

Promote financial instruments for liability on environment (LIFE PROFILE)

Action B.5: Socio-economic impact assessment of the application of financial provisions based on the risk assessment tool, on the relevant market and on the national economy.

Deliverable B.5. Assessment of socio-economic impacts of the implementation of financial security based on the environmental risk assessment methodology in the market and the national economy



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Abbreviations

CGE	Computable General Equilibrium
HEIC	Hellenic Association of Insurance Companies
GDP	Gross Domestic Product
EU-EMS	European Union Economic Modelling System

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Executive Summary

Deliverable B5 of the LIFE PROFILE project assesses the socio-economic impacts of implementing mandatory financial provisions for environmental risks, grounded in the risk assessment methodology developed in prior project actions (A1, B1, B2, B4). It explores how the introduction of such provisions may affect the insurance market, the business sector, and the Greek economy at large.

Using data collected from a targeted group of 26 stakeholders in the Greek insurance industry (via structured questionnaires), the analysis investigates anticipated impacts on revenue, premiums, administrative costs, innovation, employment, and product pricing. Stakeholder opinions varied widely, reflecting divergent risk perceptions and strategic expectations within the sector. While some expect significant revenue growth and innovation, others foresee modest or negligible effects, particularly regarding employment and claims volume.

To project macroeconomic impacts, a Computable General Equilibrium (CGE) model was employed, simulating the 2026 introduction of mandatory environmental insurance (calibrated to 2019 data). Model assumptions incorporated stakeholder estimates of premium increases (5–10%), insurance demand growth (20–30%), and modest innovation and employment changes. Results showed positive but moderate macroeconomic effects, including slight GDP (+0.1%) and household income (+0.09%) increases. Sectorally, Insurance, Industry, and Construction exhibited growth in Gross Value Added (GVA), while Agriculture and Utilities showed minor declines. The Insurance sector, in particular, is projected to experience a notable consumption boost (+6.29%) and GVA growth (+2.56%).

Περίληψη του παραδοτέου

Το Παραδοτέο B5 του έργου LIFE PROFILE αξιολογεί τις κοινωνικοοικονομικές επιπτώσεις από την εφαρμογή υποχρεωτικών χρηματοοικονομικών εγγυήσεων για περιβαλλοντικούς κινδύνους, βασισμένων στη μεθοδολογία εκτίμησης κινδύνου που αναπτύχθηκε σε προηγούμενες δράσεις του έργου (A1, B1, B2, B4). Η μελέτη εξετάζει τις επιπτώσεις αυτών των ρυθμίσεων στην ασφαλιστική αγορά, στον επιχειρηματικό τομέα και στην ελληνική οικονομία συνολικά.

Με βάση δεδομένα που συλλέχθηκαν από 26 εμπειρογνώμονες της ελληνικής ασφαλιστικής αγοράς (μέσω δομημένων ερωτηματολογίων), η ανάλυση διερευνά τις αναμενόμενες επιδράσεις στα έσοδα, στα ασφάλιστρα, στο διοικητικό κόστος, στην καινοτομία, στην απασχόληση και στις τιμές προϊόντων. Οι απόψεις των συμμετεχόντων διέφεραν σημαντικά, γεγονός που αντικατοπτρίζει διαφορετικές αντιλήψεις κινδύνου και στρατηγικές προσαρμογής. Ορισμένοι αναμένουν αυξήσεις στα έσοδα και ενίσχυση της καινοτομίας, ενώ άλλοι προβλέπουν μικρές ή αμελητέες επιδράσεις, ιδιαίτερα σε ό,τι αφορά την απασχόληση και τον αριθμό αποζημιώσεων.

