture certificates, could be certified through soil health accreditations[572]. Such accreditation, conditioning the capacity to deliver certificates, could facilitate the designation of those responsible when proving additionality, compliance with transparency obligations, and the implementation of the requested securities to ensure the long-term benefits of such schemes. All while setting sufficient deterrents in case of non-compliance, as with the withdrawal of the accreditation and the subsequent prohibition from practicing.

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[568] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* Article 6.

[569] *Ibid.* Also, we might note that this proposal is said to be "consistent with the proposal to transform the current Farm Accountancy Data Network (FADN) into a Farm Sustainability Data Network (FSDN)27, included in the Farm to Fork Strategy." If this network seems promising, participating farmers (to provide date) are volunteers, as most data collection exercises are not obligatory for farmers which may complicate monitoring. See: file:///C:/Users/polre/Downloads/090166e5ddfd5cc0.pdf

[570] ASTRAND Johan et. al., JRC Technical Report, "Controls with Remote Sensing in the CAP 2020+", 2020. https://op.europa.eu/en/publication-detail/-/publication/f6649e4a-7cca-11ec-8c40-01aa75ed71a1/language-en. Knowing that the overarching framing is established by the Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU PE/21/2021/INIT *OJ L 170, 12.5.2021, p. 69–148*

[571] Proposal for a Regulation on nature restoration, COM/2022/304 final. *Op. Cit.*

[572] This thread of thoughts was mainly suggested by DESROUSSEAUX Maylis (MC) in an interview.

261. It's worth noting that these interventions might constitute a limitation of the freedom to conduct business[573]. Nonetheless, they could be justified and deemed proportionate, as they serve the protection of the public interest through the protection of the environment[574]. Indeed, we have to acknowledge that the opportunity to a make profit will incentivize these undertakings to be forward-looking when seeking out farmers with whom to contract. Therefore, just as for PES, there is a risk that without proper framing, to facilitate the negotiation process financial undertakings "might tone down the demands – in particular in terms of length of the commitment"[575]. In consequence, it could reduce the potential of such endeavors to durably contribute to the soil monitoring and EU Taxonomy objectives.

262. To deal with the complexity, uncertainty, and the difficulty of the issues when dealing with commons as soils (Common-pool resources (CPR) according to Ostrom), locally accredited undertakings along with adapted local authorities could be key assistants to locally "arrange for monitoring and enforcing mechanisms"[576]. This is particularly true when dealing with small-scale problems that cannot be solved by overarching external authorities, as soils and their stressors vary tremendously depending on the locality. This complexity is further compounded by the difficulties in grasping and enforcing financial stakeholders' responsibilities and obligations in a globalized world. Therefore, "smaller scale CPRs (and local investment hubs) are more likely to self-organize and effectively govern their own CPR", especially in a changing and unpredictable world, as well as making it easier to identify those that are responsible[577].

263. Nonetheless, while we can implement measures to potentially surmount some of the limitations of an EU Taxonomy and Soil Health Law synergy, it's equally essential to acknowledge the inherent limitations within our "pragmatic" approach regarding its capacity to foster a perdurable agroecological transition.

II) The risks of a market-based approach to combat agricultural soil health degradation.

264. As beforementioned, "the rhetoric in favor of market instruments (to foster environmental protection) knows a great success"[578]. However, acknowledging the conflictual visions in SFI's potential to support sustainability considerations, we tried (non-exhaustively) to draw the line between the potentialities and the dangers of a synergy between the Taxonomy and the Soil

[573] According to article 16 of the European Charter of fundamental rights (*Op. Cit.)* the freedom to conduct a business constitutes a fundamental right and even a principle of constitutional value in France (See Décision nº81-132 du Conseil Constitutionnel, "Loi de nationalization", 16 janvier 1982).
[574] Taking the example of France, Constitutional judges have admitted that this freedom is not general, nor absolute and therefore can be limited if the public interest justifies it (Décision nº89-254 DC, 4 Juillet 1989). Further, as the protection of the environment constitutes a fundamental right and, in France, a principle of constitutional value, Constitutional judges have admitted that while conciliating those two freedoms upholding this constitutional objective might justify a limitation on the freedom of trade (Décision nº2019-823 QPC, 31 Janvier 2020).
[575] ETRILLARD C., « Paiements pour services environnementaux : nouveaux instruments de politique publiqueenvironnementale », *Développement durable et territoires*, vol. 7 n°1, p. 6.
[576] OSTROM, E. "Governing the commons: The evolution of institutions for collective action". Cambridge University Press, 1990. https://www.actu-environnement.com/media/pdf/ostrom_1990.pdf pages 182-183-184.
[577] *Ibid.*
[578]BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", *Op. Cit.* See also Supra, from §165.

Health Law[579]. Indeed, we have to be careful that the proposed synergy does not diverge from its aim, to allow the blossoming of the speculative tendencies of finance in agriculture. In that sense, some authors underline that the adoption of the sustainable finance agenda may have limited effects when rationalizing finance and "paradoxically may promote further financialization"[580]. This having in mind that financialization "has been frequently identified as one of the main root causes of our unprecedented social and environmental problems".[581]

265. As a result, facilitating private investments towards sustainable agricultural undertakings may potentially encourage financialization in agriculture, with its share of risks **(A).** While suitable regulatory frameworks might mitigate these hurdles, certain intrinsic limitations on the capacity of voluntary tools to foster sustainability in agriculture could persist **(B).** Furthermore, this may raise doubts about the pertinence of a potential Taxonomy and Soil Health Law synergy and prompts the consideration of a more holistic approach that might involve more constraining measures regarding SSM throughout the agrifood value chain.

