

**IRELAND'S
SUSTAINABLE FINANCE
SKILLS GAP
REPORT
2021**

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This report has been funded by:



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1.0 EXECUTIVE SUMMARY

It is widely reported that there is a sustainable finance skills shortage but less understanding of which skills are needed and who needs them.

In Europe almost 75% of respondents to a study undertaken by the UN FC4S indicated their organisation would be affected by a skills shortage. In Ireland, this stands at 67%. Ireland is already established as a leader in sustainable finance skills development with the establishment of the Sustainable Finance Skillnet (SFS) which delivered 1833 training days in 2020. However, this is still a significantly high percentage which indicates there is much more to do to provide the upskilling opportunities and capability to deliver on ambitious sustainable finance strategies and plans.

Compounding the skills shortage, supply is not keeping pace with demand. Almost 50% of respondents to the UN FC4S survey stated there is demand for but lack of adequate supply of sustainable finance skills. This is backed up with the experience of SFS with the launch of a first of its kind EU Taxonomy course. All 30 places were filled and SFS are currently operating a waitlist for the next iteration of the course. There is a need to expand the availability of this course and update continuously to ensure course content reflects most recent developments as the regulatory framework rapidly evolves. This requires further investment into developing and running courses.

There is an evident need for financial services professionals to anticipate such changes in regulations that will affect their working lives. New Zealand and the UK are two examples of countries who are mandating priority sectors to disclose in line with the TCFD recommendations, a voluntary framework to disclose financially material climate risk. In New Zealand, the mandating of the TCFD by FY 2022 will cover roughly 90%¹ of AUM. This is a piece of legislation that as members of the EU, the Irish financial services sector should take note of and indeed many already are. There is a significant chance that as countries commit to net-zero emissions by 2050, different economic sectors will introduce different measures to accelerate this transition. Anticipating the same scenario in the EU or in Ireland, the capabilities around TCFD reporting will have to be unquestionably enhanced. By providing courseware to the sector offering the capabilities to report in line with the TCFD would make Ireland '*TCFD Ready*' and offer financial services firms another reason why Ireland should be the *go-to* location for investment managers, banks, and insurers in the EU.

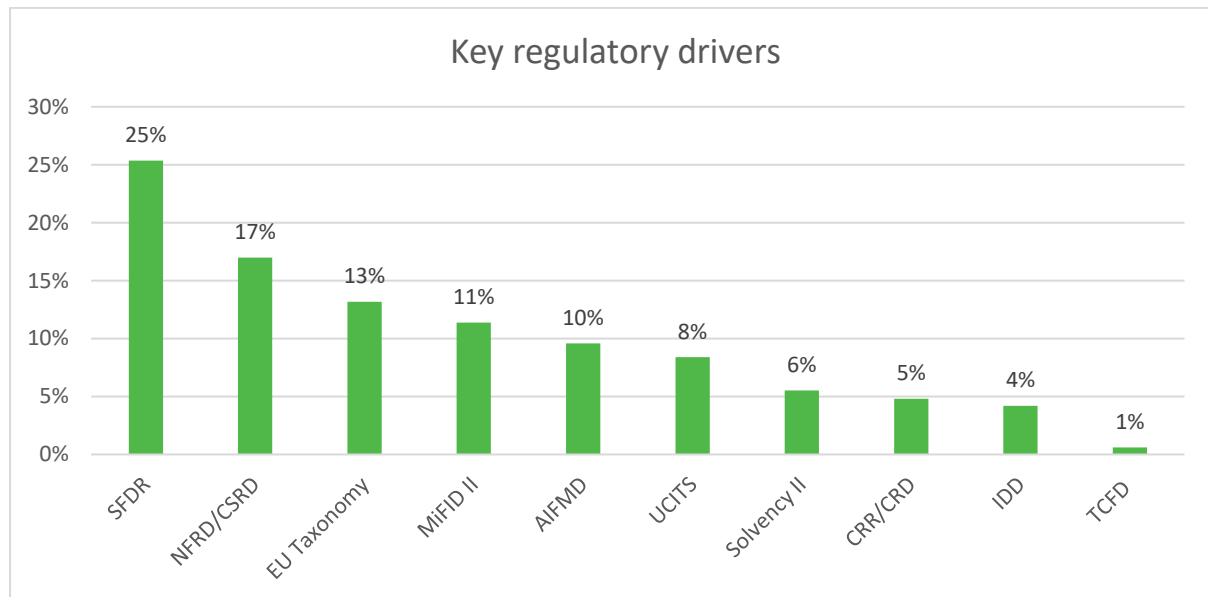
Whilst this research found that risk management was a key primary driver, upskilling on TCFD remains low, perhaps because the potential impacts are underestimated. With Minister Donohoe's support for the TCFD and NewERA's recommendation of the framework to state and semi-state bodies, there is growing momentum of support for the TCFD within Ireland. There are also growing expectations at EU level. For example, the European Central Bank published its guide on managing climate-related and environmental risks and expects banks to prudently manage and transparently disclose such risks under current prudential rules. This raises the stakes for Ireland's readiness to adopt leading sustainable finance practices and upskilling is key to Ireland's ability to respond and adapt effectively.

¹ <https://www.cdsb.net/mandatory-reporting/1094/new-zealand-becomes-first-implement-mandatory-tcfid-reporting>

For many years we have witnessed the movement from voluntary to mandatory standards and guidelines, and this trajectory will continue in the near and longer term. A key and immediate driver for sustainable finance skills is the tsunami of regulatory requirements from the EU, more specifically:

1. Understanding sustainable finance related regulation;
2. Applying and implementing sustainable finance regulation;
3. Enabling adequate compliance

SFDR is the top driver that requires upskilling due to the fast-paced nature and breadth of requirements.



The above regulatory acronyms are expanded on in Appendix A.

Given that the first deadline for SFDR disclosures has passed, it is no surprise that this tops the list of drivers. This is followed by the NFRD as sustainability reporting increases in importance for financial services firms in Ireland. Whilst the TCFD currently is low at 1% this is likely to shift dramatically in the future as the global dialogue on TCFD alignment and reporting intensifies

In addition to the regulatory drivers this study finds there is a need to create a baseline of sustainable finance education amongst financial services professionals. Traditional finance training is inadequate in its current form as it does not take into consideration broader ESG impacts and how this relates to financial impact. Integration is key to provide all FS professionals with basic knowledge of sustainable finance and this can be achieved through sustainable finance modules in existing academic and professional qualifications. There is already action being undertaken by several Irish universities and professional associations.

Technical training to those sectors and roles that have the most capacity and influence to redirect funds towards sustainable finance is also needed. Certain sectors such as insurance have little to no training specific for the industry currently available. Further research needs to be undertaken to understand the market more effectively.

The overall aim of this technical study is to inform the Sustainable Finance Roadmap development process by providing insight to the Working Groups (WGs) on the sustainable finance skills landscape in Ireland in 2021. The output will be to develop a core set of opportunities for the skills market, whether policy driven, course development or industry initiatives. We welcome all ideas to be brought forward to the Skills WG for discussion. Our collective challenge is to arrive at a set of core opportunities for inclusion in Ireland's Draft Sustainable Finance Roadmap. Ultimately, this study builds upon the Deloitte [2019 SFS Deep Dive Skills Report](#) and is solution oriented. Post working groups and draft roadmap development, the goal of Sustainable Finance Ireland and SFS is to build upon this paper by incorporating the outcomes of the working groups process and publish this study externally.

2.0 INTRODUCTION

2.1 Background

Key to the *Ireland for Finance* Action Plan 2021 is the development of a Sustainable Finance Roadmap for Ireland. The aim is, by 2025, for Ireland to be a leading global hub for sustainable finance. Part of this ambition is to create a Centre of Excellence for sustainable finance skills.

One of the key drivers for the SFS is to support the implementation of the Government of Ireland's *Ireland for Finance* strategy, launched in 2019. The strategy has four pillars, one of which is talent; and three horizontal priorities, one of which is sustainable finance. Therefore, the development of best-in-class sustainable finance talent is key to the government's strategy and an opportunity for Ireland's financial centre.

In 2019 there were just under 44,000 people employed across the 6 main business areas within Ireland's international financial services industry with an ambition to grow to [50,000 by 2025](#).

2.2 Purpose and objectives

Building on the 2019 report which assessed sustainable finance skills in Ireland, this report was developed to provide insight on the current picture of sustainable finance skills in Ireland in 2021 through the below objectives:

- Identify sustainable finance training courses available to Irish FS sector professionals;
- Identify key professions for sustainable finance impact across key areas of banking, insurance, investment and asset management and funds management;
- Identify the drivers (both general, and specific regulatory drivers) of, training gaps and focus areas for skills development;
- Make recommendations to enhance the availability of sustainable finance skills to the Irish Financial Services industry.

3.0 THE SUSTAINABLE FINANCE SKILLS GAP

3.1 Progress to date

The Sustainable Finance Skillnet (SFS) is one of 70 networks run through Skillnet Ireland, a business support agency of the Government of Ireland. With a mandate to advance the competitiveness, productivity, and innovation of Irish businesses through enterprise-led workforce development, Skillnet Ireland supports over 18,000 businesses and provides upskilling opportunities to over 70,000 trainees.