Για την εκτίμηση των μακροοικονομικών επιπτώσεων, χρησιμοποιήθηκε υπολογιστικό μοντέλο γενικής ισορροπίας (CGE), το οποίο προσομοιώνει την εφαρμογή υποχρεωτικής περιβαλλοντικής ασφάλισης το 2026 (με έτος αναφοράς το 2019). Το σενάριο ενσωματώνει τις εκτιμήσεις των συμμετεχόντων για αύξηση ασφαλίστρων (5–10%), αύξηση της ζήτησης ασφάλισης (20–30%) και

μέτριες αλλαγές στην καινοτομία και την απασχόληση. Τα αποτελέσματα δείχνουν ήπιες αλλά θετικές μακροοικονομικές επιδράσεις, με μικρές αυξήσεις στο ΑΕΠ της Ελλάδας (+0,1%) και στο διαθέσιμο εισόδημα των νοικοκυριών (+0,09%). Κατά τομέα, Ασφάλειες, Βιομηχανία και Κατασκευές εμφανίζουν αύξηση της Ακαθάριστης Προστιθέμενης Αξίας (GVA), ενώ Γεωργία και Υπηρεσίες Κοινής Ωφέλειας παρουσιάζουν ελαφρές μειώσεις. Ιδιαίτερα ο ασφαλιστικός τομέας προβλέπεται να σημειώσει σημαντική αύξηση στην κατανάλωση (+6,29%) και στην GVA (+2,56%).

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1. Data description

The responses dataset captures the perceptions and expectations of 26 practitioners in the Greek insurance market regarding the economic impacts of introducing mandatory environmental damage insurance. The data was collected through direct invitations to HEIC members. The responses vary considerably, highlighting differing opinions about the directive's significance for the sector and broader economy. Below we describe each question separately, and plot non-qualitative responses.

2. Revenue Impact

Insurance firms generally anticipate a moderate revenue increase, typically between 10% and 30%. This indicates expectations of market expansion due to mandatory coverage, although some companies foresee minimal impact (Figure 1).

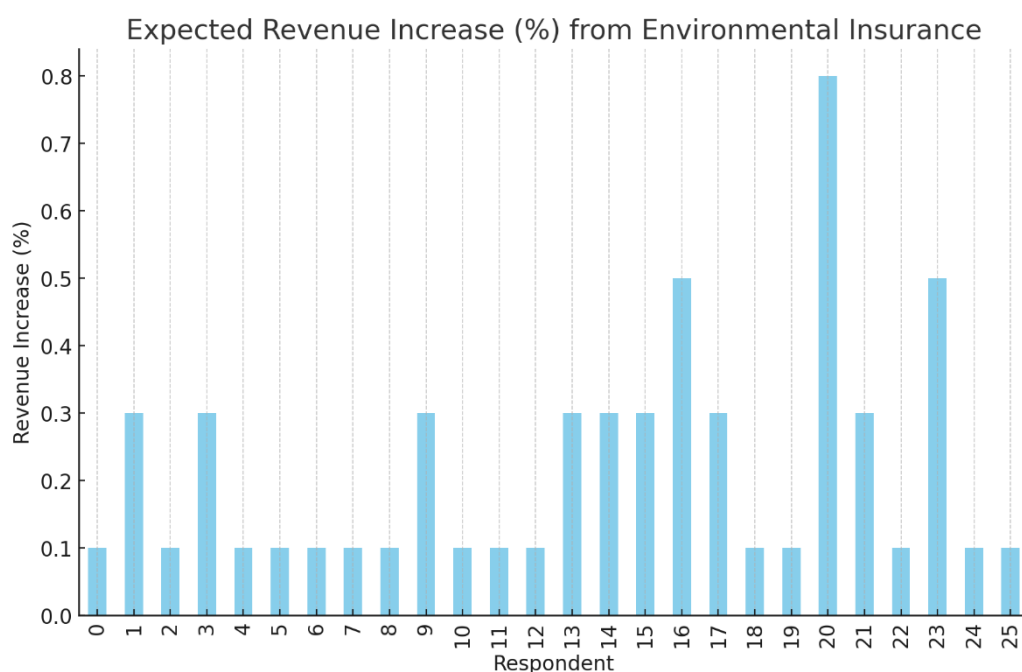


Figure 1. Expected Revenue increase from environmental insurance

3. Impact on Prices of Goods

Responses indicate a wide variance regarding the anticipated price impact on goods due to mandatory insurance costs. Several firms expect noticeable price increases (scored around 3 on a scale), reflecting a belief that businesses will pass insurance costs onto consumers. However, other respondents foresee minimal or no impact.

4. Premium Impact

Expectations for premium increases show considerable diversity, ranging from minor increases (1-3%) to significant surges up to 10% (Figure 2). This variance suggests differing estimations of market risk perception and company strategies in adjusting premium levels.