A) A risk of further financialization in agriculture.

266. As the reader may have noted, when suggesting the possibility to partially secure and drive private investments in soil health through public investments[582]there may be a risk that financial undertakings capitalize on pre-existing investments in agriculture, and ultimately profit at the expense of taxpayers **(1).** Moreover, it could allow such undertakings to leverage financial mechanisms to capture value from soils to the detriment of farmers, their vital functions and services as well as the environment **(2).**

1. Broadening blended finance[583] in agricultural policies: the risk of an "ecological trap".

267. As underlined by the CONSOLE report, "a question at the heart of blended finance is the extent to which private investment can operate alongside public investment in future agri-environmental policies"[584]. To address this question, this report underlines the need for a "high degree of transparency" to allow, besides the good functioning of the structure, the demarcation of private financing from public funding (as CAP subsidies) and a proper evaluation of additionality[585]. This especially to avoid payments for actions that do not go beyond what is required (such as with Statutory management requirements), as well as avoiding the superimposition of payments for the same type of SSM practice (among other actions).

[579] See Supra, from §115.
[580] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op. Cit*.
[581] *Ibid.* The authors also define financialization as "the increasing importance of financial markets, institutions and motives in the world economy".
[582] See *Supra*, From §218.
[583] By blended finance we understand the strategic combination, the "blending", of private and public finance to provide additional support for sustainable endeavors.
[584] LANGLAIS Alexandra, *et al.* « Report on Legal Aspects on Contractual solutions for the delivery of public goods", *Op. Cit.*
[585] *Ibid.*

268. In fact, as explained by Garmendia *et. al.* regarding Green Infrastructures, the idea of fostering agricultural soil health through sustainable investments could "act as a conceptual ecological trap" [586]. The authors draw here an analogy from ecology, as the ecological trap represents "an idea that attracts funding and effort from specific conservation measures that could deliver better biodiversity conservation outcomes"[587].

269. Indeed, if private support supplants public funding for certain types of SSM practices, or is simply added to this funding, the initial public contribution must be coherently taken into account to prevent public money from consolidating and increasing the profitability of private investments. If done otherwise, it could result in the capturing, by investors, of public support allocated to agriculture and environmental protection, instead of assigning these funds more effectively to foster soil health. The same is true when deciding to allocate public funding towards undertakings that already have access to sustainable financing. This could draw financial efforts from more vulnerable farmers, or farmers that do not have access to private sources of financing, knowing that supporting them is essential to attain comprehensive improvements in agricultural soil health.

270. To avoid such misuse of public funding, the Taxonomy and public investment regimes need to be structured correctly and transparently. Especially acknowledging that opacity[588] in farming public investments is already a considerable and very costly issue in the EU[589]. For example, these systems could revolve around well-defined and accredited entities like community funds[590], acting as platforms for investors and agricultural stakeholders. This along with local governing bodies (such as municipalities) and civil society representatives to provide support and monitor potential abuses.

271. On the other hand, this ecological trap might also materialize through the allocation of efforts and funding towards a Taxonomy-based approach without addressing the risks of a growing administrative burden which could undermine the feasibility of our approach[591].

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[586] GARMENDIA Eneko, APOSTOLOPOULOU Evangelia, ADAMS William M. *et al.*, « Biodiversity and Green Infrastructure in Europe », *Land Use Policy*, 56, 2016. The usual example is "when an animal settles preferentially in a habitat within which it does poorly relative to other available habitats, it is said to have been caught in an "ecological trap", as other pathways would have been more effective even though less obvious. (ROBERTSON B., HUTTO R., "A framework for understanding ecological traps and an evaluation of existing evidence", 1 may 2006.https://esajournals.onlinelibrary.wiley.com/doi/full/10.1890/00129658%282006%2987%5B1075%3AAFFUET%5D2.0.CO%3B2 In our case the same could be true if we capitalize on carbon and SOC considerations, as it appears to be an effective way to improve soil health and is much easier to apprehend, while disregarding other factors and indicators that might be determinant.

[587] GARMENDIA E. *et al.*, « Biodiversity and Green Infrastructure in Europe ». *Op. Cit.*

[588] EUROPEAN OMBUDSMAN, "Ombudsman asks Commission how it is ensuring transparency in relation to farming policy", *Op. Cit.*

[589] GEBREKIDAN S. *et. al.* "The Money Farmers: How Oligarchs and Populists Milk the E.U. for Millions - The New York Times", 3 November 2019.

[590]An appropriate local structure suggested by: SACHS Jeffrey D., WOO Wing Thye, YOSHINO Naoyuki *et al.* (dir.), "Handbook of Green Finance", *Op.Cit.*

[591] KOOTHS Stefan, « EU Taxonomy: Mission impossible », *The Economists' Voice*, 19, 2023.

272. Indeed, if not done properly, our approach might further worsen the already heavy and complex administrative burden falling on farmers' shoulders, knowing that simplification is crucial here to ensure environmental results (through effective compliance)[592]. This, through added requirements to monitor additionality, to implement safeguards (such as with contract costs), compliance costs, extra-financial reporting, etc.

273. The EU Taxonomy also raised this potential hindrance[593]. In order to address it, the regulations instructed the Commission to "establish technical screening criteria that provide for sufficient legal clarity, that are practicable and easy to apply, and for which compliance can be verified within reasonable cost-of-compliance boundaries"[594]. This is also what our proposition attempts through appropriate governance on the sustainability criteria and when benchmarking compliance and additionality[595].