SFS works with training providers and subject matter experts to develop and conduct sustainable finance training on their behalf and supports companies directly, by providing matched funding for employees looking to undertake training.

| Key Numbers for 2020 | |
|--|-------|
| Training Days Provided | 1833 |
| Total Trainees | 1410 |
| Level of Matched Funding | €98k+ |
| Total Training Spend | €203k |
| Further Highlights for 2020 | |
| 190 signed up for one of the 4 UN PRI Academy online courses | |
| Partnered with CFA Ireland for the Irish launch of the CFA UK Certificate in ESG Investing | |
| Supported the development and rollout of a first-of-its-kind EU Taxonomy course (at capacity) | |
| Supported Climate Finance Week Ireland – 5000 attendees, 1.3 million people reached, over 5 million social media impressions | |

Beyond SFS, academia and Irish based professional and industry associations have been developing their own courses. For example, UCD (University College Dublin) and the IoB (Institute of Bankers)

MSc Renewable Energy and Environmental Finance (UCD) – originally MSc Energy and Environmental Finance (September 2012)²:

- First of its kind master’s programme incorporating traditional finance modules as well as those specifically related to renewable energy and environmental finance;
- Nearly doubling in class size from 16 (2019-2020) to 30 (2020-2021);
- Taught by leading sustainable finance experts including members of the European Commission’s Technical Expert Group (EC TEG).

Responsible and Sustainable Finance (IoB)³:

- Introduction to, and an understanding of themes such as: response to climate change; the catalyst for sustainable finance and EU regulatory initiatives. Including but not limited to non-financial disclosures, green, social, and sustainable bonds;
- First Delivered in October 2020, offered 3 times yearly (trimester 1 – October to January, trimester 2 – February to May, trimester 3 – June to August);
- Class size ranges between 50-70.

²https://www.smurfitschool.ie/programmes/masters/mscinrenewableenergyandenvironmentalfinance/?gclid=CjwKCAjwTJ2FBhAuEiwAiku19ovKjHQ7td2sP0UV96n_zxTzNpTNOVAldr7jkHPYPRnBuALka6JmrhoCWuIQAvD_BwE&gclidsrc=aw.ds

³https://iob.ie/programme/sustainable-finance?gclid=CjwKCAjwTJ2FBhAuEiwAiku19p8bAdLXsCSOSHwPyW7xo6C23IxgNORwpPgINy9LbP51b27hCz_X2BoCNVkJQAvD_BwE

3.2 Research methodology

We undertook detailed desktop research which began with identifying the top 47 roles in financial services. Using the total number of 44,000 we approximated numbers employed in each role. Estimates for numbers employed in roles/areas were obtained through research and outreach to educational providers with Irish membership and or societies e.g., CFA Ireland. We were challenged with gaps and therefore adopted estimates or reasonable proxies. For example, if we consider there are approximately 400 large companies in Ireland, we estimated that each board has on average, eight to 10 members. Allowing that some members will be executive and some non-executive, this resulted in approximately 1000 - 2000 board members in Ireland. We also adopted a range estimation of numbers employed in the various roles as can be seen in the table below. The ranges are up to 250, 251-500, 501-1000, 1001-2000, 2000+.

The drivers behind the need to upskill these roles in relation to sustainable finance were taken from the 2019 and 2020 skills reports conducted by SFS and UN FC4S, respectively and updated by SFS. Examples of these drivers included regulatory, disclosure, stakeholder expectations, and risk management, as shown in *Figure 1*, further below.

As regulatory and disclosure demands were seen in both Irish and European cases as one of the most important drivers behind the need to invest in sustainable finance skills and talent, the mapping of more specific regulations was allocated to the affected roles. An example of this is the introduction of ESG considerations in the amended MiFID II legislation. This will affect asset managers as MiFID firms will be required to update their product origination and marketing / distribution strategies, to ensure that they take account of client sustainability preferences.

As domestic and EU regulation has caused a major shift in focus for the financial services sector to take account of ESG considerations, there are no roles in the sector that are not directly and/or indirectly affected in some way by this changing landscape.

Desktop research was also conducted to compile information on sustainable finance courses available in the market. We identified 50 different courses from a variety of providers across academia, industry, and professional associations (Appendix B) Having completed research on the roles and drivers, the courses were then allocated to the list of roles and the relevant drivers behind the need to upskill these roles.

3.3 What are the key issues driving the need for upskilling?

Key drivers for upskilling were identified in the 2019 report on Ireland skills gap and backed up by the UN FC4S research across Europe. The below graph represents the drivers behind investment in sustainable finance skills and talent in Ireland.

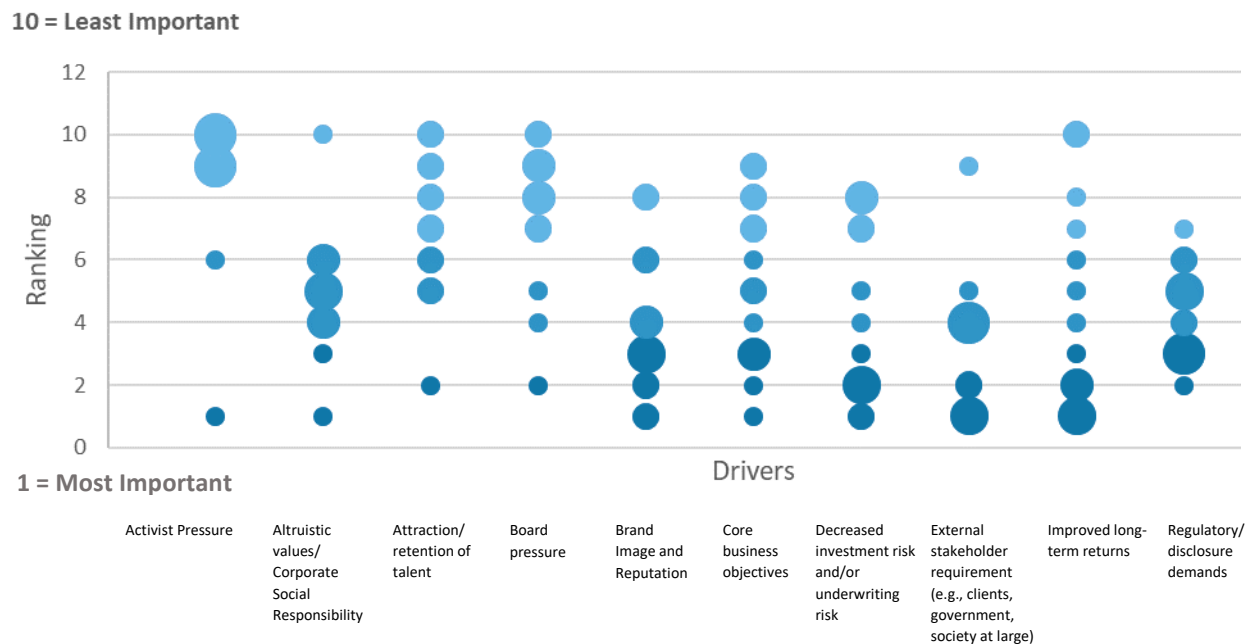


Figure 1 Sustainable Finance Skillnet Deep Dive Skills Report (2019)

As can be seen in *Figure 1*, the main drivers behind investment in sustainable finance upskilling in Ireland in 2019 were (in no particular order): improved long-term returns, brand image and reputation, decreased investment risk and/or underwriting risk, regulatory/disclosure demands, external stakeholder requirement (e.g., clients, government, society at large), and core business objectives. These drivers are expected to remain the same in 2025 but are expected to intensify.

As part of our research and analysis, we mapped financial sector roles to ESG agenda drivers. Drivers were taken from the 2019 and 2020 skills reports conducted by SFS and UN FC4S, respectively and updated by SFS. The mapping of the below general drivers onto specific roles was conducted by the authors of this report.

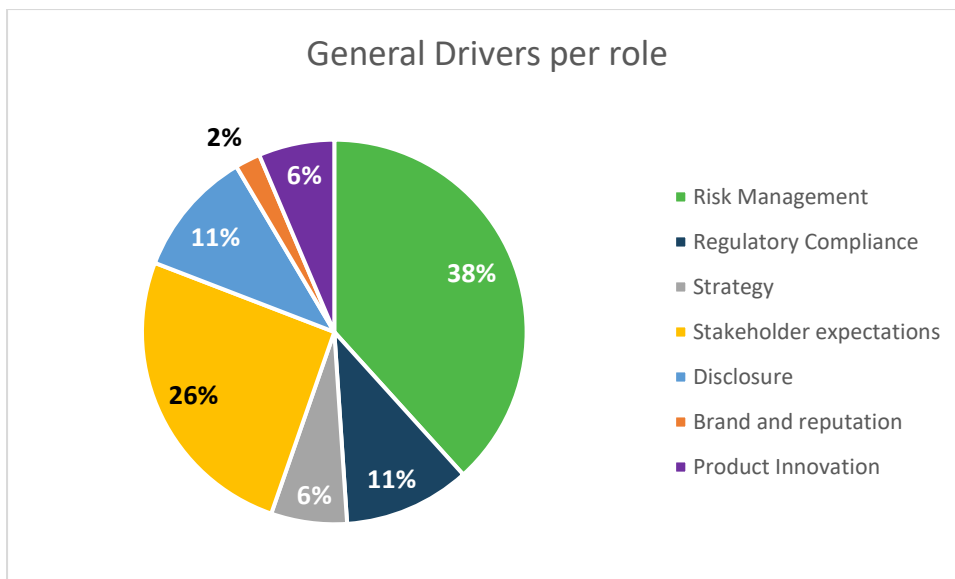


Figure 2

This graph shows the primary drivers of ESG adoption and integration into businesses across 47 key roles in the financial sector in Ireland. Risk management, regulatory compliance and disclosure represent 60% of the overall drivers. Stakeholder expectations stand at over a quarter as there are increasing expectations of client facing employees for example, to have knowledge of ESG impacts and how to minimise ESG related risks.