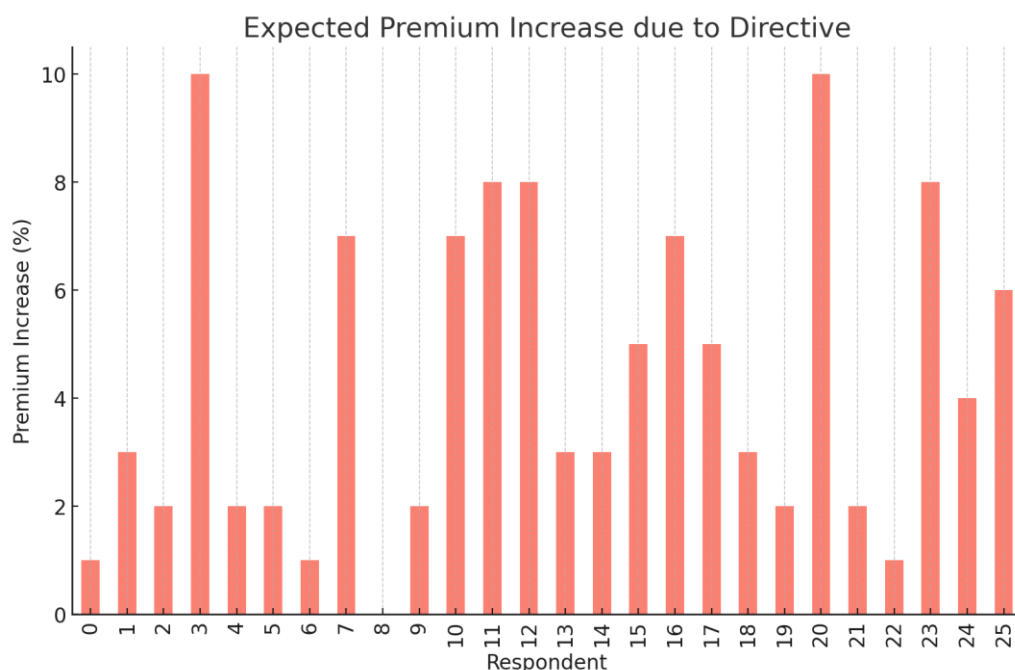


Figure 2. Expected Premium increase due to Directive

5. Claims Increase

Companies' responses regarding the anticipated rise in insurance claims also vary significantly (Figure 3). While a few companies expect substantial increases (up to 75%), many responses suggest minor or negligible rises. This variability reflects uncertainty about actual environmental incidents and claims patterns post-implementation.

6. Risk Management Strategies

Only a few firms explicitly foresee changes in their risk management strategies, particularly emphasizing enhanced preventive measures. However, many respondents did not detail their expectations, indicating either uncertainty or confidence in existing risk management practices

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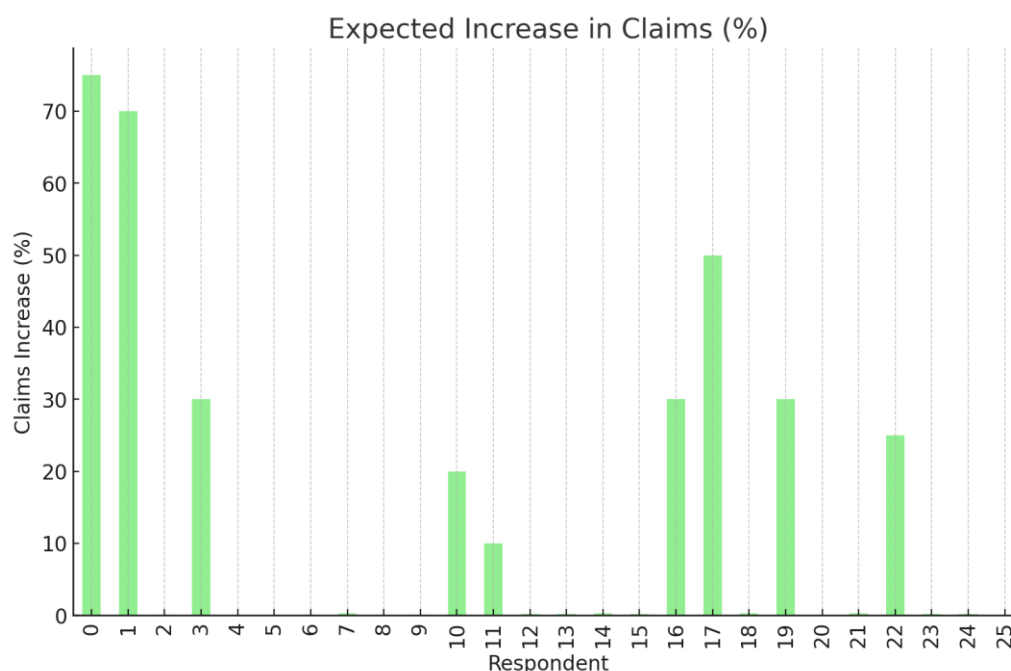