274. Moreover, the risk of a heavier administrative burden is one of the reasons, according to the draft proposition, on why the Soil Monitoring directive does not require MS's "to create any new programs of measures for SSM or soil regeneration"[596]. However, in line with our proposals, the proposition compels the EU to exploit as much as possible the "synergies between different certifications schemes (…) to reduce the administrative burden for those applying for relevant certifications", after having asked the commission to "facilitate soil health certification" and promote "best practices"[597].

275. However, if the presented hurdles might be possible to be framed, we have to acknowledge that Market-based instruments still "put a price on nature" to "get a premium for environmentally friendly productions" [598]. This is not necessarily a problem in itself, but it might open the door for potential misuse.

2. Financialization: a pathway for the further commodification of agroecosystems.

276. Hanna Ahlström *et. al.* underline that "financialization was already there" but it might be "further entrenched" with sustainable finance regulations[599]. This especially along the emergence of ideas like "biodiversity banks" and "mitigation banks" [600], as intermediaries to facilitate investments in environmental projects and to offset a damaging project somewhere else in the EU[601]. Such approaches are also present in the Soil monitoring directive proposition,

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[592] As underlined by the EUROPEAN COURT OF AUDITORS, "Making cross-compliance more effective and achieving simplification remains challenging", special report nº26/2016, 27th October 2016.
[593] Regulation (EU) 2020/852 (The EU Taxonomy). *Op. Cit.* Paragraph (47).
[594] *Ibid.*
[595] See *Supra*, from §254.
[596] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* page 13.
[597] *Ibid,* paragraph (28).
[598] BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", *Op. Cit.*
[599] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op.Cit*. See interview 24.
[600] BURGIN, S. 'Mitigation banks' for wetland conservation: a major success or an unmitigated disaster?. *Wetlands Ecol Manage* **18**, 49–55 (2010). https://doi.org/10.1007/s11273-009-9147-5
[601] AHLSTRÖM Hanna et MONCIARDINI David, « The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. », *Op.Cit*.

as regarding the prevention of land take for example[602]. Indeed, the proposition establishes under the mitigations principles, in the event of land-take, the objectives "to avoid or reduce as much as technically and economically possible the loss of the capacity of the soil to provide multiple ecosystem services, including food production" and to "compensate as much as possible the loss of soil capacity to provide multiple ecosystem services"[603]. If we do not delve into the vital issue of land take, it is a great example to show how the acquisition of soil health certificates, produced via fragile gains on soil functionality, could allow (via offset mechanism) irreversible losses in soil functionality through land take.

277. In consequence, those instruments allow "the commodification of nature", which represents "the process of putting a value on nature for the purpose of trade or payments"[604]. This price put on nature is then "assumed to be one of the conditions for the correction of market failures, and for the orientation of decisions through the distribution of the right incentives" by integrating the costs of environmental damages and allowing their "compensation"[605].

278. Indeed, as eminently explained by Erik Gómez-Baggethun *et. al*.,"for the first time in human history, it seems necessary to some to put a price on the biophysical structures and functions that make higher life possible on Earth. Until now, the essentials to life have been free. The felt need among environmental economists to price 'the environment' implies a sense of impending scarcity. To many ecologists, this particular form of scarcity indicates an increasingly dysfunctional relationship between the human enterprise and the ecosphere."[606] In fact, soil commodification allows us to think soil "as capital, a set of stocks which increases or depreciate" depending on its "capacity to provide the expected services"[607].

279. Furthermore, "valuing nature in economic terms is not always beneficial for (soil) biodiversity conservation" [608]. Indeed, financial approaches rely on "the attraction towards the ecosystem concept", as having a "potential for win-win outcomes" by enhancing ecosystems, farmers' revenue, investors' profit, and reducing public spending[609]. Nonetheless, focusing on fostering ecosystem services "does not automatically lead to the conservation of biodiversity", as seen for SOC[610]. Even worse, this "economical lecture" of environmental issues[611] may erode our moral responsibility to protect nature and in our case soils, as vital ecosystems deserving

[602] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* See article 11.
[603] *Ibid*. Article 11 (a) and (b).
[604] BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", *Op. Cit.*
[605] *Ibid.*
[606] GÓMEZ-BAGGETHUN Erik, DE GROOT Rudolf, LOMAS Pedro L. *et al.*, « The history of ecosystem services in economic theory and practice », *Ecological Economics*, 69, 2010.
[607] DESROUSSEAUX Maylis, Thesis "La protection Juridique de la Qualité des Sols", *Op. Cit.*
[608] ADAMS W. M., « The value of valuing nature », *Science*, 346, American Association for the Advancement of Science, 2014.
[609] *Ibid.*
[610] *Ibid.* See also *Supra*, From §200.
[611] Marie HRABANSKI, "Instrument de marché et biodiversité", CERISCOPE Environnement, 2014, [online], (Accessed the 8th of August 2023). URL: http://ceriscope.sciences-po.fr/environnement/content/part4/instrument-de-marche-et-biodiversite

care without the need to make a profit out of it[612]. Moreover, this "focus on monetary valuation" reproduces the "neoclassical economics paradigm and the market logic to tackle environmental problems", despite not having yet delivered convincing results[613].

