

Figure S1. Analysis of the EU's vulnerability regarding imports of coffee, whether roasted or decaffeinated or not; coffee husks and skins; coffee substitutes ('0901)

Source: Authors' own elaboration (2021).

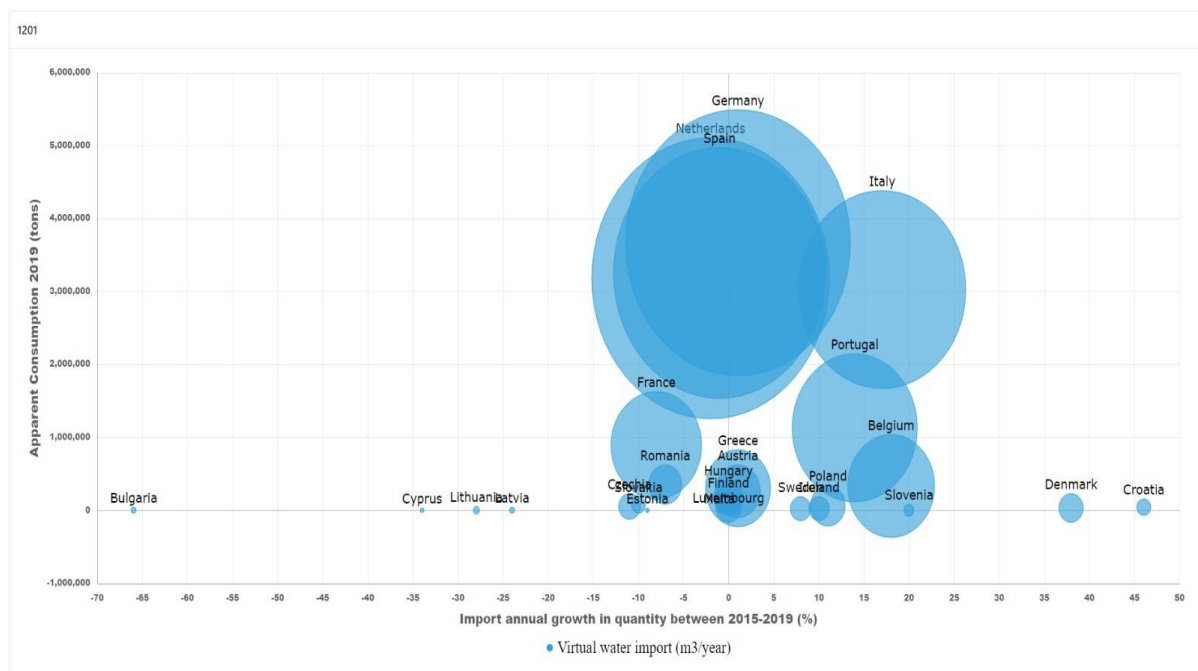


Figure S2. Analysis of the EU 's vulnerability regarding imports of soya beans, whether broken or not ('1201).

Source: Authors' own elaboration (2021).