Such a focus on the risk management, disclosure and regulatory compliance could indicate that there is limited capacity and capability for considering the transformation agenda and innovation opportunities that sustainable finance presents. This would lead to a loss of competitiveness for Ireland. Ireland will not stand at the forefront of sustainable finance if our focus is backward looking as opposed to future proofing and innovating new ways to steer capital towards sustainable activities. More research needs to be undertaken to explore this.

***'The consensus among interviewees is they expect the pace of demand for sustainable finance skills and talent to rapidly increase as the regulatory agenda is rolled out. The findings indicate that baseline technical knowledge and knowledge of Sustainable Finance frameworks and regulations is required as a main priority in the short term.'* UNFC4S**

Given the immediacy of regulatory drivers, we narrowed our focus to dive deeper into exploring which regulations are specifically driving the need for upskilling.

No stakeholder engagement was involved in the mapping of the specific regulatory drivers (Figure 3), or the knowledge required (Figure 4) behind the need to upskill certain roles. This method was solely undertaken by the authors of this report in their roles at Sustainable Finance Ireland. The mapping of these findings are open to WG interpretation and amending where deemed necessary.

Figure 3 (below) shows the single top regulatory driver for our estimated employee numbers in the financial services sector. Percentage figures represent our estimations of employees in the financial services sector mapped to this regulatory driver.

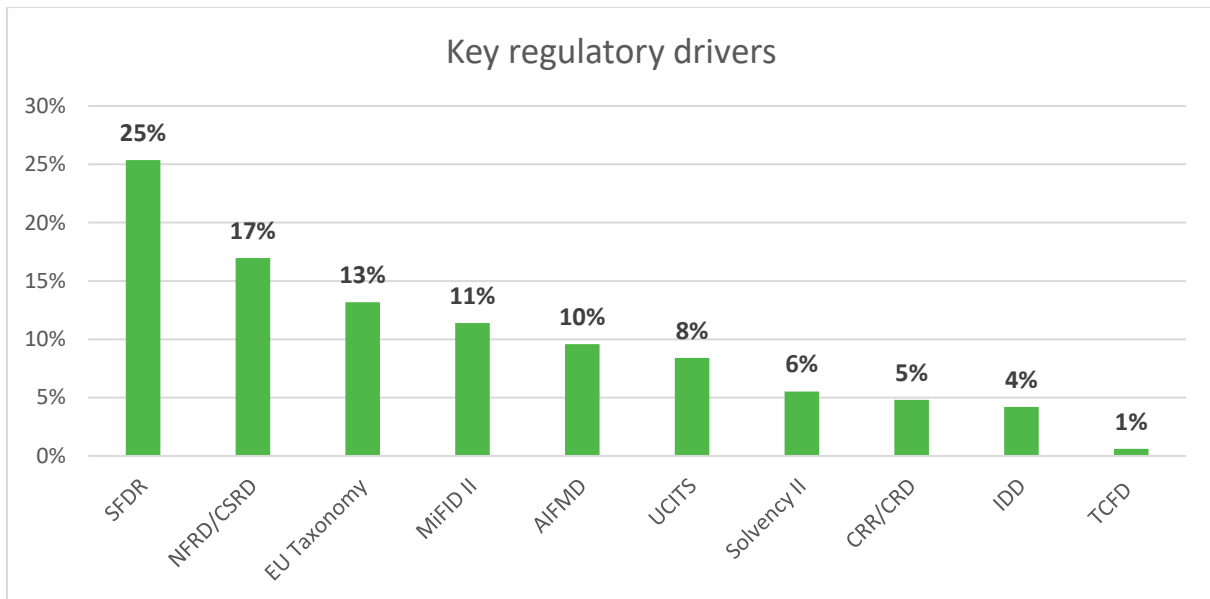


Figure 3

Disclosure regulation and asset management regulation are among the more common drivers for employee upskilling. Whilst the TCFD currently is low at 1% this is likely to shift dramatically in the future as the global dialogue on TCFD alignment and reporting intensifies and shifts the requirements from voluntary to mandatory. It is recommended that a focus on upskilling for TCFD adoption and implementation continues.

3.4 What skillsets do key roles require?

According to UN FC4S research, across Europe almost a third of sustainable finance capability is found within a dedicated team equipped with a budget and accountable for managing KPIs, with another third via a high-level executive who reports directly to the CEO and board. Whilst dedicated sustainable finance experts are required to drive the agenda forward at a strategic level, there is also a critical need for key roles to be upskilled so that sustainable finance can be integrated into the day-to-day of certain roles and become business as usual where necessary. By understanding which roles are most affected and what type of training they need to develop, we can work towards embedding the required skills into the right roles.

We know that there is a skills shortage, and we know the drivers for skillset development but what skills are needed, who needs them, and what does the current landscape of available training options look like?

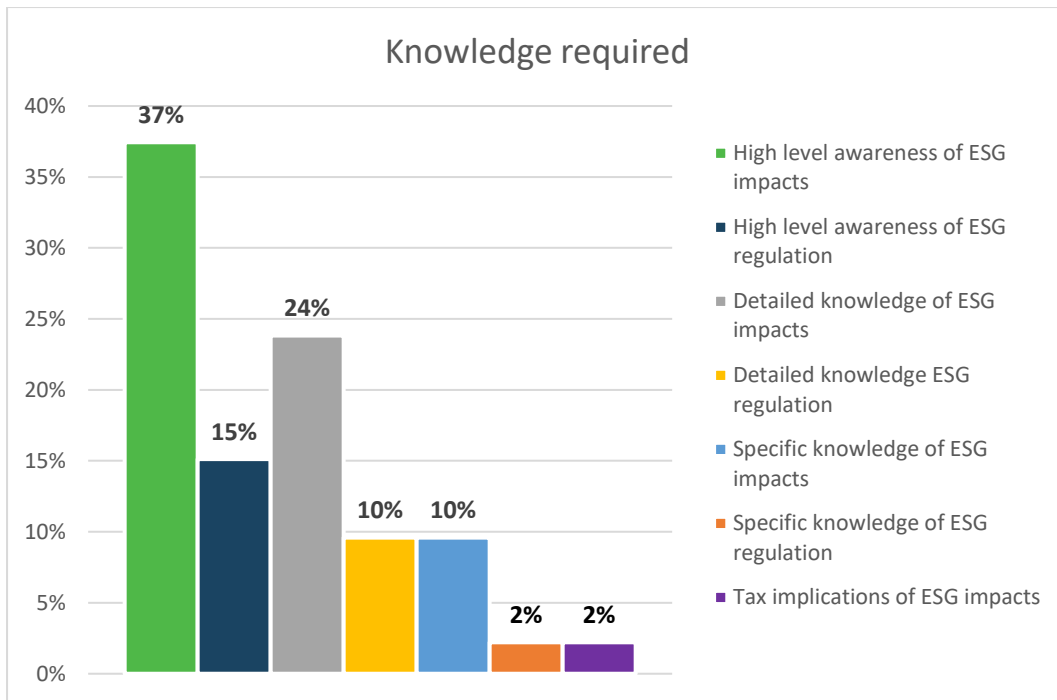


Figure 4

As part of our technical research, we grouped the estimated employee numbers based on their required knowledge and skills (Figure 4). Employees were mapped to one of the following categories:

- High level awareness of ESG impacts;
- High level awareness of ESG regulation;
- Detailed level awareness of ESG impacts;
- Detailed level awareness of ESG regulation;
- Specific level awareness of ESG impacts;
- Specific level awareness of ESG regulation;
- Tax implications of ESG impacts.

Roles falling under high-level awareness categories include C-suite members, for strategy and management purposes, and those employees who will need the broad view as opposed to needing very specific skillsets on ESG impacts in their day-to-day role.

Detailed awareness categories include employees who will be dealing with ESG impacts or regulation on a regular basis. This includes fund/portfolio analysts and risk and compliance officers.

Specific level awareness refers to roles that require a detailed knowledge of ESG impacts or regulation in a specific area, such as a product analyst.

The tax implications of ESG impacts refers to roles that work in the tax area and will work with the impacts of ESG changes.

From the graph, most financial sector employees require a high-level awareness of ESG impacts (37%). A total of 52% of employees require a high-level awareness of ESG impacts or regulation. A lesser proportion require detailed ESG knowledge of impacts or regulation, totalling 34% of estimated employees in the financial services sector. However, these groupings will require more intense and focused development and upskilling opportunities. It may also be likely in the medium-term (2-5 years)

future that the knowledge required by employees will intensify to more detailed and/or specific knowledge on impacts and/or regulations.

We reviewed the upskilling requirements of different roles. The graph below indicates the single primary upskilling required by employees. The graph provides a further breakdown of *Figure 4* above. We acknowledge that employees may have multiple upskilling requirements. However, for the purposes of the below graph, only the primary upskilling was considered. As a result, “detailed knowledge of ESG regulation” scores low while “MiFID II” scores high.