280. Just as dangerous, the growing valuation of soil ecosystem services might also entice the covetousness of financial undertakings to appropriate land in order to make a profit from it, by marketing agricultural and environmental goods. The European Economic and Social Committee has been warning the Commission and MS's of this issue since at least 2015[614]. After reaffirming that "land is no ordinary commodity", the Committee warns EU MS's about the threats of land grabbing and land concentration, especially by investors that see "agricultural land as a safe investment" as the demand for agri-environmental goods is ever-rising[615]. In fact, land grabbing and land concentration has been described as a "creeping process" in the EU, affecting human rights as "the scope of local populations to manage farms independently and to produce food" is being diminished[616]. Therefore, we have to acknowledge that our approach bears the risk of supporting the appropriation of soil value by finance, to produce what's more profitable, such as soil health certifications, carbon certificates, biofuels, etc., and maybe not even food. Thus, it could potentially disadvantage farmers on their rights and their access to the land, as well as the environment since this approach might struggle to detach from prioritizing profit over environmental concerns.

281. Due to their superior financial leverage, such companies are also "blocking the entry to prospective (young) farmers in Europe"[617]. In fact, in France, the surface cultivated by financial companies has almost doubled in 20 years and now accounts for around one farm in 10[618]. Without having any direct link with the land, "the shareholders in the company become, de facto, landowners", as the farm becomes "just another entity in the industrial group", and agricultural soil health is simply an asset with more or less financial potential[619].

282. This issue needs to be taken seriously, as by the suggestion to create "an EU observatory for agricultural land, listing land transactions and making it possible to regulate transnational

[612] MORENO-MATEOS David, MARIS Virginie, BÉCHET Arnaud *et al.*, « The true loss caused by biodiversity offsets », *Biological Conservation*, 192, 2015.
[613] GÓMEZ-BAGGETHUN Erik, DE GROOT Rudolf, LOMAS Pedro L. *et al.*, « The history of ecosystem services in economic theory and practice », *Ecological Economics*, 69, 2010.
[614] EUROPEAN ECONOMIC AND SOCIAL COMMITTEE, (2015/C 242/03) Opinion on "Land grabbing – a warning for Europe and a threat to family farming", 23 July 2015.
[615] *Ibid.* The Committee defines land grabbing as "a process of large-scale acquisition of agricultural land without consulting the local population beforehand or obtaining its consent."
[616] *Ibid.* The Committee also refers to the report conducted by the EUROPEAN COORDINATOR VIA CAMPESINA, "Land concentration, land grabbing and people's struggles in Europe", Published by the Transnational Institute for European Coordination Via Campesina and Hands off the Land network, April 2013.
[617] EUROPEAN COORDINATOR VIA CAMPESINA, "Land concentration, land grabbing and people's struggles in Europe", *Op. Cit.*
[618] SOVRAN C., RUFFIER F., et. al., « Financiarisation : des investisseurs non agricoles à l'assaut des terres », Part 3 from the report « La propriété des terres agricoles en France », Terre de Liens, février 2023.
[619] NGUYEN G. PURSEIGLE F. « Les exploitations agricoles à l'épreuve des firmes », Études rurales, n°190, 2012. Translated by us.

investments", as well as with an ambitious land policy[620]. Here the EU could make a broad interpretation of her competencies to potentially sketch out a Common Land Policy, to ensure economic, social, and territorial cohesion, environmental protection, and the protection of farmers under the CAP[621]. This to ensure that the land stays with the farmers and is allocated to the production of agricultural goods and the improvement of agroecosystems through SSM. Having in mind that around 57.6% of farm managers are at least 55 years of age in the EU, this could be an opportunity for renewal by prioritizing the takeover, or the purchase, of the vacant (or soon-to-be vacant) land by Taxonomy-aligned undertakings[622]. Nonetheless, if proper safeguards, as well as an appropriate land policy, are not erected, fostering financialization in agriculture might even support the growing land-grabbing and monopolization that is currently being conducted by firms[623].

283. Ultimately, further than financial considerations, financialization in agriculture and the decline of agroecosystems through unsustainable management might be calling for a renewed social contract in agriculture, considering soils more than like an asset but as an entity with an invaluable inherent importance, that happens to be vital for our survival and well-being.

B) Inherent limitations of a financial approach to durably improve agricultural soil health.

284. A synergy between the EU Taxonomy and the EU Soil Health Law might also be expected to suffer from its lack of binding obligations. Without strengthening the Taxonomy framework, this approach would depend on the voluntarism of investors (private and public) as well as farmers **(1).** Consequently, an approach based on voluntary participation would emphasize on the financial benefits of adhering to the suggested framework, rather than fostering a sense of intergenerational, individual, and ethical duty towards safeguarding this fragile and invaluable natural common **(2).**

1. A dependence on uncertain voluntary engagements to deliver results.

285. One could argue that the EU Taxonomy regulation and the proposed EU Soil Health Law, as incentive instruments for sustainable practices, rely on the long-acquired vision that "autoregulation would be as effective than unilateral constraint" [624]. This by "completing" the

[620] As suggested by SOVRAN C., RUFFIER F., et. al., « Financiarisation : des investisseurs non agricoles à l'assaut des terres », *Op. Cit.* Translated by us.
[621] TFUE, *Op. Cit.* As the EU has a shared competence with MS's on those fields. See Article 4, (b), (d), (e,).
[622] EUROSTAT, "Agriculture, forestry and fishery statistics", *Op. Cit.* Indeed, in ten years around half of those farmers with leave their land vacant Also "most of the EU members recorder an overall decline in the number of farms managers between 2016 and 2020", as the UUA per farmers expands, and thus land concentration, page 16.
[623] CHAIGNON Alexandra, « Auchan, Chanel, L'Oréal... Ils font main basse sur les terres agricoles | L'Humanité », published the 28th february 2023, [Accessed 3th of august 2023]. https://www.humanite.fr/societe/agriculture/auchan-chanel-l-oreal-ils-font-main-basse-sur-les-terres-agricoles-784410
[624]BILLET, Ph, « Avant-Propos », from HERVÉ-FOURNEREAU Nathalie (dir.), « Les approches volontaires et le droit de l'environnement », Presses universitaires de Rennes, published the 25th of august 2008. ISBN : 978-2-7535-0645-9. The author specificaly refers on the protection of the environment through contractual tools.

absence or the inadequacy of regulatory measures to impose them such as regarding soils[625]. Nonetheless, we could doubt on the effectiveness of this "autoregulation", especially in light of the continuing deterioration of soils and nature.