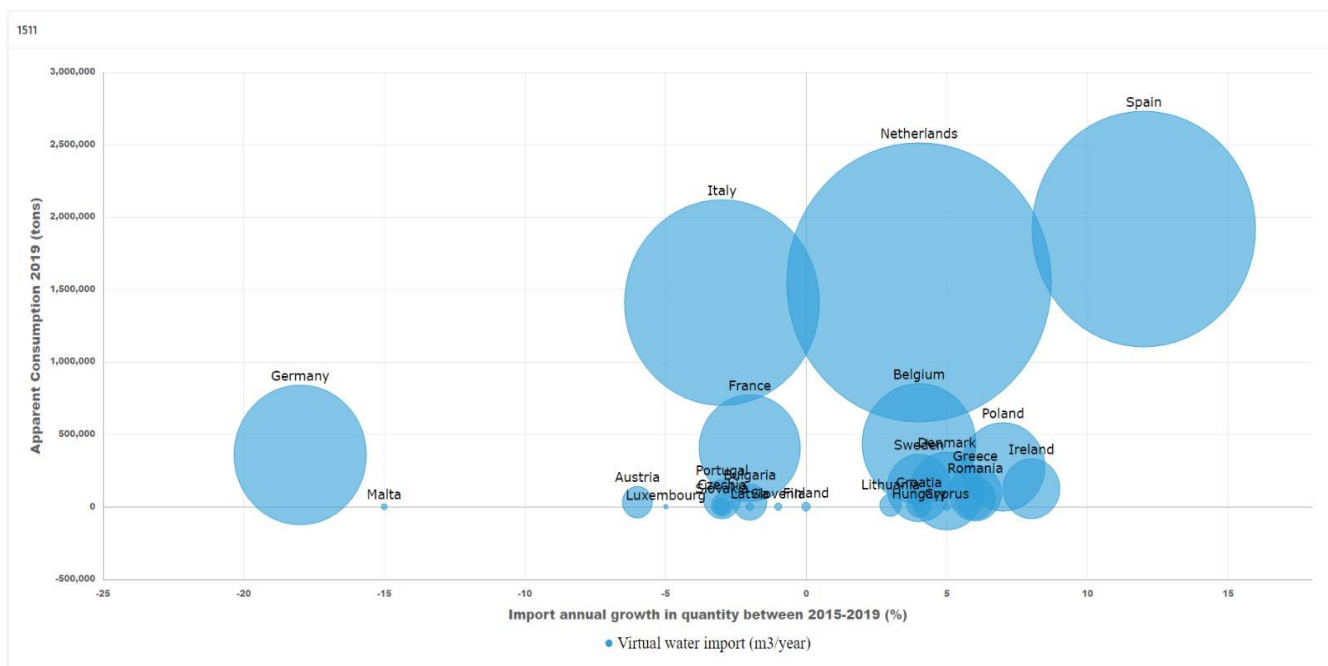


Figure S3. Analysis of the EU's vulnerability regarding imports of palm oil and its fractions, whether refined or not (excluding chemically modified) ('1511).

Source: Authors' own elaboration (2021).

Note: Estonia is not included in the graph due to its extremely atypical scores: annual import growth (454%, apparent consumption (−2,397), virtual water (726,649,973 m³).

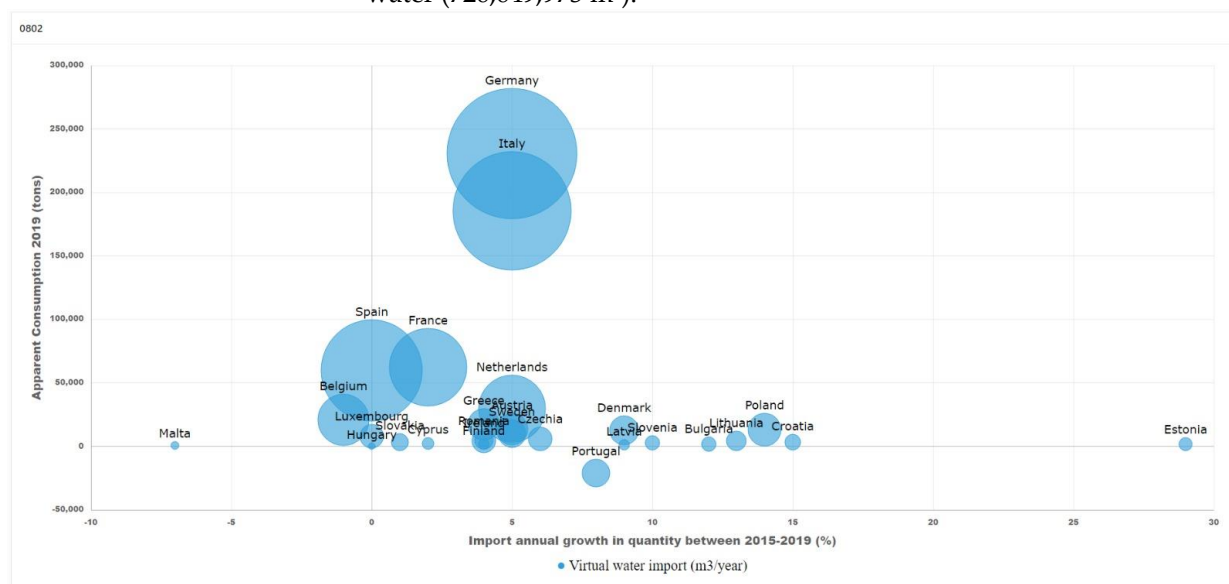


Figure S4. Analysis of the EU's vulnerability regarding imports of other nuts, whether fresh or dried, or shelled or peeled or not, excluding coconuts, Brazil nuts ('0802).