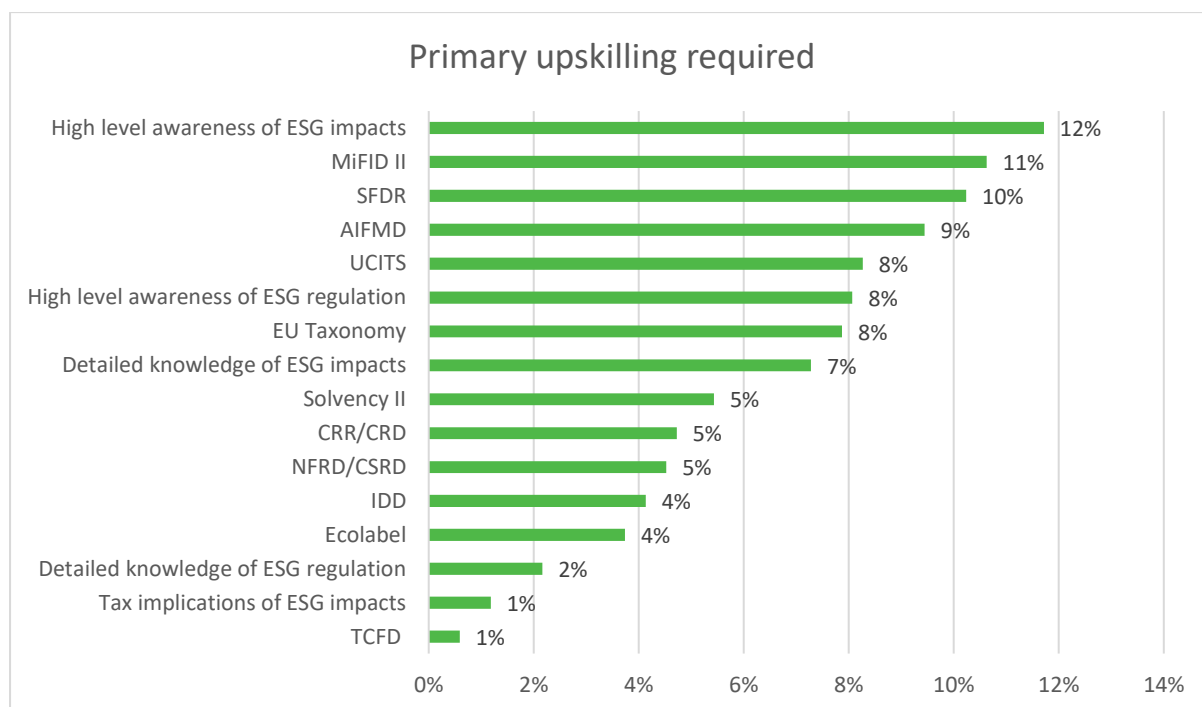


Figure 5

We see that a high-level overview of ESG related impacts (12%) is the most common primary upskilling required. This is in-line with previous findings suggesting that a baseline understanding of sustainable finance amongst all employees is required across the sector. Additionally, we see the disclosure requirements and guidance (SFDR, NFRD/CSRD and TCFD) combined equal 15%. We note again that TCFD is currently optional. This finding is again consistent with those found by SFS (2019) and UN FC4S (2020).

Note that SFDR and some other regulations and directives show different values in *Figure 3* and *Figure 5*. This is due to the broad upskilling categories, such as “High level awareness of ESG regulation” in *Figure 5*, are distributed proportionally among applicable regulations and directives in *Figure 3*. We see this again with “Detailed knowledge of ESG regulation” between *Figure 4* and *Figure 5*.

4.0 MAPPING ROLES TO DRIVERS, SKILLS AND QUALIFICATIONS

As detailed in the methodology we identified 50 different courses from a variety of providers across academia, industry, and professional associations (Appendix B). Having completed research on the roles and drivers, the courses were then allocated to the list of roles and the relevant drivers behind the need to upskill these roles.

This process allowed for the identification of surpluses and shortages in sustainable finance courses for the mapped roles, given their allocated drivers.

The table below aggregates the research undertaken to:

1. Identify the key roles for sustainable finance impact;
2. Estimate the market numbers for each role;
3. Assign key drivers to the roles and upskilling required;
4. Identify the academic and professional qualifications and subsequent opportunity to embed sustainable finance;
5. Map current course availability and gaps.

Key:



Courses are available








No courses available













Course is partially available





Mapping Roles to Drivers, Skills, and Qualifications


| C-Suite and senior level roles | | | | | | |
|--------------------------------|--|--------------------------|------------------------------------|---|---|------------------|
| | Key Roles and Descriptions | Market Numbers (approx.) | Key Drivers for Skills Development | Specific ESG Drivers | Academic/ Professional Qualification required | Available Course |
| 1 | Board member: ensure the company's prosperity by collectively directing the company's affairs, while meeting the appropriate interests of its shareholders and relevant stakeholders | 1001-2000 | Stakeholder expectations | High level awareness of ESG impacts and regulation | Regulated by CBI. Extensive experience and industry knowledge | |
| 2 | CEO/Chief Executive: responsible to lead overall direction of firm | 251-500 | Strategy | High level awareness of ESG impacts and regulation, EU Taxonomy, SFDR | Regulated by CBI. CFA, relevant accounting qualification (ACCA, CAI etc.). Extensive firm/industry experience | |
| 3 | COO: responsible for the day-to-day operations of a firm and for assisting the CEO in a variety of tasks | Up to 250 | Risk management | High level awareness of ESG impacts, NFRD/CSRD, SFDR | Regulated by CBI. Relevant accounting qualification (ACCA, CAI etc.) CFA, FCA, etc. Extensive experience in firm/industry | |

| | | | | | | |
|---|--|-----------|-----------------|--|---|---|
| 4 | CIO: manage investment strategies and portfolios | 251-500 | Risk management | High level awareness of ESG impacts, EU Taxonomy, SFDR | Regulated by CBI. CFA, relevant accounting qualification (ACCA, CAI etc.). Extensive firm/industry experience |  |
| 5 | CFO: top-level financial controller, handling everything relating to cash flow and financial planning | 251-500 | Risk management | High level awareness of ESG, SFDR, TCFD | Regulated by CBI. CFA, relevant accounting qualification (ACCA, CAI etc.) Extensive firm/industry experience |  |
| 6 | CRO: responsible for identifying, analysing, and mitigating internal and external risks | 251-500 | Risk management | High level awareness of ESG regulation TCFD, NFRD/CSRD MiFID, IDD (sector dependent) | Regulated by CBI. Degree and extensive industry experience, CFA, GARP qualifications etc. |  |
| 7 | CSO: head of firms' sustainability objectives. Responsible for direction of firm's sustainability credentials and performance | Up to 250 | Strategy | Detailed knowledge of ESG regulation | Degree. Extensive industry/firm experience. Relevant Masters may be beneficial. |  |
| 8 | Chief Administrative Officer (CAO): oversees a company's day-to-day operations, usually focus on finding ways to improve specific elements of a company's operations | Up to 250 | Risk management | High level awareness of ESG impacts | Degree and background, extensive firm/industry experience. |  |




| | | | | | | |
|----|---|----------|--------------------------|--|--|---|
| 9 | Company Secretary: responsibility to ensure that the company and its directors operate in line with relevant legal requirements | 251-500 | Regulatory compliance | High level awareness of ESG regulation | Degree and/or experience. Chartered Governance Institute |  |
| 10 | Client Manager: between a company and its clients, develop account plans, and deliver proposals | 251-500 | Stakeholder expectations | High level awareness of ESG regulation MiFID II, IDD (sector dependent) | Regulated by CBI. Relevant degree (marketing, communications etc.) and/or experience |  |
| 11 | Communications Manager: promotes a company's mission, products and/or services. identifying press opportunities and developing content to be disseminated via social media, websites, newsletters, press releases and any other distribution channels | 251-500 | Brand and reputation | High level awareness of ESG impacts. Disclosures: SFDR, NFRD/CSRD, TCFD | Relevant degree (marketing, communications etc.) and/or experience |  |
| 12 | Client engagement executive: responsible for building a positive relationship with a client, assigning company resources to the client, billing and invoicing the client, managing the client expectations, and working with the sales team | 501-1000 | Product innovation | High level awareness of ESG regulation. MiFID II, IDD (sector dependent) | Regulated by CBI. Relevant degree (marketing, communications etc.) and/or experience |  |
| 13 | Head of Depository Services: maintain appropriate control environment to ensure the firm fulfils its depository obligations. | 251-500 | Risk management | High level awareness of ESG impacts. SFDR, EU taxonomy | Relevant degree (maths, business, finance, similar) and/or experience |  |





| | | | | | | |
|----|---|-----------|-----------------------|---|---|---|
| 14 | Head of Legal/Compliance/Regulatory Affairs: ensures firm is legally/regulatory compliant | 251-500 | Regulatory compliance | Detailed knowledge of ESG regulation, EU Taxonomy and SFDR | Regulated by CBI. Degree, relevant experience and a relevant certification e.g., Certified Regulatory Compliance Manager (CRCM) |  |
| 15 | Head of Client Asset Oversight (HCAO): PCF role that reports to the Board at least annually. Ensure the client asset management plan is produced. Report breaches to the CBI | Up to 250 | Risk management | High level awareness of ESG regulation. MiFID II | Regulated by CBI. Degree and background, extensive firm/industry and regulatory experience. |  |
| 16 | Head of Operational Due Diligence: assess operational risk of investment to firm. ensures adequate internal processes are met for investments. | 251-500 | Risk management | High level awareness of ESG impacts. MiFID II | Degree, extensive experience and accounting and/or investment qualifications, CFA etc. |  |
| 17 | Head of Distribution: develop and maintain internal client management systems, as well as ensure timely and accurate delivery of customised reporting to clients. Market financial products | 251-500 | Product innovation | High level awareness of ESG impacts. SFDR, EU Taxonomy, EU Ecolabel, MiFID II | Relevant degree (marketing, communications etc.) and experience. |  |
| 18 | Assurance Manager: verify the records available in the company's accounting record is as per accounting standard and principle, and it also confirms that accounting record is accurate or not. | 251-500 | Disclosure | High level awareness of ESG regulation. SFDR, NFRD/CSRD | Degree and experience. Relevant accounting qualification (ACCA, CAI etc.) |  |