286. Regarding farmers' engagements, which are done through agreements between them and investors, they rely on "the strength of reciprocal commitments" and their will to contract to improve their profits through the mutual provision of ecosystem services and financing[626]. However, those voluntary engagements have an "intrinsic weakness" such as "the fact that they depend on their effective application by the co-contracting parties, in the absence of sanctions"[627]. Moreover, some farmers might refuse altogether to contract, as this consensual approach relies on the capacity to obtain their consent to consider soils more carefully through SSM, just as for PES[628]. In consequence, this dependence on voluntary actions by farmers has been identified as a major limiting factor regarding the adoption of SSM practices[629], as shown by "the limited willingness of farmers to participate in agri-environmental schemes" [630].

287. The same is true regarding financial undertakings, as "obligations relating to sustainable finance are mainly covered by voluntary law" despite growing requirements on extra-financial disclosures and due diligence[631]. What's more, it appears that there is a growing animosity to engage in ESG considerations among certain financial actors. For example, the letter addressed by 21 Republican Attorneys General (RAG) addressed to the largest US asset managers summarizes a large part of the grievance made to sustainable investing[632]. As for those RAG, SFI is sometimes reduced to "political" or "activist" goals and is said to be infringing "a duty of care and a duty of loyalty" by fiduciaries that render advice promoting sustainable investing[633]. This as sustainable finance might not be in the "best interest" of their clients with ESG investing sometimes being less profitable, in financial terms, than conventional investments[634].

288. To overcome this reluctance and the dependence on voluntary engagements, M. Chaaben suggests requiring "investment funds to include a minimum percentage of ESG assets (or aligned assets) in their portfolio"[635]. Thereon, it could allow sustainable investing to reach its

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[625] *Ibid.* And see See *Supra*, §118.
[626] DESROUSSEAUX Maylis, Thesis "La protection Juridique de la Qualité des Sols", *Op. Cit.* As explained on her section on "the prevalence of non-constraining legal mechanisms", page 81.
[627] *Ibid.* Citing CAUDAL S., "La protection intégrée de l'environnement en droit public français ». thesis, University Lyon 3, 1993, p.565.
[628] ICHER Liliane, "Public Spending in the Environmental Field: The Case of Soil Protection", *Op. Cit*
[629] STRAUSS Veronika, PAUL Carsten, DÖNMEZ Cenk *et al.*, « Sustainable soil management measures: a synthesis of stakeholder recommendations », *Op. Cit.*
[630] KELEMEN Eszter, MEGYESI Boldizsár, MATZDORF Bettina *et al.*, « The prospects of innovative agri-environmental contracts in the European policy context », *Op. Cit.*
[631] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* Page 334.
[632] KNUDSEN A. *et. al.,* Letter « to asset manager industry participants to raise concerns about the ESG agenda", March 30, 2023. https://attorneygeneral.utah.gov/wp-content/uploads/2023/03/2023-03-30-Asset-Manager-letter-Press-FINAL.pdf
[633] *Ibid.*
[634] *Ibid.*
[635] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* From page 334, Paragraph 1 : « l'efficience des règles relatives à la finance durable ».

full potential by instituting it as a systematized legal standard that's in line with the vital protected interests, rather than a simple moral consideration or a tool to diversify portfolios[636].

289. Surely, one could argue that private voluntary initiatives should not always be favored and might need to be "relegated to a secondary role" behind constraining obligations[637]. Undeniably, private initiatives are sometimes "deemed suspect of focusing in private interests" and "incapable of getting on well with the collective interest underlying environmental issues"[638]. As opposed to constraining obligations, such as easements imposed by public authorities, which allow the allocation of the property in question to an environmental purpose thereby "prohibiting any use contrary to this purpose" as unsustainable soil management or biased practices with limited additionality[639]. So, implementing real easements or real covenants as safeguards for sustainable investments in agricultural soil health might seem like a satisfactory fallback solution.

290. Ergo, "the virtues and efficiency of economic liberalism" should not be simply taken for granted when implementing market-based investments[640]. Instead, a more critical stance could be adopted, especially when addressing agricultural soil-related matters. As underlined by A. Sotiropoulou regarding SFI regulations, "given the particularly ambitious nature of the EU's objectives and the very short timescale for achieving them, would it not be preferable for the European legislator to use instruments that are better able to change mentalities?"[641].

291. More broadly, one could argue that we could also focus on tools that might contribute more effectively to rebuilding our relationship with the land and establish a newfound common respect, in the law, in accordance with the challenges of the Anthropocene[642]. Therefore, this fundamental alignment could contribute to the ultimate goal of environmental law, which is to maintain and restore "the integrity of Earth's life-support system as a precondition for sustainable development"[643].