Figure 3. Expected Increase in Claims

7. Additional Costs

Reported additional costs, primarily administrative and legal, range widely. Some firms quantified these costs explicitly (e.g., €7,500, €5,000), while others expect minimal or unclear increases. This points to differing capacities for internal adjustment and the perceived bureaucratic burden associated with compliance.

8. Employment Impact

Employment effects anticipated by respondents range from negligible (0.01%) to significant increases (10%-15%). While several firms predict no meaningful changes, others anticipate workforce expansion to manage increased operational demands or new market segments arising from the directive.

9. Innovation and Product Development

There is broad agreement on increased innovation and investment in new insurance products and risk management tools. Respondents typically estimate modest to moderate increases (2%-10%), suggesting an expectation that the directive will spur product innovation and technological advancement within the sector (Figure 4).

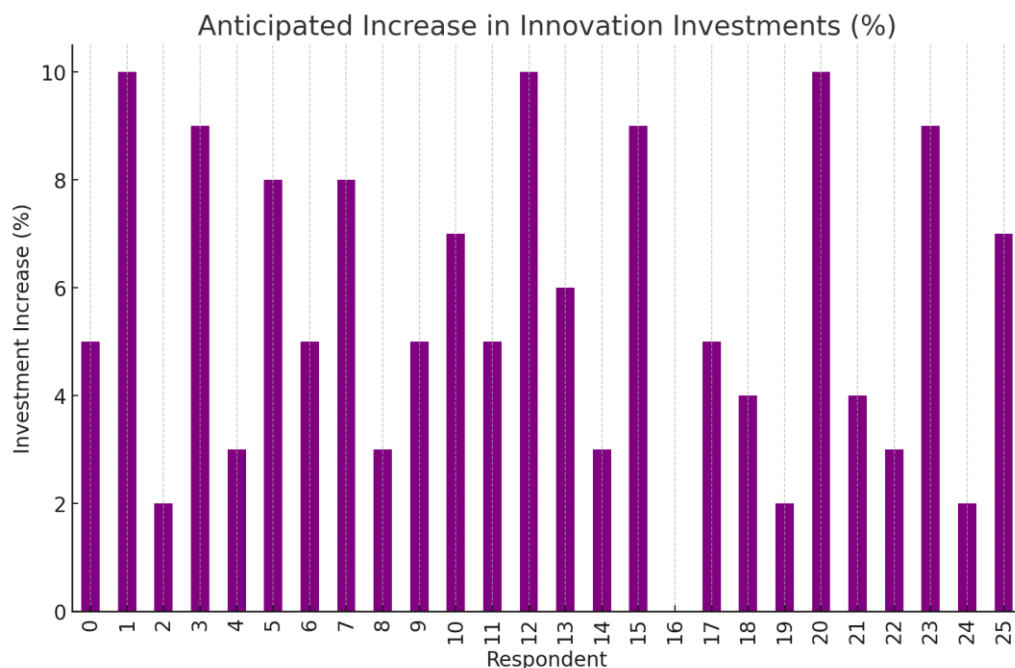


Figure 4. Anticipated Increase in innovation investments

10. Demand for Insurance

Expectations for increased insurance demand vary widely. While some respondents anticipate significant demand increases (up to 50%), others foresee marginal growth. This highlights uncertainty regarding market responsiveness and potential compliance levels across industries (Figure 5).

11. Sector-specific Effects

Some respondents highlighted specific sectors expected to experience significant impacts, such as business insurance (30%) and residential (15%). However, other respondents either provided minimal detail or explicitly indicated minimal impact, suggesting heterogeneous effects across various market segments.

