

## IS WATER INSECURITY GOING TO FOLLOW THE SAME POLITICAL PLAYBOOK AS CLIMATE CHANGE AND BIODIVERSITY LOSS?

### **Water insecurity is on the map of forthcoming national security risks**

A recent national security assessment from the UK government<sup>1</sup> assessed that *“there is a realistic possibility that some ecosystems (such as coral reefs in South East Asia and boreal forests) start to collapse from 2030, and others (rainforests and mangroves) start to collapse from 2050 (...) All countries are exposed to the risks of ecosystem collapse within and beyond their borders. Some will be exposed sooner than others and are likely to act to secure their interests, particularly water and food security.”* It explained as well that potential national security risks from ecosystem collapse included conflict and military escalation, that *“will become more likely, both within and between states, as groups compete for arable land and food and water resources.”*

Concerns about future water insecurity are not limited to the UK. EU Commission president Ursula Van Der Leyen had already stated in a 2024 speech that *“the world of 2050, just 25 years from now, might be one of floods and water rationing.”*<sup>2</sup>

While these concerns are not new, it is worth noting that they are understood not as long term ecological risks, but as national security risks over the coming decades.

### **Water insecurity is often politically produced**

As a quick reminder, let us clarify what are water insecurity and water scarcity. Water scarcity does not mean that there is a shortage of water in absolute terms, as the global stock of water on the planet is constant. What is scarce is clean, accessible freshwater where and when it is needed, i.e. water that is not saline, not polluted, not too deep or expensive to pump or treat. Scarcity happens when the renewable supply of clean accessible freshwater is insufficient to meet demand.

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<sup>1</sup> HM government, Global biodiversity loss, ecosystem collapse and national security  
[https://assets.publishing.service.gov.uk/media/696e0eae719d837d69afc7de/National\\_security\\_assessment\\_-\\_global\\_biodiversity\\_loss\\_ecosystem\\_collapse\\_and\\_national\\_security.pdf](https://assets.publishing.service.gov.uk/media/696e0eae719d837d69afc7de/National_security_assessment_-_global_biodiversity_loss_ecosystem_collapse_and_national_security.pdf)

<sup>2</sup> Keynote speech by President von der Leyen at the DLD Nature Conference, 13. sept 2024,  
[https://ec.europa.eu/commission/presscorner/detail/da/speech\\_24\\_4668](https://ec.europa.eu/commission/presscorner/detail/da/speech_24_4668)

Scarcity thus encompasses several dimensions, from physical scarcity in some areas, to economic scarcity when water cannot be accessed due to poverty or lack of infrastructures, and quality-related scarcity when water is polluted beyond safe use.

Political ecologists have long argued that water scarcity a sociopolitical process, linked to power, global-local dynamics, and uneven distribution, and not necessarily related to physical water availability.<sup>3</sup>

Power dynamics and politics can for example influence scarcity through determining whose rights are important, by prioritising and subsidising certain water intensive industries, or by choosing not to regulate overextraction.

### **Amongst the range of solutions put forward, there is an ongoing push to financialise water**

The range of solutions to water scarcity includes reforming allocation rights and subsidies - in particular agricultural incentives, improving governance and curbing pollution.

In addition to these solutions, there has been a long push by some neoliberal institutions and stakeholders to financialise water, presented as an alternative solution to water insecurity risks. By financialisation, we mean the increasing role of financial actors, motives, and markets in the supply of water (quantity) and water services (purification), transforming them into tradable financial assets.

The trading of water rights and related derivatives<sup>4</sup> has a long history, from the full privatisation of the water supply in Chile under the Pinochet dictatorship to Australia's Murray-Darling Basin water markets,<sup>5</sup> to water future contracts traded on the Chicago Mercantile Exchange.<sup>6</sup> These remain so far isolated cases.

What I want to focus on here, is the **financialisation of water purification**, as we observe some political momentum on this topic, as well as a framing and talking points that are reminiscent of what is happening with carbon, biodiversity, and plastic.

**This financialisation of clean water can take different forms; the first one is called nutrient trading or water pollution trading**, it is a market-based approach to address excess nutrients in water, primarily nitrogen and phosphorus, where an entity that pollutes water will be able to purchase tradable credits linked to some eligible activities and claim that it has offset its pollution. Eligible activities depending on the frameworks can include creating or restoring new semi natural habitats, such as natural wetlands, woodlands, or grasslands, short-term temporary agricultural

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<sup>3</sup> Wutich, A., Beresford, M., Montoya, T., Radonic, L., & Workman, C. (2022, March 23). Water Security and Scarcity. Oxford Research Encyclopedia of Anthropology. Retrieved 10 Feb. 2026, from <https://oxfordre.com/anthropology/view/10.1093/acrefore/9780190854584.001.0001/acrefore-9780190854584-e-475>.