2. Difficulties in forging a new relationship with the land via a financial approach.

292. It is arguable that "modern agriculture (…) has weakened the bond between farmers and the soil upon which they rely for the regrowing of crops"[644]. This especially by the relentless

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[636] *Ibid.*

[637] SARLAT J.-J., « La servitude conventionnelle environnementale », Environnement n°6, juin 2011, étude 7.

[638] *Ibid.*

[639] *Ibid.* Here we also refer to the focus on carbon certificate schemes and offsetting schemes, being more profitable than adopting comprehensive practices with a bigger potential for additionality. See *Supra*, §156.

[640] BROUGHTON E., PIRARD R., "What's in a name? Market-based Instruments for Biodiversity, Health and Environment Reports n°8", *Op. Cit.*

[641] SOTIROPOULOU A., "Sustainable investments in European Union Law", *Op. Cit.*

[642] DU TOIT Louise et KOTZÉ Louis J., « Reimagining international environmental law for the Anthropocene », *Earth System Governance*, 11, 2022.

[643] Kim, Rakhyun E. "Transnational Sustainability Law-Whither International Environmental Law?." *Envtl. Pol'y & L.* 46 (2016): 405.

[644] CHABERT Ariane, SARTHOU Jean-Pierre, "Agricultural soil, an essential yet neglected resource", from the book "Ecosystem services and soil protection: Legal analyses and agronomic insights." HERMON Carole (dir.) et

research of profit in a globalized economy, reducing the soil to an economic asset that allows the production of agri-environmental goods[645]. Hence, an approach that is mainly based on rethinking" the profits of investing into agricultural soil"[646] by valuing the ecosystem services provided by healthy soils should be approached with great care when trying to reconcile agricultural endeavors and the environment.

293. This anthropocentric view, grasping soils for the sole interest of the profits to be made from it, could be said to go "against the grain of environmental ethics"[647]. This especially knowing that the notion of ecosystem services was thought to be "above all a metaphor designed to strike a chord with public opinion and raise awareness of the need to preserve the environment"[648]. As stated by the Commission, "we have an ethical responsibility to preserve biodiversity for its intrinsic value" in addition to being an economically sound endeavor, especially for agricultural soils[649]. And mobilizing ecosystem services could have perverse effects to improve considerations on agricultural soils, by "crowding out intrinsic motivations, such as people's moral commitment towards nature conservation" [650].

294. If a proper regulatory framework could "harness self-interest for the common good", economic incentives "that appeal to self-interest" may be counterproductive[651]. Indeed, such incentives might "signal that selfishness is an appropriate response" as the adoption of sustainable practices is aimed at attracting further financing[652]. Consequently, it could compromise "the individual's sense of self-determination and thereby degrade intrinsic motivations (Adam Smith's moral sentiments)"[653]. In the contrary, one could oppose this approach with the use of a more constraining "legal protection against damage to the integrity of ecosystems" that would "imply, in a way, respecting them as a full and complete entity, and therefore going beyond a purely utilitarian vision"[654].

295. As argued by Edgar Pisani, "paraphrasing a famous phrase, we could say that soil protection has become a matter too serious to be (solely) entrusted to the owner" [655].

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al., The french version is edited by : Quae, coll. Update ISBN : 978-2-7592-2791-4, ePub, 2018, and IEJUC, Droit et Ville, 2017, n° 84.

[645] *Ibid.*

[646] See *Supra*, From §111.

[647] DOUSSAN, I « Nature à vendre », Études foncières, nº154, december 2010, p12.

[648] BARNAUD C., ANTONA M., MARTIN J., « Vers une mise en débat des incertitudes associées à la notion de service écosystémique », Vertigo, vol. 11, nº1, may 2011, p.4.

[649] Communication from the Commission to the Council and the European Parliament - Biodiversity Action Plans in the areas of Conservation of Natural Resources, Agriculture, Fisheries, and Development and Economic Co-operation, COM/2001/0162 final , 2001. Point 2. https://op.europa.eu/mt/publication-detail/-/publication/dd6ab1f5-7be5-4b43-abe6-ea618c3c3848/language-mt

[650] RODE Julian, GÓMEZ-BAGGETHUN Erik et KRAUSE Torsten, « Motivation crowding by economic incentives in conservation policy », *Ecological Economics*, 117, 2015.

[651] BOWLES Samuel, « Policies Designed for Self-Interested Citizens May Undermine "The Moral Sentiments" », *Science*, 320, American Association for the Advancement of Science, 2008.

[652] *Ibid.*

[653] *Ibid.*

[654] LANGLAIS Alexandra. « Solutions fondées sur la nature : levier ou frein pour la préservation de la biodiversité ? Réflexions juridiques » *Op. Cit.*

[655] E. PISANI, « Utopie foncière, l'espace pour l'homme », Etudes rurales, 1979. Page 113. Translated by us.

Furthermore, since 1976, the United Nations has been stating that " land use was to be determined on the basis of society's long-term interests. (…)"[656]. In this sense, as boldly pointed out in a ruling of the US Wisconsin Supreme Court, "the owner of land does not have an absolute and unlimited right to alter the essential natural character of his land and, similarly, he may not use it for a purpose contrary to its natural state that causes damage to the rights of third parties"[657].

296. If this may not be always true in Europe, one could argue that there should be "a certain form of restraint when exploiting (a) component (of our common heritage)", just as with agricultural soil health management[658].

297. Additionally, another possible complementary, bifurcated, approach to our own could involve considering more stringent obligations within soil management. Moreover, it could be worth contemplating the reevaluation of property rights, in accordance with the urgent and vital need to preserve agricultural soils.