12. Direct and Indirect economic effects to the Greek economy

Introducing mandatory environmental damage insurance in Greece can lead to significant direct and indirect economic impacts, comprehensively analyzed through a Computable General Equilibrium (CGE) model. Direct effects include immediate adjustments within the insurance sector, such as

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increased premiums, expanded market demand, enhanced innovation investments, and changes in employment due to regulatory compliance. Indirectly, the broader Greek economy may experience shifts in prices of goods and services, production costs across various sectors, consumer consumption patterns, and sectoral competitiveness, triggered by pass-through effects and reallocations of resources and labor. Utilizing a CGE framework enables the capture of these complex interdependencies and economy-wide repercussions, providing insights into how mandatory environmental insurance could shape economic resilience, growth, and sectoral transformations in Greece. The scenario developed to assess these dynamics are based on the 26 responses of the experts responded to the questionnaire designed for Life-Profile found here¹

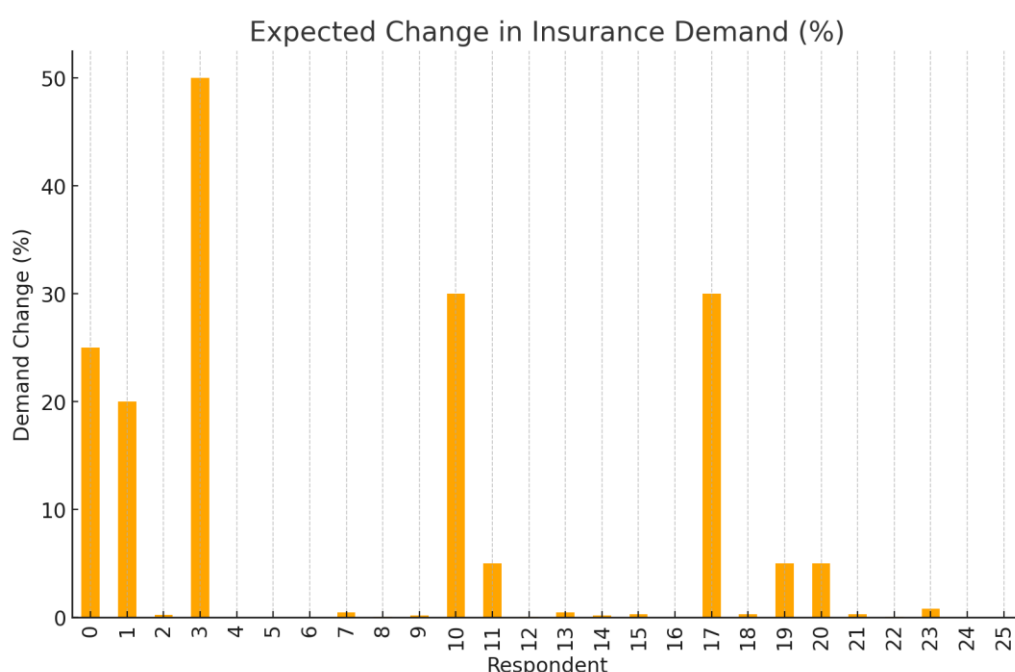


Figure 5. Expected change in insurance demand

13. CGE Model analysis

Using the EU-EMS Computable General Equilibrium model, this analysis simulates the introduction of compulsory environmental damage insurance in Greece for 2026, using 2019 as the calibration year. The scenario draws on survey-derived inputs: moderate premium increases; elevated insurance demand; and modest changes in employment and innovation spending, to reflect the anticipated effects of mandatory environmental coverage.

¹ <https://forms.gle/1pDPjeHkM4iTXpz26>, and the responses can be found here: [Πόσο θα επηρεαστεί ο κλάδος από την υποχρεωτική ασφάλιση για τον περιβαλλοντικό κίνδυνο. \(Responses\).xlsx](#)

The model links interdependent economic sectors and captures feedback mechanisms triggered by new insurance costs and coverage requirements. It contrasts a baseline without compulsory insurance against a policy scenario that incorporates projected premium hikes (5%-10%), higher demand (20%-30%). These assumptions shift firms' production costs and investment behavior, affecting prices, consumption, and employment across sectors.