Source: Authors' own elaboration (2021).

Note: Data on Hungary were not available for 2019.

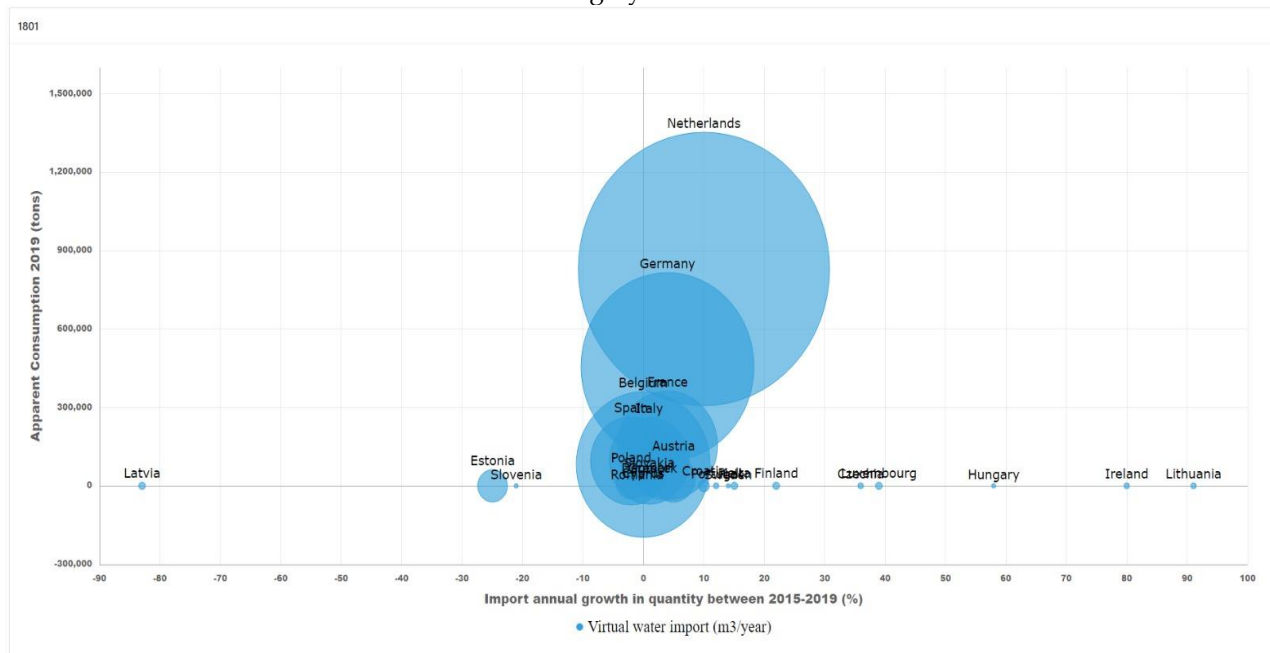


Figure S5. Analysis of the EU's vulnerability regarding imports of cocoa beans, whole or broken, raw or roasted ('1801).

Source: Authors' own elaboration (2021).

Note: Bulgaria is not included in the graph due to its extremely atypical scores: annual import growth (612%), apparent consumption (18,019), virtual water (356,160,310 m³).