| | | | | | | |
|----|---|-----------|--------------------------|---|---|---|
| 19 | Asset Manager: front office, maximising returns for relevant customer market | 2000+ | Stakeholder expectations | Specific knowledge of ESG impacts. MiFID II, SFDR, UCITS, AIFMD | Regulated by CBI. Degree, experience and professional qualification, CFA, relevant accounting qualification (ACCA, CAI etc.) |  |
| 20 | Fund/Portfolio Manager: front office, maximising returns for relevant customer market | 1001-2000 | Stakeholder expectations | Detailed knowledge of ESG impacts. MiFID II, UCITS, AIFMD | Regulated by CBI. Degree, experience and professional qualification, CFA, relevant accounting qualification (ACCA, CPA, CAI etc.) |  |
| 21 | Real Estate Portfolio Manager: maximising returns from real estate management | 501-1000 | Stakeholder expectations | High Level awareness of ESG impacts. AIFMD | Regulated by CBI. Degree, experience and professional qualification, CFA, relevant accounting qualification (ACCA, CAI etc.) |  |
| 22 | Insurance risk manager: responsible for identifying the critical causes of accidents or losses, recommending, and implementing precautionary measures, and coming up with plans to minimize cost and damage in case a loss occurs, including the purchase of insurance. | 501-1000 | Risk management | High level awareness of ESG regulation. Solvency II, IDD, detailed knowledge of ESG risks | Degree, experience and professional qualification. Insurance Institute exams |  |





| | | | | | | |
|----|---|----------|--------------------------|---|--|---|
| 23 | Financial Advisor: understand and advise clients on relevant investment opportunities based on their risk appetite and time horizon | 501-1000 | Stakeholder expectations | Detailed knowledge of ESG impacts. MiFID II, IDD (sector dependent) | Regulated by CBI. Degree, experience and professional qualification, CFA, relevant accounting qualification (ACCA, CAI etc.) |  |
|----|---|----------|--------------------------|---|--|---|

Mid-Level Roles




| | Key Roles and Descriptions | Market Numbers (approx.) | Key Drivers for Skills Development | Specific ESG Drivers | Academic/ Professional Qualification required | Available Course |
|----|---|--------------------------|------------------------------------|---|---|---|
| 24 | Stockbroker: execute trades on clients' behalf | 251-500 | Stakeholder expectations | High level awareness of ESG impacts. UCITS, AIFMD, Ecolabel | Degree, experience and professional qualification, CFA etc. IOB Stockbroker |  |
| 25 | Trader: buy and sell financial Products on behalf of investors and their own firm's capital | 251-500 | Stakeholder expectations | High level awareness of ESG impacts | Degree, experience and professional qualification, CFA, IIFT etc. |  |
| 26 | Internal Auditor: reviews a company's financial statements, documents, data and processes. | 1001-2000 | Disclosure | Detailed knowledge of ESG regulation. SFDR, NFRD/CSRD | Governed by Institute of Internal Auditors. Relevant degree (maths, business, finance etc.) and/or relevant accounting qualification (ACCA, CAI etc.) |  |




| | | | | | | |
|----|---|-----------|--------------------------|--|---|---|
| 27 | Private Banker: provides financial advice for high net worth individuals | Up to 250 | Stakeholder expectations | High level awareness of ESG impacts. SFDR, UCITS, AIFMD, EU Ecolabel | Regulated by CBI. Degree, experience and professional qualification, CFA, CFP etc. |  |
| 28 | Mortgage advisor: Advise customers on relevant mortgages | 251-500 | Stakeholder expectations | High level awareness of ESG impacts | Regulated by CBI. Degree and professional qualifications QFA (IoB), Accredited product advisor (IoB), CFA etc. |  |
| 29 | Trustees (pension): responsible for the proper management of all property and other assets owned by the trust for the benefit of a beneficiary. | 251-500 | Risk management | High level awareness of ESG impacts. IORP II | Regulated by CBI. Relevant degree and experience. Professional qualifications QFA (IoB) IIMP |  |
| 30 | Compliance Officer: responsible for ensuring their organisation complies with government regulations — both domestic and global | 251-500 | Regulatory compliance | Detailed knowledge of ESG regulation | Regulated by CBI. Degree, relevant experience and a relevant certification e.g., Certified Regulatory Compliance Manager (CRCM) |  |
| 31 | Risk Officer: Manage risks associated with clients' and or firm's investments as appropriate to client/firm. | 501-1000 | Risk management | Detailed knowledge of ESG regulation | Relevant degree (maths, economics /finance-related), experience and professional qualification, CFA, FRM |  |


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| 32 | Equity Risk Manager/Analyst: middle office, minimise equity risk appropriate to clients. | 1001-2000 | Risk management | Detailed knowledge of ESG regulation | Degree, relevant experience and professional qualification, CFA, FRM |  |
| 33 | Underwriter: responsible for deciding whether to accept applications for insurance cover | 501-1000 | Risk management | Detailed knowledge of ESG regulation. Solvency II | Regulated by CBI. Degree, experience and professional qualification. Insurance Institute exams |  |
| 34 | Credit Risk Manager: protect firm from credit losses, monitors expected and unexpected losses | 1001-2000 | Risk management | High level awareness of ESG impacts. CRR, CRD | Degree, experience and professional qualification, CFA, FRM |  |
| 35 | Loan Officer: evaluate and authorize the approval of business, real estate, or credit loans and evaluate the financial status of a loan applicant | 1001-2000 | Risk management | High level awareness of ESG impacts | Degree, experience and professional qualification, CFA, FRM |  |
| 36 | Actuary: analyses data and works with statistics, using mathematical skill to assess or predict the probability of an event happening and its financial consequences | 1001-2000 | Risk management | Detailed knowledge of ESG impacts. Solvency II | Governed by Society of Actuaries in Ireland. Relevant degree (maths/stats, actuary, economics etc.), professional qualifications Institute and Faculty of Actuaries (UK based of which many Irish students' avail) |  |

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| 37 | Fund Accountant: responsible for all aspects of day-to-day accounting for one or more assigned mutual funds and/or institutional funds. | Up to 250 | Regulatory compliance | High level awareness of ESG regulation. SFDR | Relevant degree/ background. Professional accounting qualifications. |  |
| 38 | Treasurer: protect firms' value from financial risk | 1001-2000 | Disclosure | High level awareness of ESG regulation. EU Taxonomy, SFDR | Relevant experience and accounting qualifications (ACCA, CAI etc.) |  |
| 39 | Retail Bank Manager: manages local bank branches | 501-1000 | Stakeholder expectations | High level awareness of ESG impacts | Regulated by CBI. Relevant degree (maths, economics, finance etc.) and/or experience. Professional qualifications may not be necessary |  |
| 40 | Financial Economist: conduct research, formulate plans to address economic problems related to the firm's investments or monetary and fiscal policy. | Up to 250 | Disclosure | High level awareness of ESG impacts. EU Taxonomy | Relevant degree (maths/stats/economics-related) and necessary experience. Masters/PhD of benefit. |  |

Junior/Entry/Analyst Roles

| | Key Roles and Descriptions | Market Numbers (approx.) | Key drivers for Skills Development | Specific ESG Drivers | Academic/ Professional Qualification required | Available Course |
|----|---|---------------------------------|---|--|--|---|
| 41 | Investment/Portfolio Analyst: front office, track investment/portfolio performance | 1001-2000 | Stakeholder expectations | Detailed knowledge of ESG impacts. UCITS, AIFMD, EU Ecolabel | Relevant degree (maths, economics, finance etc.), experience and working towards professional qualification, CFA, relevant accounting qualification (ACCA, CAI etc.) |  |
| 42 | Policy/Regulatory Analyst/Advisor: research policies to assess risk and opportunities to firms' investment landscape. Advise on such policies where necessary. | Up to 250 | Regulatory compliance | Detailed knowledge of ESG regulation | Relevant degree (maths/economics-related), and/or experience. Financial risk exams may be desirable but not necessary. |  |
| 43 | Insurance Risk Analyst: assessing risks your clients may undergo and how to insure them properly. Collect and analyse data, such as past claims in the industry, competitor pricing, and various risk management strategies to help your company keep costs down. | 501-1000 | Risk management | Specific knowledge of ESG impacts. Solvency II. | Relevant degree (Actuary, quant finance etc.), experience and professional qualification. Insurance Institute exams, risk exams |  |

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| 44 | Strategy Analyst: responsible for identifying the needs of their firm and developing plans to determine the overall direction it should take to succeed. | Up to 250 | Strategy | Detailed knowledge of ESG impacts. NFRD/CSRD | Relevant degree (maths/economics-related) and/or experience. Professional qualifications may not be necessary but beneficial. |  |
| 45 | Tax Analyst: prepare, review, and file tax returns and tax forms and manage tax efficiencies. | 501-1000 | Disclosure | Tax implications of ESG impacts | Relevant degree (maths, business, finance similar), relevant accounting qualification (ACCA, CAI etc.) |  |
| 46 | Product Analyst: help companies decide on which products and launch strategies are likely to result in long-term financial gain. Engage in market research, customer polling and help choose new products that fill a need and demand in the market. | 501-1000 | Product Innovation | Specific knowledge of ESG regulation. SFDR, EU Taxonomy, EU Ecolabel | Relevant degree (maths, economics, finance etc.), working toward relevant qualification, CFA etc. |  |

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| 47 | Quantitative Analyst: applies mathematical and statistical methods to financial and risk management problems. Develops and implements complex models used by firms to make financial and business decisions about issues such as investments, pricing and so on. | 1001-2000 | Risk management | Detailed knowledge of ESG impacts. EU Taxonomy, CRR, CRD | Relevant degree/masters (stats/finance etc.) working toward professional qualifications, CFA etc. |  |
|----|--|-----------|-----------------|--|---|---|

These lists are non-exhaustive. We fully acknowledge that there are additional roles and courses publicly and privately available. We have conducted our research to the best of our ability given resources and time frames.