<sup>4</sup> Water rights and water trading have existed in the US for over a century and a half and direct buying and selling of water has been in play in Chile since Pinochet; water derivatives, which are financial bets on the future price of water, are much more recent

<sup>5</sup> Australian government, Department of Climate Change, Energy, the Environment and Water, Introduction to water markets, <https://www.dcceew.gov.au/water/policy/markets/introduction-water-markets>

Waterfind, Waterfind's Online Water Market, <https://www.waterfind.com.au/products-services/waterfinds-online-water-market/>

Waterfind, Options trading in Australia, <https://www.waterfind.com.au/products-services/options-trading/>

<sup>6</sup> CME Group, Nasdaq Veles California Water Index, <https://www.cmegroup.com/markets/equities/nasdaq/nasdaq-veles-california-water-index.html>

management measures such as cover crops or provision of buffer strips, farmers agreeing to stop fertilising their land, or desalinisation-based solutions.

It is thus an offset market, similar in principle to carbon or biodiversity offsetting, with the difference that offsetting is typically local.

Recent statements and initiatives around water credits include UK's 2023 launch of a nutrient trading market in 2023, the call from Singapore President Tharman Shanmugaratnam at the 2025 Davos summit to develop water credits stapled on carbon credits,<sup>7</sup> and a few private initiatives, such as Swiss company Hypercube, that tokenises voluntary water credits. As stated in a recent article, *"the company is in discussions with governments in regions facing both water scarcity and fiscal constraints, including states in Brazil and African nations, to support the development of water credit frameworks. It also plans to expand its work in Europe. Hypercube seeks to align its protocol to imminent nature credit rules established by the EU."*<sup>8</sup>

The reference to nature credits is interesting in our view, as the EU Commission has mentioned water trading as far back as 2012.<sup>9</sup> The definition of nature credits also does not exclude water quality trading, and includes activities such as wetland restoration.<sup>10</sup> The roadmap towards nature credits has in fact been added under the flagship actions of the Water Resilience Strategy. And a policy officer at DG Environment stated in a recent interview that *"in the EU context, especially for marine and freshwater ecosystems, we already have a dense regulatory framework. Nature credits could help stakeholders implement these frameworks and support nature-positive practices."*<sup>11</sup> We understand that to mean that water quality trading could be part of nature credits in the future.

### **...Using a similar framing and talking points to those used with carbon and biodiversity**

The usual arguments are put forward to promote water quality trading, including the ability to *"control pollutants at an overall lower cost to society,"*<sup>12</sup> the assessment that *"public actions for freshwater conservation are insufficient to ensure future water security and the availability of freshwater,"*<sup>13</sup> the claim that there is a massive annual funding gap<sup>14</sup> and the related claim that we need to *"develop innovative mechanisms that engage the private sector."*<sup>15</sup>

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<sup>7</sup> Aligning the Three Nature Markets: Transcript of Opening Remarks by President Tharman Shanmugaratnam at the World Economic Forum 2025 in Davos, Switzerland on 21 January 2025 [https://www.istana.gov.sg/newsroom/aligning-the-three-nature-markets-opening-remarks-by-president-tharman-at-wef-2025/?utm\\_source=chatgpt.com](https://www.istana.gov.sg/newsroom/aligning-the-three-nature-markets-opening-remarks-by-president-tharman-at-wef-2025/?utm_source=chatgpt.com)

<sup>8</sup> Nature & Biodiversity Pulse, INTERVIEW: Rising scarcity to push voluntary water credit prices higher, finance freshwater use alternatives, 26/01/26 [https://carbon-pulse.com/477375/?site=nbp&utm\\_source=Biodiversity+Pulse&utm\\_campaign=71cb8ee71e-Biodiversity+Pulse%3A+27012026&utm\\_medium=email&utm\\_term=0\\_e95c326d05-71cb8ee71e-110407746](https://carbon-pulse.com/477375/?site=nbp&utm_source=Biodiversity+Pulse&utm_campaign=71cb8ee71e-Biodiversity+Pulse%3A+27012026&utm_medium=email&utm_term=0_e95c326d05-71cb8ee71e-110407746)

<sup>9</sup> COM(2012) 673 final, COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A Blueprint to Safeguard Europe's Water Resources <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0673:FIN:EN:PDF>

<sup>10</sup> *"Nature credits represent an investment into nature-positive actions by a company, a financial institution, a public entity or a citizen, which in return can benefit from cleaner ecosystems, risk reduction, improved reputation and higher social acceptability for its projects. Those nature-positive actions can be valued and certified by an independent organisation, thus providing credibility to investors sponsoring the action through nature credits. The actions supported by nature credits can take different forms; some examples in the EU include restoring wetlands or extending forest areas."* [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_25\\_1679](https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1679)

<sup>11</sup> Nature & Biodiversity Pulse, BRIEFING: EU Commission flags scope to integrate nature credits into marine protection policies, 30/01/26 <https://carbon-pulse.com/479093/>

<sup>12</sup> EPA Water Quality Trading Evaluation, 2008 [https://www.epa.gov/sites/default/files/2016-04/documents/wqt.pdf?utm\\_source=chatgpt.com](https://www.epa.gov/sites/default/files/2016-04/documents/wqt.pdf?utm_source=chatgpt.com)