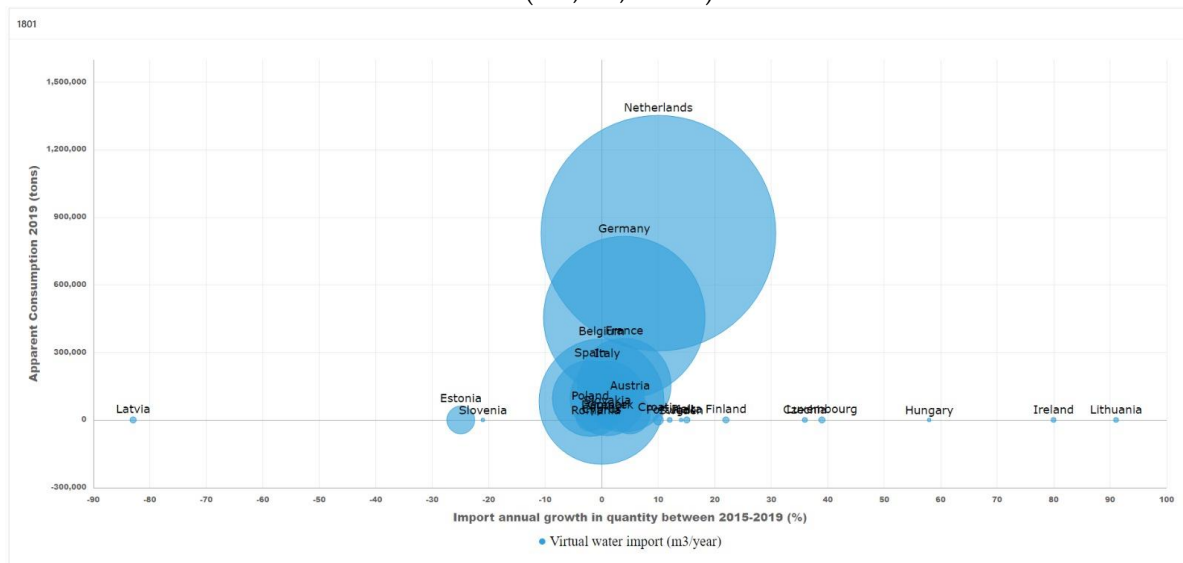


Figure S6. Analysis of the EU's vulnerability regarding imports of bananas, incl. plantains, fresh or dried (0803).

Source: Authors' own elaboration (2021).

Note: Data on Hungary were not available for 2019.

Table S1. Selection of international and European policy papers on sustainable water resources.

| No. | Issuing Institution | Name of the Document |
|-----|---|--|
| 1 | European Commission | 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 (2012) |
| 2 | European Commission | Water is for life: How the Water Framework Directive helps safeguard Europe's resources (2010) |
| 3 | European Union | EU Water Initiative (2016) |
| 4 | Food and Agriculture Organization of the United Nations | Towards a Water and Food Secure Future. Critical Perspectives for Policy-makers (2015) |
| 5 | Food and Agriculture Organization of the United Nations and Earthscan | The State of the World's Land and Water Resources for Food and Agriculture (2011) |
| 6 | GRI Standards | GRI 303: Water and Effluents (2018) |
| 7 | GRI Standards | GRI 303: Water and Effluents. Introduction (2018) |
| 8 | GRI Standards | GRI 306. Waste (2020) |
| 9 | International Water Management Institute | Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture (2007) |
| 10 | NEC | Sustainability Report 2020 |
| 11 | ORBIA | Sustainability Report 2020 |
| 12 | Pacific Institute | The CEO Water Mandate – Corporate Water Disclosure Guideline Toward a Common Approach to Reporting Water Issues (2012) |
| 13 | The Economist Intelligence Unit | Under pressure. The economic costs of water stress and mismanagement (2021) |
| 14 | The European Parliament and the Council of the European Union | 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 (2000) |
| 15 | United Nations Economic Commission for Europe | Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) |
| 16 | United Nations Economic Commission for Europe | Water Convention Programme of Work 2019-2021 (2021) |

| | | |
|----|--|---|
| 17 | United Nations Economic Commission for Europe | The European Union Water Initiative National Policy Dialogues. Achievements and lessons learned (2013) |
| 18 | United Nations Educational, Scientific and Cultural | The United Nations World Water Development Report 2015. Water for a Sustainable World (2015) |
| 19 | United Nations Educational, Scientific and Cultural Organization | The United Nations World Water Development Report 2021. Valuing Water (2021) |
| 20 | United Nations Educational, Scientific and Cultural Organization | The United Nations World Water Development Report 2020. Water and Climate Change (2020) |
| 21 | United Nations Educational, Scientific and Cultural, World Water Assessment Programme | Water in the 2030 Agenda for Sustainable Development: How can Europe Act? (2019) |
| 22 | Water Europe | Annual Report 2019/2020 (2020) |

Table S2. A general perspective by groups of items for vulnerable products and 13 countries of origin.