5.0 IMPACTS, CHALLENGES AND OPPORTUNITIES

5.1 The potential impact on organisational performance

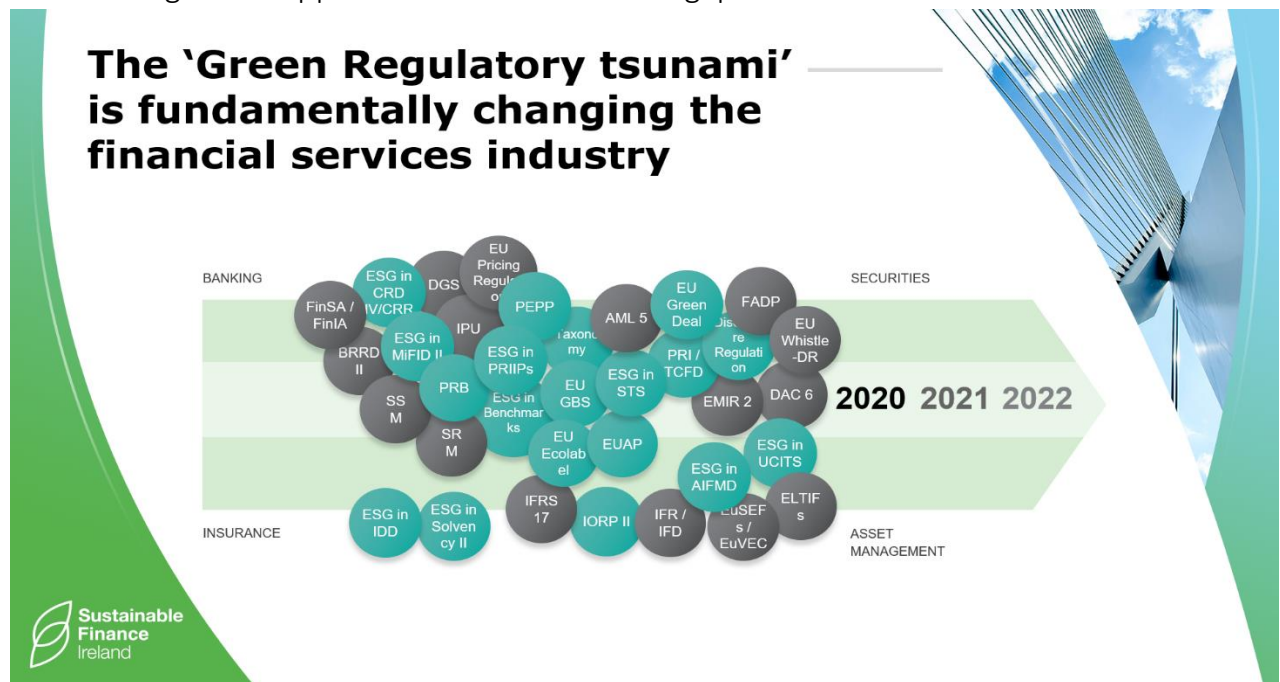
In Europe 75% of financial services organisations indicate that they are experiencing a skills gap in the field of sustainable finance. In Ireland, the result is 67%. We can partially attribute this to the SFS leading the way in Europe. However, despite this 8% improvement there is still significant shortage. Some of the reasons for this include:

- Demand is outstripping supply. 44% believe there is demand and adequate supply however almost 50% believe there is demand and inadequate supply. Courses are oversubscribed, for example the first of its kind EU Taxonomy course in 2021 and demand is being felt at all levels of organisations, from the graduates to the C-suite.
- Implementation of learning is unexplored. As sustainable finance is still considered a nascent field, on the ground implementation is evolving fast and opaque at best. Sharing lessons learned is not so common.
- Limited opportunities for capacity building and collaboration for example a ‘train the trainer’ approach. Whilst the UNEP FI including the PRB, PSI and PRI provide an excellent industry led approach to peer-to-peer learning there is a national opportunity to share knowledge gained and collaborate further. Likely that this is not occurring due to capacity and competitiveness.

The main challenge limiting the development of sustainable finance skills and talent in Ireland are competing internal priorities and lack of available talent (SFS, 2019). Taking a short-term view and not dedicating some priority to the development of skills has the potential to severely impact organisational performance of financial services firms. According to UN FC4S research 79% of financial services firms in Europe said it would have a moderate if not a significant impact on their organisation if the current (2020) level of sustainable finance skills and talent remained the same in 2025. There are three key assumptions:

- 1. Negative impact on the bottom line.** The skills gap has the potential to negatively impact an organisation’s performance in the short, medium, and long-term if the right skillsets are unavailable for the necessary requirements.
- 2. Lack of ability to the comply with the tsunami of regulatory demands.** Organisations are already feeling the pressure of mounting requirements and lack of capacity and capability to understand, manage and meet compliance standards. This could result in heavy fines.
- 3. The opportunity cost of lagging the market.** Those that are unprepared will miss potential opportunities to win in the market if they are scrambling to keep up with the competition. A reactive and compliance-based approach impacts the ability to innovate, develop and market new ESG related financial products and services.

5.2 Challenges and opportunities to address the gap



| Theme | Challenge | Opportunity |
|--|---|---|
| Facing the tsunami of regulation | The most in demand and high-profile skillset needed in 2021 is expertise to deliver on existing and impending SF frameworks and regulations including the EU Taxonomy, SFDR and ESG integration requirements in the likes of UCITS, AIFMD etc. No specific courses were found to upskill for the ESG inclusion across IDD, MiFID II, Solvency II, SFDR, NFRD/CSRD | Demand for general knowledge of regulation is lower than the application and implementation side and availability is low for both. FS organisations need to first understand what regulation affects them and by when, and further make plans for application and implementation. Opportunity exists to broaden the reach of the SFS EU Taxonomy course with updates and increase the number of participants and to build very specific courses for ESG amendments to key regulation such as IDD. |
| Limited availability of role specific courses | We identified 50 courses focused on sustainable finance to varying degrees as part of this research. We found mostly foundation and basic working level ESG knowledge related training and a lack of specific courses targeted at issues that affect a particular role | Targeted approach to understanding which roles present the greatest capacity for impact and ensuring those in those roles are equipped with the right training and knowledge. |
| Limited availability of level specific courses | The research indicated that courses are generally nonspecific to level or role. Little to no pre-qualifications are necessary and courses on | Further research is required to identify the most influential roles for sustainable finance and to map the thematic needs |

| | | |
|------------------------------------|---|--|
| | sustainable finance are being taken up at all levels from graduate to CEO. | of each group for key areas such as regulation, climate risk, scenario analysis, and ESG analysis and integration. |
| Integration of SF modules | Industry expectations for graduates with sustainable finance skills embedded into academic learning are growing. In Europe, the study found that almost 83% indicated they expected SF to have already been integrated into business and economic curricula by 3rd level educational providers. Potential subject areas include but are not limited to: engineering, business, finance, accounting, actuary, consulting, economics, maths, marketing, change management, behavioural change, systems/design thinking. | There are four layers of opportunities: 1. Undergraduate 2. Masters 3. Professional qualification 4. Continuing Professional Development (CPD) |
| ESG risk management | There is a gap between acknowledgement of climate risk as an issue to address and understanding of financially material impacts to the portfolio. With mandatory TCFD reporting in the UK and Minister Donohoe and the NTMA's support of the framework in Ireland we can expect further regulatory developments on climate risk disclosures and scenario planning requirements. There is currently low availability of climate risk specific courses. The TCFD host short web-based learning on the TCFD Hub and the Global Association of Risk Professionals run a Sustainability and Climate Risk certificate . | The SFS Road to COP26 TCFD campaign is gaining traction with a unique approach to learning combining classroom-based training and peer to peer support. Pending the success there is opportunity to roll out, further the training approach. |
| Sector progress | The analysis of this research remains in line with the skills report from 2019 that the investment sector has made the most progress in terms of upskilling its workforce on sustainable investment practices. Banking has some sector specific training for example via the IoB, and what remains are significant gaps for sustainable insurance and sustainable fund management. | Opportunity to develop sustainable insurance and sustainable funds specific courses. |
| Attraction and retention of talent | Through the development of this report anecdotal evidence was shared that the retention of talent is key. There is one case study of a sustainable finance trained graduate seeking work opportunities in the UK where the field is more mature. On the flipside there is also the chance to attract sustainable finance expertise to/back to Ireland from other countries. | Opportunity to demonstrate Ireland's sustainable finance field as a promising and exciting career path to new graduates and experienced hires from abroad. |
| Career path is undefined. | For more established careers the career pathway is more clearly mapped out with timelines, professional qualifications and experienced professional associations with cohorts and leadership to support career development through each stage. As a nascent field there are limited senior level executives with deep experience to demonstrate a pathway forward. | Opportunity to leverage the IoB learner's roadmap for the broader sustainable finance industry to articulate the career path forward. |

6.0 RECOMMENDATIONS

‘The Sustainable Finance skills shortages are likely to intensify over time and potentially have a negative effect on business performance and growth potential if there is no proper investment in quality education and skills.’ (UNFC4S, 2020)

Future skills and talents are needed to support a growing market for sustainable finance across investing, banking, insurance and fund management. What was previously considered a niche field, a trend is quickly transforming into a fundamental shift in the financial system from unsustainable to sustainable economic activity. A systemic shift is underway and there is an immediate need to invest in talent so that the financial system can drive the transition to a 1.5-degree world.