298. From this perspective, particular attention could be paid to the emergence of a legal standard of "good exploitation of the land"[659], for proprietors, to make it imperative to take on board the challenges and requirements of soil conservation in the hope of reshaping the relationship between humans and the land as well as fostering a renewed governance model for natural commons (such as soils)[660]. Likewise, a "systematized legal standard" could mandate institutional, public, and private investors to give more profound consideration to agricultural soil health[661]. This would aspire to elevate these concerns beyond the realm of voluntary considerations and embed them as a crucial and integral aspect of investment decision-making.

[656] UN, "Conference on Human settlements – Habitat I Vancouver", Final statement, Canada, 31 May – 11 June 1976.
[657] WISCONSIN SUPREME COURT, "Just v. Marinette County", *Op. Cit.* The ruling related to the management of a swamp.
[658] G. MEUBLAT, « Sciences économiques, gestion de l'eau, gestion du fleuve », in Le fleuve et ses métamorphoses, Didier Erudition, 1993 p. 19.
[659] DESROUSSEAUX Maylis, Thesis "La protection Juridique de la Qualité des Sols", *Op. Cit.*, Page 68.This standard is said to be emerging from article 1766 of the French Civil Code.
[660] As envisionned by CAMPROUX DUFFRENE, « Repenser l'article 714 du Code civil Français comme une porte d'entrée vers les communs », *Op. Cit.*
[661] CHAABEN Mohamed, « La Finance durable : Essai de conceptualisation juridique ». *Op. Cit.* Page 334. Also see *Supra*, §222.

General conclusion

299. As exposed through this paper, building a synergy between the EU Taxonomy and EU Soil Health Laws might not be ideal, but certainly presents an intriguing avenue to offer a supplementary tool for farmers, investors, and policymakers alike, for enhancing agricultural soil health. Furthermore, it could be seen as the logical progression of regulations pertaining to soil health, employing incentive-based regulatory mechanisms to achieve the established threshold of ensuring healthy soils by 2050 in the EU[662].

300. Acknowledging the Taxonomy limitations and incompleteness, this synergy could also reinforce its framework, notably by using the principles and indicators presented in the Soil monitoring directive draft and by establishing further internal and external securities. Additionally, aligning their respective provisions could contribute to securing the additionality of sustainable investments for agricultural soil health. Besides, this overlapping could provide a more comprehensive apprehension of agricultural soil health challenges and realities, thus contributing to the development of the sustainability criteria for agriculture. Furthermore, the Taxonomy "normativity" could be reinforced to provide greater impetus to its systemic transformative goals. Lastly, the identified gaps in its framework could be mitigated through public funding and corresponding safeguards, altogether constructing a more holistic approach.

301. On the other hand, the Taxonomy framework could also contribute to covering some flaws of the Soil Monitoring directive through an increased support for the implementation of its non-constraining SSM standards. Moreover, in conjunction with the potential strengthening of the binding scope of the Soil Monitoring directive provisions, this synergy with the Taxonomy's regulatory framework could allow to unleash the anticipated potential of an updated EU Soil Health Law, accordingly the obligation of consistency between EU policies established in article 7 of TFEU and to the EU ambitions as announced in the EU Soil Strategy for 2030[663].

302. However, governance limitations regarding the establishment of the sustainability criteria, as well as when implementing the proposed framework, should be addressed. Adapting the existing governance structure could facilitate the effective participation and representation of relevant stakeholders, such as environmental entities (such as soils and biodiversity) and farmer's needs, especially those in more vulnerable positions.

303. At last, it is imperative to recognize the inherent limitations of economic incentives in achieving enduring outcomes regarding agricultural soil health enhancement, especially in the pursuit of a successful and equitable agroecological transition. Identifying these constraints is crucial, not only for implementing adequate safeguards but also for thoroughly evaluating their potential compared to alternative approaches. Taking such precautions will be essential, particularly to prevent reaching a critical threshold where irreversible harm is inflicted upon the health of this vital, intricate, and unique natural common.

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[662] Directive proposal COM/2023/416 final (Soil Monitoring Law), *Op. Cit.* Article 1.
[663] COMMUNICATION FROM THE COMMISSION (…) "EU Soil Strategy for 2030 (…)", COM/2021/699 final, *Op. Cit.*

Where to look next:

304. Numerous research avenues and considerations emerged during our examination of the relevance of a potential synergy between the EU Taxonomy regulation and the emerging Soil Health Laws. We will now highlight some of the aspects that we would have liked to investigate more comprehensively, particularly if ongoing normative actions aim to formalize the proposed synergy or a similar incentive-driven strategy.

305. Firstly, recognizing the EU's "global power" through market forces that drive the exportation of EU's legal standards and regulatory frameworks, further research should be conducted into the potential risks and extra-territorial impacts associated with the adoption of the suggested approach[664]. This especially if adequate safeguards are not implemented in the forthcoming integration of the sustainability criteria regarding agricultural undertakings into the Taxonomy framework. Indeed, it's important to acknowledge that "when exporting market mechanisms for the protection of nature to developing countries and non-market societies, international organizations promoting market mechanisms for conservation can consciously or unconsciously contribute to manufacturing the *homo economicus* in places where such logic was inexistent, or culturally discouraged by the existing institutional structures." [665]

306. Regarding such international repercussions, compatibility with WTO criteria for "payments under environmental programs" should also be examined[666], as WTO rules "have applied to agriculture since 1995 and are difficult to derogate from" and sometimes even discourage certain regulatory actions to protect the environment[667].