| Category 1: Water Availability | |
|---|------------------------------|
| <p>Risk; groundwater; basin; river; ecosystem/s; resource; availability; safety; scarcity; freshwater; basin; green water; flood; flood risk; watershed; erosion; water resources; river basin; water supply; food security; water stress; drinking water; surface water; water scarcity; world water; water availability; global water; water sector; river basin management; water consumption; water risk; access to water; water security; water demand; water withdrawals; transboundary water; water storage; international water; water bodies; transboundary basins; water challenges; freshwater resources; local water; safe water; droughts; floods and droughts; blue water; rainfed agriculture; water shortages; groundwater resources; extreme weather events; flood risk; coastal waters; flood protection; flood</p> | <p>7269 times 16.85%</p> |

| | |
|---|-----------------------|
| management; physical water scarcity; water crisis; limited water; freshwater withdrawals; baseline water stress; green water | |
| Category 2: Water Management | |
| Water; management; irrigation; governance; investment/s; initiatives; protection; technology; strategies; training; irrigated; technologies; strategy; innovation; programs; water resource development; WRD; water management; sustainable development; water resources management; corporate water; water disclosure; sustainable water; water governance; water infrastructure; management of water; integrated water resource management; agricultural water management; improve water; corporate water disclosure; water issues; irrigation systems; water systems; water conservation; water sustainability; water strategy | 11439 times 26.52% |
| Category 3: Water Quality | |
| Quality; policy; sanitation; waste; framework; wastewater; policies; standards; directive; research; pollution; efficiency; convention; degradation; conservation; guidelines; initiative; science; government; SDG; fertilizer; certification; certifications; certified; utz; regulation; ecologic; ISPO; ISO; accreditation; CSPO; RSPO; CWR; pesticides; nitrates; chemical; pesticide; herbicide/s; nutrients; contamination; water quality; water and sanitation; wastewater treatment; water policy; water discharge; GRI standards; water efficiency; water productivity; water footprint; water stewardship; water convention; water pollution; water treatment; water framework directive; water intensity; water performance; clean water; quality of water; water legislation | 24328 times 56.53% |

Source: Authors' own elaboration (2021).

Table S3. Share of apparent consumption of virtual water from virtual water imports.

| Country | Coffee, whether roasted or decaffeinated or not; coffee husks and skins; coffee substitutes | Soya beans, whether broken or not | Palm oil and its fractions, whether refined or not | Other nuts, fresh or dried | Cocoa beans, whole or broken, raw or roasted | Bananas, incl. plantains, fresh or dried |
|---------|---|-----------------------------------|--|----------------------------|--|--|
| *EU | 163% | 95% | 131% | 159% | 122% | 140% |
| Austria | 123% | 55% | 100% | 126% | 100% | 110% |
| Belgium | 441% | 161% | 116% | 215% | 344% | 510% |

| | | | | | | |
|------------|------|------|--------|------|------|------|
| Bulgaria | 179% | 17% | 127% | 200% | 100% | 101% |
| Croatia | 118% | 32% | 114% | 123% | 101% | 108% |
| Cyprus | 102% | 100% | 100% | 100% | 0% | 59% |
| Czechia | 191% | 54% | 154% | 159% | 105% | 141% |
| Denmark | 115% | 103% | 195% | 112% | 100% | 114% |
| Estonia | 122% | -25% | -6462% | 166% | 939% | 100% |
| Finland | 115% | 100% | 100% | 100% | 0% | 107% |
| France | 117% | 67% | 101% | 162% | 100% | 102% |
| Germany | 194% | 100% | 193% | 125% | 103% | 127% |
| Greece | 106% | 99% | 113% | 98% | 100% | 131% |
| Hungary | n/a | 34% | n/a | n/a | 100% | n/a |
| Ireland | 125% | 107% | 100% | 106% | 100% | 114% |
| Italy | 157% | 68% | 108% | 130% | 101% | 112% |
| Latvia | 203% | 148% | 107% | 127% | 0% | 193% |
| Lithuania | 174% | 120% | 112% | 147% | 101% | 139% |
| Luxembourg | 177% | 101% | 103% | 123% | 0% | 104% |

| | | | | | | |
|-------------|------|------|------|------|------|------|
| Malta | 100% | 100% | 100% | 100% | 0% | 100% |
| Netherlands | 187% | 129% | 180% | 260% | 120% | 504% |
| Poland | 155% | 121% | 102% | 141% | 101% | 117% |
| Portugal | 128% | 101% | 101% | -59% | 101% | 101% |
| Romania | 104% | 23% | 100% | 216% | 100% | 101% |
| Slovakia | 998% | 19% | 100% | 142% | 100% | 140% |
| Slovenia | 197% | 406% | 102% | 122% | 116% | 263% |
| Spain | 115% | 100% | 104% | 294% | 106% | 58% |
| Sweden | 126% | 100% | 120% | 123% | 102% | 120% |

Source: Authors' work. Note: The top three countries with the largest share of apparent consumption from external resources are highlighted in red, whereas those with the lowest shares are in green. We have referred to the colour distinctions in text.