Building on the findings of the UN FC4S baseline assessment and best practice case studies report (both reports also provided to the WGs) coupled with this technical assessment we formulated the below list of potential opportunities for Ireland to become the go-to location globally for sustainable finance skills.

We identified three key actions with specificity on ways to address each:

6.1 Increase the Availability of Technical Training.

- Roll out and expand the reach of the EU Taxonomy course.
- Integrate SF modules into existing Undergraduate and Masters across Business, Economics, Finance, Consulting, Energy, and Engineering.
- Increase sustainable finance courses from professional development bodies. Some are already beginning this journey for example:
 - The CFA UK Society rolled out their Certificate in ESG Investing in Q4 2020.
 - CPA Ireland are introducing sustainability reporting into their 2021 curriculum.
 - The Global Association of Risk Professionals has developed a Sustainability and Climate Risk (SCR®) Certificate, and many more professional bodies are providing ESG-related courses (Appendix B).
- As noted there has been a recent swell of ESG-related courses being provided by professional bodies. If sustainable finance is really moving to the ‘mainstream’ then it should be considered that ESG be integrated into the mainstream qualifications needed by many of the mapped roles in this study. For example:
 - Integration of ESG into the CFA® Program curriculum i.e. within and/or across the CFA Level 1, 2, and 3 exams⁴.
 - Develop a Professional Sustainable Finance Skills Charter group. This group would congregate financial chartered and professional bodies based in Ireland to facilitate the mainstreaming of ESG into required professional financial services qualifications and to further develop current standalone

⁴ The Top 5 CFA Global Charterholder roles are Portfolio Manager; Research Analyst; Chief Level Executive; Consultant; and Risk Manager.

courses. Such a charter could be based on the UK based Green Finance Institute's 'Green Finance Education Charter'⁵.

- Unlike other 'mainstream' professional development providers, like those mentioned above, there is no apparent integration of ESG teachings in the curriculum relating to the insurance sector⁶. This is something that should be looked at by the Insurance Institute to either integrate ESG into current available courses or standalone courses which other professional bodies have begun to do.
- With risk management a key driver and limited understanding on the relationship between climate risk and financial risk and how this can impact on an organisation's portfolio, it is suggested that climate risk management and scenario planning training is needed by sector.
- In Ireland there is an opportunity to develop ESG financial product design courses e.g., green/social bonds, indices, ESG policies as none were identified.

6.2 Enable the Right environment to Share Learning.

- How can we create incentives for practitioners to share learnings? This could be approached in two ways:
 - Incentives to teach/lecture and input to the development of sustainable finance modules for academic courses and professional qualifications.
 - Set up of confidential peer learning opportunities for practitioners to learn from each other, sharing challenges and successes.
- The SFS has enabled Ireland to start to create a cohort of sustainable finance trainers. This creates supply side expertise that can be provided to a global market, making Ireland an attractive place for sustainable finance training and development. Ireland can then be marketed as a key destination globally on ESG skills.
- Consider the setup of a Global Centre of Excellence for sustainable finance skills to promote the development of Irish based sustainable finance education. This would support attracting investment into Ireland and build Ireland's reputation as a hub for best-in-class sustainable finance training. A part of this could include building a networking and collaboration hub and community of practice based on the learning model of 70% 'learning by doing', 20% 'mentoring', and 10% 'classroom'. We note there is a broad base of skills required for sustainable finance, including product distribution, regulatory expertise, and data analytics. The scope of a Global Centre of Excellence should be considered.

6.3 Further Research is Required.

- As an emerging field of professionals with diverse backgrounds, skills, expertise, and job roles, undertake research to assess the viability of creating an Institute of Sustainable Finance Professionals.
- Deeper dive study to understand the competency level of sustainable finance related skills in Ireland. This would include a mapping the impact and influence of key roles to target training to where there is the most need and where the most effect can be generated.

⁵ <https://www.greenfinanceinstitute.co.uk/green-finance-education-charter/>

⁶ This finding was confirmed through desktop research and outreach to the Insurance Institute of Ireland (April 2021).

7.0 APPENDIX

Appendix A: Regulation Descriptions

| Regulation/Disclosure | Description |
|-----------------------|---|
| AIFMD | The Alternative Investment Fund Management Directive (AIFMD) Level 2 Regulation will introduce requirements to integrate sustainability risks and factors in compliance with existing rules in three key areas: organisational requirements; operational requirements; and risk management ⁷ . |
| CSRD | In April 2021, the EC published the Corporate Sustainability Reporting Directive (CSRD) which seeks to improve the flow, comparability and reliability of sustainability information. It extends the existing reporting requirements under the Non-Financial Reporting Directive (NFRD). Specifically, the CSRD extends the scope of companies that must report, requires the audit of reported information and introduces mandatory EU sustainability reporting standards. |
| EU Ecolabel | An EU Ecolabel for retail financial products is currently being developed by the EC. The Ecolabel will define the minimum environmental performance of this product group and will be based on the requirements of the EU Ecolabel Regulation 66/2010 with the objective of awarding the best environmentally performing financial products ⁸ . |
| EU Taxonomy | The EU Taxonomy, which will apply from December 31, 2021, is a common classification system establishing a list of environmentally sustainable economic activities across a wide range of industries. It mandates certain companies to report on and disclose the extent to which their business activities are aligned with the Taxonomy's definition of sustainable. |
| IDD | Designed to ensure a level playing field across all participants selling insurance products. Key changes to the Insurance Distribution Directive (IDD) integrates sustainability factors, risks and preferences into product oversight and governance requirements for insurance undertakings and insurance distributors and into the conduct of business rules and investment advice for insurance-based investment products (IBIPs) ⁹ . |
| IORP II | Sets out minimum harmonization rules for financial institutions which manage collective retirement schemes for employers in order to provide retirement benefits to their employees (the scheme members and beneficiaries) (Dechert). The Institutions for Occupational Retirement Provision (IORP II) details that EU Member States should require IORPs to explicitly disclose where such ESG factors are considered in investment decisions and how they form part of their risk management system ¹⁰ . (Dechert) |

⁷ "<https://www.arthurcox.com/knowledge/esg-for-fund-managers-integrating-sustainability-risks-and-factors-into-the-aifmd-and-ucits-frameworks/>

⁸ <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/432/home>

⁹ <https://www.algoodbody.com/insights-publications/esg-related-changes-to-the-solvency-ii-and-idd-frameworks>

¹⁰ IORP II Recital (58)

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|-------------|---|
| MiFID II | The Markets in Financial Instruments Directive (MiFID) governs the provision of investment services as of January 3, 2018. With proposed amendments in April 2021, MiFID II relates to the integration of sustainability into organisational requirements, as well as the integration of sustainability preferences into the suitability process. MiFID firms will be required to update their product origination and marketing / distribution strategies, to ensure that they take account of the sustainability preferences. |
| NFRD | In place since 2014, the Non-Financial Reporting Directive (NFRD) sets out rules on disclosure of non-financial, ESG and diversity information by large EU public-interest companies (PICs), being a company with more than 500 employees. |
| SFDR | The Sustainable Finance Disclosure Regulation (SFDR) and the EU Taxonomy (which supplements the SFDR) have enormous scope and application. The SFDR introduces obligations on investors and asset managers to disclose how they integrate ESG factors into their decision-making and risk processes. |
| Solvency II | Introduces obligations for (re)insurance undertakings to manage 'sustainability risks' and ensure sustainability factors are considered in risk assessment ¹¹ . |
| TCFD | Set up in December 2015 by the Financial Stability Board (FSB). The Taskforce on Climate-related Financial Disclosures (TCFD) has developed voluntary, consistent climate-related financial disclosures. It essentially takes the perspective of an investor and asks the reporting entity to report on issues such as the physical and transition risks and opportunities it is facing. To do so, it uses a forward-looking scenario analysis. |
| UCITS | UCITS Organisation Directive will introduce requirements to integrate sustainability risks and factors in compliance with existing rules in three key areas: organisational requirements; operational requirements; and risk management ¹² . |

¹¹ <https://www.algoodbody.com/insights-publications/esg-related-changes-to-the-solvency-ii-and-idd-frameworks>

¹² <https://www.arthurcox.com/knowledge/esg-for-fund-managers-integrating-sustainability-risks-and-factors-into-the-aifmd-and-ucits-frameworks/>