307. Moreover, the potentialities of fiscal instruments to support this approach could be explored, such as Pigouvian taxes[668]. In fact, tax instruments should help to "protect the availability and functionality of soils", whose "primary purpose is to produce life and provide ecosystem functions and services"[669]. More broadly, as suggested by a growing number of stakeholders, taxation in (international) financial transactions could be considered, to discipline

[664]BRADFORD Anu, « Exporting standards: The externalization of the EU's regulatory power via markets», *International Review of Law and Economics*, 42, 2015.
[665]DAILY Gretchen C, POLASKY Stephen, GOLDSTEIN Joshua *et al.*, « Ecosystem services in decision making », *Frontiers in Ecology and the Environment*, 7, 2009.
[666] WTO ANALYTICAL INDEX, "Agreement on Agriculture – Annex 2 (DS reports)" , entered into force in 1995. See Paragraph 12 on the Annex 2. Regarding the agreement on Agriculture, attention could be paid regarding domestic support rules. https://www.wto.org/english/res_e/publications_e/ai17_e/agriculture_ann2_jur.pdf
[667]AUBERT Pierre-Marie, GARCIA VEGA Diego et POUX Xavier, « Biodiversité, sécurité alimentaire et changement climatique : quelle(s) trajectoire(s) de transformation pour l'agriculture ? », Annales des Mines - Responsabilité et environnement, 100, F.F.E., 2020, no 4, p. 33-37. Translated by us.
[668]Named after the economist Arthur Pigou (See "Externalities solved by government taxes in markets", 1920s), a precursor of the "externality theory", that proposes the use of tax instruments to sanction private endeavors creating adverse effects to the environment, or more broadly society, thus forcing the integration of those "externalities" in private stakeholders decision-making.
[669](French) COMITÉ POUR LA FISCALITÉ ÉCOLOGIQUE, « Fiscalité et artificialisation des sols », Adopté en séance du 28 mars 2013, p.2. Translated by us.

financial undertakings that support unsustainable practices thus undermining the potential for an agroecological transition[670].

308. Many pathways exist to impose such taxes upon non-aligned undertakings on the agricultural sector, especially to those not compliant with DNSH criteria, to reinforce the Taxonomy normativity. For example, the implementation of EU taxation guidelines, or exploring the potentialities of a harmonized EU fiscality could be considered[671]. On the other hand, lightening the fiscal burden of undertakings fostering soil health could also be considered, as with "tax relief or tax credits" promoting sustainable endeavors, for investors and farmers[672].

309. Additionally, we would have liked to further study the reasons, consequences and limitations of the Commission's central role and power in the shaping of the Taxonomy through the use of delegated acts that determine, *in fine*, the substance of these regulations and therefore which undertakings are supported, with limited democratic safeguards from EU co-legislators.

310. Finally, the EU could also get involved in MS's land policies. This especially knowing the risks of land grabbing by industrial and financial entities in the context of aging farmers combined with a lack of young farmers to take over and to fill all the lands left vacant. Indeed, an improved allocation of the land to undertakings implementing SSM practices through effective land policies might offer great potential for systemic change[673]. In addition, establishing more inclusive property rights on the land, promoting real covenants, or facilitated access to the land for sustainable projects could also contribute to the agroecological transition, especially knowing that a considerable proportion of farmers are tenants and that a lack of land rights is often correlated with poor soil management[674] [675].

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[670] For e.g. See EUROPEAN PARLIAMENT, Legislative resolution of 3 July 2013 on the proposal for a Council directive implementing enhanced cooperation in the area of financial transaction tax (COM(2013)0071 – C7-0049/2013 – 2013/0045(CNS)), 3 July 2013.

[671] See the propositions of BOISSENIN Aurélie, « Le financement de l'UE : Moteur d'une intégration politique ? » Version actualisée de thèse de doctorat, soutenue le 20 décembre 2017, tient compte des observations du jury, LGDJ, Lextenso éditions, 2019. ISMB : 978-2-275-06441-3. This thesis notably underlines the perspectives for a supranational financing system for the EU budget, notably with the renationalization of the EU own resources system, as well as a "general reorganization of fiscal governance" in the EU. See notably pages 182 and further.

[672] As suggested in SACHS Jeffrey D., WOO Wing Thye, YOSHINO Naoyuki *et al.* (dir.), *Handbook of Green Finance* [online], Springer Singapore, 2019. Regarding farmers, such incentives are already implemented and could be further improved. For example, in France there already are tax credits for farmers implementing Organic farming or reducing their use of glyphosate (loi de finances nº 2020-1721 du 29 décembre 2020, article 140).

[673]PAWLEWICZ Adam et PAWLEWICZ Katarzyna, « The Risk of Agricultural Land Abandonment as a Socioeconomic Challenge for the Development of Agriculture in the European Union », *Sustainability*, 15, Multidisciplinary Digital Publishing Institute, 2023. https://www.mdpi.com/2071-1050/15/4/3233 As stated by the authors, « an analysis of the factors that contribute to farmland abandonment demonstrated that the likelihood of this risk decreases with a rise in agricultural investments, farm income, population density, prices of agricultural land, road quality, and density. A high proportion of ageing farm owners was the only factor that increased the risk of agricultural land abandonment."

[674]RICHARDSON Jesse, « Uncertainty of Land Tenure and the Effects of Sustainability if Agriculture in the United States », [International Yearbook of Soil Law and Policy 2017, pp.125-149], 2018. Indeed the authors identify to some extent a link between the lack of land rights and unsustainable soil management.

[675]LICHTENBERG Erik, « Tenants, Landlords, and Soil Conservation », *American Journal of Agricultural Economics*, 89, 2007.

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