Results indicate modest but positive macroeconomic outcomes overall. While most sectors experience slight price reductions, the Insurance sector sees a larger price drop of -4.65%, resulting probably from the spike in coverage. Consumption shows minor increases in several sectors, with the Insurance sector experiencing a consumption boost of 6.29%. Gross Value Added growth is notably positive in Industry and Construction (0.31% and 0.25% respectively) but modestly negative in sectors like Agriculture and Utilities (-0.03% and -0.06%).

At the national level, Greece's GDP and household income both rise marginally (0.1% and 0.09%, respectively). These gains likely stem from improved risk coverage, growth in insurance activity, and moderate cost pass-through effects that redistribute resources across the economy. Overall, the simulation suggests that compulsory environmental insurance can yield slight yet positive macroeconomic benefits, influencing sectoral performance and spurring innovation and job creation within the insurance industry.

Table 1: CGE Results for Greece compared to a baseline without the compulsory Insurance

<i>Measure</i>	<i>Agriculture</i>	<i>Industry</i>	<i>Construction</i>	<i>Utilities</i>	<i>Logistics</i>	<i>Transport</i>	<i>Services</i>	<i>Insurance</i>
<i>Prices</i>	-1,96%	-1,91%	-1,59%	-1,95%	-1,95%	-1,98%	-1,9%	-4,65%
<i>Consumption</i>	0,05%	0%	-0,29%	0,04%	0,04%	0,07%	0%	6,29%
<i>GVA</i>	-0,03%	0,31%	0,25%	-0,06%	-0,13%	-0,03%	-0,07%	2,56%

<i>Measure</i>	Greece
<i>GDP</i>	0,1%
<i>Household Income</i>	0,09%

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Πόσο θα επηρεαστεί ο κλάδος από την υποχρεωτική ασφάλιση για τον περιβαλλοντικό κίνδυνο.

* Indicates required question

☐ 0%

☐ 10%

☐ 30%

☐ 50%

☐ 80%

☐ 100% και πάνω

0 1 2 3 4 5 6 7

Καθόλου ○ ○ ○ ○ ○ ○ ○ Πάρα πολύ

Πώς αναμένετε ότι η Οδηγία για την Περιβαλλοντική Ευθύνη, ιδίως την υποχρεωτική ασφάλιση για περιβαλλοντικές ζημιές, θα επηρεάσει τα ασφάλιστρά σας;



Πόση αύξηση αναμένετε στις αξιώσεις λόγω της εισαγωγής της οδηγίας;
Καταχωρίστε % αλλαγή στις αξιώσεις

Your answer

Αναμένετε αλλαγές στις στρατηγικές διαχείρισης κινδύνου ως αποτέλεσμα της οδηγίας; Αν ναι, τι είδους αλλαγές;

Your answer

Ποιο πρόσθετο κόστος (διοικητικό, νομικό κ.λπ.) αναμένετε να επιβαρυνθείτε λόγω αυτής της οδηγίας; Μια απλή ένδειξη αξίας με σύμβαση.

Your answer

Αναμένετε σημαντικές αλλαγές στην απασχόληση στην εταιρεία σας ή στον ασφαλιστικό τομέα συνολικά ως αποτέλεσμα της οδηγίας; % Αλλαγή στην απασχόληση

Your answer

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Αναμένετε ότι η οδηγία θα δώσει ώθηση στην καινοτομία σε νέα ασφαλιστικά προϊόντα ή εργαλεία διαχείρισης κινδύνου; Παροχή % αλλαγής στις επενδύσεις καινοτομίας



Πώς αναμένετε να επηρεάσει η οδηγία τη συνολική ζήτηση για ασφάλιση στον κλάδο σας; Παρέχετε % μεταβολή στη ζήτηση

Your answer

Υπάρχουν τομείς ή κλάδοι για τους οποίους προβλέπετε ότι η οδηγία έχει ιδιαίτερα σημαντικά αποτελέσματα; Εάν ναι, πόση % αλλαγή ανά τομέα.

Your answer

Submit

Clear form



Το έργο LIFE PROFILE (LIFE19 GIE/GR/001127) Promote financial instruments for liability on environment συγχρηματοδοτείται από το Πρόγραμμα LIFE της Ευρωπαϊκής Ένωσης.



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