Appendix B: Researched Courses

| Course | Provider | Link |
|---|--------------------------|---|
| An Introduction to Sustainability for Business | ACCA | https://www.accaglobal.com/gb/en/member/discover/events/global/e-learning/sustainability/intro-to-sustainability-for-bus.html |
| ACCA Qualification | ACCA | https://www.accaglobal.com/gb/en/technical-activities/sustainability.html |
| ESG Investment - an Overview | BPP | https://www.bpp.com/courses/professional-development/environmental-social-governance-esg-investment-an-overview |
| FAE exams | CAI | https://www.charteredaccountants.ie/News/getting-to-know-topic-area-4-sustainability-corporate-social-responsibility-and-integrating-reporting |
| Certificate in ESG Investing | CFA | https://www.cfasociety.org/ireland/Pages/esg.aspx |
| Professional Assessment, Sustainable and Responsible Investment | CISI | https://www.cisi.org/cisiweb2/cisi-website/study-with-us/professional-assessments/sustainable-and-responsible-investment-professional-assessment |
| Refresher module: ESG Investing, Ethical Sustainable Investment, Green Bonds and Asset backed securities, Impact Investing, and Responsible Investment the Taxonomy | CISI | https://www.cisi.org/cisiweb2/cisi-website/study-with-us/getting-started/professional-refresher |
| Green and Sustainable Finance Certificate | CISI & Chartered Bankers | https://www.cisi.org/cisiweb2/cisi-website/study-with-us/certificate-in-green-finance |
| Green Bond Training | Climate Bonds Initiative | https://www.climatebonds.net/training/courses/green-bond-training |
| CPA Ireland | CPA | https://www.cpaireland.ie/CPAIreland/media/Education-Training/Syllabus%202021/syllabusFeb21_1.pdf |
| EFFAS Environmental Social and Governance Analyst (CESGA®) Online course & Certification | EFFAS Academy | https://effas-academy.com/product/cesga-online-course-certification/?gclid=Cj0KCQjw38-DBhDpARIsADJ3kjl6ubws4SMowJ_JJAudHPD_KmCT2SaFclWeq2LY8RVJcbPhQW |

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|--|---|---|
| | | uo-kYaAlN3EALw_wcB#download-brochure-cesga |
| EU Taxonomy – Environmentally Sustainable Investments | ELS Europe and Frankfurt School of Finance & Management | https://sfskillnet.sustainablefinance.ie/training/eu-taxonomy-environmentally-sustainable-investments/ |
| GRI Standards Certified Training | EY | https://eytrainingcenter.ey.com/Home/DownloadWidgetAttachment?WidgetID=27 |
| Sustainability Awareness Workshop | EY | https://eytrainingcenter.ey.com/Home/DownloadWidgetAttachment?WidgetID=27 |
| Stakeholder Engagement and Materiality Assessment | EY | https://eytrainingcenter.ey.com/Home/DownloadWidgetAttachment?WidgetID=28 |
| Sustainability Leadership Workshop | EY | https://eytrainingcenter.ey.com/Home/DownloadWidgetAttachment?WidgetID=27 |
| Certified Expert in Sustainable Finance | Frankfurt School of Finance and Management | https://execed.frankfurt-school.de/en/home/individuals/sustainable-development/expert-sustainable-finance |
| The Sustainability and Climate Risk Certificate (SCR) | GARP | https://www.garp.org/#!/scr |
| GRI Professional Certification | GRI Academy | GRI Academy (globalreporting.org) |
| Introduction to Sustainability Reporting and the GRI Standards | GRI Academy | GRI Academy (globalreporting.org) |
| Integrating the SDGs into Sustainability Reporting | GRI Academy | GRI Academy (globalreporting.org) |
| Introduction to Sustainable Finance and Investments | Harvard University | https://online-learning.harvard.edu/course/introduction-sustainable-finance-and-investments?delta=0 |
| Responsible and Sustainable Finance | IOB | https://iob.ie/programme/sustainable-finance |

| | | |
|---|---|---|
| GRI Standards Certified Training Course | KPMG India | https://home.kpmg/in/en/home/trainings/advisorytrainings/climatechange-sustainabilityservices.html |
| Products and Standards | Luxembourg Green Exchange | Luxembourg Green Exchange - Sustainable products and standards course LGX Academy (bourse.lu) |
| Fundamentals of Sustainable Finance | Luxembourg Green Exchange | Luxembourg Green Exchange - Fundamentals of Sustainable Finance's course LGX Academy (bourse.lu) |
| LPEA Training Academy | Luxembourg Private Equity and Venture Capital Association (LPEA) | PowerPoint Presentation (lpea.lu) |
| MA in Ethics (Corporate Responsibility) | Offered jointly by Dublin City University and Mater Dei Institute of Education in partnership with the Association of Compliance Officers in Ireland (ACOI) | https://www.dcu.ie/courses/postgraduate/school-theology-philosophy-and-music/ma-ethics-corporate-responsibility |
| Getting Started in Responsible Investment | PRI Academy | https://priacademy.org/products/getting-started-in-ri |
| Foundations in Responsible Investment | PRI Academy | https://priacademy.org/products/foundations-in-ri |
| Advanced RI Analysis | PRI Academy | https://priacademy.org/products/advanced-ri-analysis |
| Responsible Investment for Trustees | PRI Academy | https://priacademy.org/products/ri-for-trustees |
| Fundamentals of Sustainability Accounting | SASB | https://fsa.sasb.org/ |
| Introduction to the Natural Capital Project Approach | Stanford University | Introduction to the Natural Capital Project Approach edX |
| InVEST Carbon Storage and Sequestration Model (Virtual Workshops) | Stanford University | InVEST Virtual Workshops Natural Capital Project (stanford.edu) |
| Certified Sustainable Finance Analyst (Standard) (CSFA™) | Sustainable Finance Institute (SFI) & World Sustainable | https://sfini.org/csfa-standard |

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|---|---|---|
| | Finance Association (WSFA) | |
| Certified Sustainable Finance Analyst (Advanced) (CSFA™) | Sustainable Finance Institute (SFI) & World Sustainable Finance Association (WSFA) | https://sfini.org/csfa-advanced |
| Sustainability and ESG Reporting | susthub | https://susthub.ie/sustainability-esg-reporting/ |
| Introduction to climate-related disclosures - starting your climate journey | TCFD | https://learn.tcfhub.org/ |
| Understanding the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) | TCFD | https://learn.tcfhub.org/ |
| Governance of climate-related risks and opportunities | TCFD | https://learn.tcfhub.org/ |
| An introduction to managing the financial risks from climate change | TCFD | https://learn.tcfhub.org/ |
| Embedding climate change into financial management – climate-related reporting for accountants | TCFD | https://learn.tcfhub.org/ |
| Corporate reporting of climate and environmental matters in the European Union | TCFD | https://learn.tcfhub.org/ |
| MiFID 2 | The Knowledge Academy | https://www.theknowledgeacademy.com/ie/courses/markets-in-financial-instruments-directive/mifid-ii-professional/ |
| Introduction to Sustainable Finance | UN CC:e-learn | https://unccelearn.org/course/view.php?id=59&page=overview |
| Climate Change and the TCFD: Risks and Opportunities for the Banking Sector | UNEP FI & CAF | https://www.unepfi.org/training/trainin g/climate-change-training/online-course/ |
| UNEP FI Environmental and Social Risk Analysis (ESRA) | UNEP FI INCAE Business School's Ecobanking Project Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH | https://www.unepfi.org/training/trainin g/esra/esra-online-course/ |

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|---------------------|--|---|
| Sustainable Finance | University of Cambridge Institute for Sustainability Leadership (CISL) | https://online-short-courses.cisl.cam.ac.uk/presentations/lp/university-of-cambridge-sustainable-finance-online-short-course/?ef_id=c:434321599395_d:c_n:g_ti:kwd-296622156187_p:k:%2Bgreen%20%2Bfinance%20%2Bcourse_m:b_a:101786900835&gclid=Cj0KCQjw38-DBhDpARIsADJ3kjmrl8rzOSnwmY3gcSSf-_-uiMSOD2wAYB3uCMPiWcwjgpVhoXuXRWtpMaAsdsEALw_wcB&gclsrc=aw.ds |
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Acronyms

| | |
|---------|--|
| AIFMD | Alternative Investment Fund Management Directive |
| CBI | Central Bank of Ireland |
| CSRD | Corporate Sustainability Reporting Directive |
| EC | European Commission |
| ESG | Environmental Social Governance |
| EU | European Union |
| FS | Financial Services |
| FSB | Financial Stability Board |
| IDD | Insurance Distribution Directive |
| MiFID | Markets in Financial Instruments Directive |
| NFRD | Non-financial Reporting Directive |
| NTMA | National Treasury Management Agency |
| PRB | Principles for Responsible Banking |
| PRI | Principles for Responsible Investment |
| SF | Sustainable Finance |
| SFDR | Sustainable Finance Disclosure Regulation |
| SFS | Sustainable Finance Skillnet |
| PCF | Pre-Approval Controlled Function |
| PSI | Principles for Sustainable Insurance |
| TCFD | Taskforce on Climate-related Financial Disclosure |
| TEG | Technical Expert Group |
| UCITS | Undertakings for the Collective Investment in Transferable Securities. |
| UNEP FI | United Nations Environment Programme Finance Initiative |

Professional Course Providers

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| ACCA | Association of Chartered Certified Accountants |
| CAI | Chartered Accountants Ireland |
| CFA | Chartered Financial Analyst |
| CFP | Certified Financial Planner |

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| CRCM | Certified Regulatory Compliance Manager |
| FCA | Financial Conduct Authority |
| FRM | Financial Risk Manager |
| GARP | Global Association of Risk Professionals |
| IIFT | Institute of Investing and Financial Trading |
| IIMP | International Institute of Marketing Professionals |
| IoB | Institute of Bankers |
| QFA | Qualified Financial Advisor |