<sup>13</sup> Nature & Biodiversity Pulse, FEATURE: Water credit market takes first steps as scarcity hits crisis point, 04/06/25 <https://carbon-pulse.com/404468/#:~:text=FEATURE:%20Water%20credit%20market%20takes%20first%20steps%20as%20scarcity%20hits%20crisis%20point,-Published%2001:14&text=Emerging%20frameworks%20in%20the%20voluntary%20Carbon%20Pulse%20account%2C%20login%20here.>

UK's nutrient mitigation market relies on the concept of nutrient neutrality, which is to water pollution what net zero emissions is to climate change, zero net loss or biodiversity net gain are to biodiversity loss, or plastic net zero is to plastic pollution: the goal of these schemes is to offset pollution and destruction, not curb them.

We find water quality trading to create concerns similar to carbon and biodiversity offsetting: by definition, offsetting at best displaces pollution, but does not mitigate it; yet, as water quality trading seems to have a mixed or weak environmental track record,<sup>16</sup> offsetting leads to a net increase in water pollution. We also understand offsetting schemes to derive their political appeal from the fact that they often come not in addition to but instead of tighter environmental regulations curbing pollution at source.

Our understanding is that the political goal of these markets is to divert public attention from governments' inaction and from the need to address the root causes of water insecurity, including shifting existing harmful subsidies or curbing overextraction and water pollution, because doing so would require confronting powerful vested interests. As such, we understand the political goal of water quality trading to be protecting the status quo.

### **Water purification might also have political traction beyond credits/offset schemes:**

According to a recent study based on the responses of 68 UK institutional asset owners representing more than £3 trillion in assets, *"natural capital is increasingly assessed as infrastructure, with a focus on cash flow, resilience, and risk reduction."*<sup>17</sup> *"While familiar themes such as forestry, timber and agriculture remain popular, contracted payments for ecosystem services, including flood protection and clean water provision, have emerged among the top expected revenue streams. By contrast, carbon and biodiversity credits are increasingly viewed as potential upside rather than core drivers of investment."*<sup>18</sup>

A growing involvement of financial institutions and motives in the provision of clean water would be another type of further financialisation, with the likely environmental and social consequences already observed in other areas.

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<sup>14</sup> "The World Bank estimates that reaching the global Sustainable Development Goals to achieve universal safe drinking water and sanitation access by 2030 faces an annual spending gap of \$131.4–140.8 billion." [https://www.csis.org/analysis/liquidity-crisis-strengthening-funding-mechanisms-resilient-water-systems?utm\\_source=chatgpt.com](https://www.csis.org/analysis/liquidity-crisis-strengthening-funding-mechanisms-resilient-water-systems?utm_source=chatgpt.com)

<sup>15</sup> Nature and Biodiversity Pulse, supra

<sup>16</sup> Wang H et al, The environmental effectiveness of water quality trading: Evidence from emissions trading programs in China, 2024 [https://www.sciencedirect.com/science/article/pii/S0921800924001745?utm\\_source=chatgpt.com](https://www.sciencedirect.com/science/article/pii/S0921800924001745?utm_source=chatgpt.com)

EPA Water Quality Trading Evaluation, 2008, [https://www.epa.gov/sites/default/files/2016-04/documents/wqt.pdf?utm\\_source=chatgpt.com](https://www.epa.gov/sites/default/files/2016-04/documents/wqt.pdf?utm_source=chatgpt.com)

Food and Water Watch, Water quality trading - Polluting Public Waterways for Private Gain, Nov 2015

<https://www.foodandwaterwatch.org/wp-content/uploads/2022/10/2015-11-waterqualitytradingreport.pdf>

<sup>17</sup> Nature & Biodiversity Pulse, Natural capital is taking over carbon, biodiversity credits for UK asset owners -survey, 28/01/26

[https://carbon-pulse.com/478267/?site=nbp&utm\\_source=Biodiversity+Pulse&utm\\_campaign=6385da3870-Biodiversity+Pulse%3A+27012026\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_e95c326d05-6385da3870-554207633](https://carbon-pulse.com/478267/?site=nbp&utm_source=Biodiversity+Pulse&utm_campaign=6385da3870-Biodiversity+Pulse%3A+27012026_COPY_01&utm_medium=email&utm_term=0_e95c326d05-6385da3870-554207633)

<sup>18</sup> Foresight group, UK Investors Signal Natural Capital's Move into the Mainstream, January 2026

<https://foresightgroup/news-insights/news/2026/natural-capital-s-move-into-the-mainstream/>  
<https://foresightgroup/media/u0npgpcd/natural-capital-report-2026.pdf>

We find it important to monitor whether EU nature credits evolve to include water pollution offsetting in the future, and be instrumentalised politically to distract from the need to regulate overextraction, shift existing harmful subsidies and curb water pollution at source.