Table S4. Popular items within the collected data by category of product, respectively by country.

| Code/ Count ry | + /- | Rank 1 | Rank 2 | Rank 3 | Rank 4 | Rank 5 | Rank 6 | Rank 7 | Rank 8 | Rank 9 | Rank 10 |
|-------------------------------|-----------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------------------|-------------------------------------|--------------------------------|---------------------------------|--|---------------------------------|
| '0901 Brazil | + - | research pesticide | quality nitrates | manage ment wastewa ter | innovati on SDG | initiative scarcity | chemical droughts | resource groundw ater | certificati on sanitation | risk flood | technolog y watershe d |
| '0901 Vietnam | + - | fertilizer contamin ation | irrigatio n freshwat er | training sanitatio n | manage ment directive | resource herbicid e | investme nt wastewat er | initiative technolog ies | quality innovatio n | risk pollution | governm ent safety |
| '1201 US | + - | managem ent freshwater | river ecologic | research droughts | conserva tion ISO | resource nitrates | quality groundw ater | investme nt pollution | SDG governan ce | risk conventio n | irrigation certificati on |
| '1201 Brazil | + - | managem ent pesticides | initiative s nitrates | policies sanitatio n | risk irrigated | governm ent ground water | research scarcity | resource directive | conservat ion ISO | certificati on contamin ation | quality watershe d |
| '1511 Indonesia | + - | RSPO nitrates | certificat ion pesticide | manage ment initiative s | standard s freshwat er | training scarcity | governm ent contamin ation | governan ce droughts | conservat ion irrigation | quality basin | ISPO sanitation |
| '1511 Malaysia | + - | certificati on pesticide | RSPO UTZ | manage ment freshwat er | initiative droughts | standard s ground water | risk basin | policy irrigation | programs wastewat er | governm ent fertilizer | safety degradati on |
| '0802 US | + - | irrigation pollution | research scarcity | resource watershe d | manage ment | quality droughts | efficiency degradati on | conservat ion | technolog y | safety river | flood framework |

| | | | | | conventi on | | | contamin ation | regulatio n | | |
|-----------------------------------|--------|-----------------------------|----------------------------------|--|----------------------------------|-------------------------------------|-----------------------------------|---|-------------------------------|---------------------------|--------------------------------|
| '0802 Turkey | + - | utz - innovatio n | research nitrates | manage ment wastewa ter | training directive | policy ISO | conservat ion watershe d | resource droughts | irrigated sanitation | risk contamin ation | fertilizer availabilit y |
| '1801 Cote d'Ivoire | + - | certificati on basin | training SDG | manage ment freshwat er | governm ent wastewa ter | quality directive | risk watershe d | research directive | resource contamin ation | initiative nutrients | standards flood |
| '1801 Ghana | + - | training safety | manage ment irrigatio n | quality pollution | risk conventi on | certificat ion ISO | water scarcity | governm ent ecologic | research wastewat er | chemical SDG | resource sanitation |
| '0803 Ecuador | + - | managem ent irrigated | quality scarcity | certificat ion accredita tion | safety ground water | training sanitatio n | governm ent degradati on | policy pollution | resource wastewat er | waste erosion | standards contamin ation |
| '0803 Costa Rica | + - | waste pesticide | fertilizer drought s | manage ment ground water | quality sanitatio n | resource erosion | wastewat er basin | water footprint contamin ation | chemical governan ce | safety herbicide | research ISO |
| '0803 Colombia | + - | managem ent pesticide | certificat ion directive | quality irrigated | standard s freshwat er | investme nt accredita tion | governm ent degradati on | research nutrient | policy watershe d | training erosion | risk ISO |

Source: Authors' own work. Note: Rank (+) indicates the most frequent terms, whereas rank (-) indicates the least frequent ones (including those with a value of 0 (zero findings). For rank (+), the item "water" was excluded, since all the selected materials contained the word "water".