



European Construction Sector Observatory

Policy fact sheet

France

Circular Economy Initiative

Thematic objectives 3 & 4

December 2020



In a nutshell

| | |
|---------------------------|---|
| Implementing body | National Secretariat for Investment (NSI) in 2015. Ecological Transition Agency (ADEME). |
| Key features & objectives | Funding of strategic projects to accelerate France’s transition to a circular economy, reducing resource consumption and waste, increasing recycling and reuse, creating new technologies, and generating growth and employment in future economic sectors. |
| Implementation date | 2009 – ongoing |
| Targeted beneficiaries | Companies and other stakeholders involved in circular economy value chains, including construction and energy efficiency. |
| Targeted sub-sectors | All sub-sectors, including energy efficiency and (sub)sectors associated with the circular construction value chain. |
| Budget (EUR) | Around 250 million per year ¹ |
| Good practice | ★ ★ ★ ☆ ☆ |
| Transferability | ★ ★ ☆ ☆ ☆ |

Circular construction projects and initiatives in France are not delivered as part of a single programme. Instead, there are a range of initiatives that oversee circular economy activities, all of which are placed under the umbrella of the French Eco-Transition Agency, ADEME.

The Circular Economy Fund (CEF) and the Future Investment Projects (Projets d’Investissements d’Avenir – PIA) programme are the two main circular economy instruments managed by ADEME. Launched in 2009 and 2010, they aim to change the structure of the French economy to enhance circularity and support the transition to a greener economy.

The Circular Economy Fund (CEF) invests in strategic sectors to support environmental sustainability and improve energy efficiency. The construction sector is one of the main circular economy development priorities². The PIA invests in strategic areas to stimulating France’s economic recovery. One example is the development of innovation and circular economy projects³. Originally intended as a temporary measure, the PIA became a permanent instrument to monitor and manage French investment policy. Renewed plans were published in 2014, 2017 and 2020⁴.

The Circular Economy Initiative is a combination of two initiatives. Circular construction is a component part of both.

The General Investment Commissariat (Commissariat general à l’investissement) – later renamed the “National Secretariat for Investment” (NSI) – has overall responsibility for the PIA⁵. Under the direct supervision of the Prime Minister, the NSI has overall responsibility for strategies and guidelines. ADEME manages circular economy calls for proposals, selects the winning bids and monitors circular economy achievements⁶.

Circular construction R&D projects are tasked with developing, testing and validating innovative solutions for the reuse of waste and materials, as well as assessing the economic and environmental benefits they deliver⁷.

The circular economy development programmes have funded a series of successful projects and initiatives. However, many ambitious targets and objectives set for the programme seem to be out of its reach. In addition, the programme lacks a monitoring system granular enough to assess achievements in the circular economy.

1.

General description

The Circular Economy Initiative is not a single programme, but rather a policy objective that intersects with other policies and legislative acts, which include:

- Future investment projects (Projets Investissements d’Avenir – PIA);
- ADEME Circular Economy Fund (CEF);
- Circular Economy Law 2020;
- National Programme for Waste Prevention (2015);
- Energy Transition Law (August 2015)⁸.

These circular policies and the legislative framework are brought together under the direction of one agency that defines the common strategy – ADEME, the French Energy Transition Agency. ADEME has defined a roadmap with clear objectives for a circular economy. These objectives are the same for both the CEF and the PIA⁹:

- Reduce resource consumption by 30% by 2030 (2010 benchmark);
- Reduce non-dangerous waste by 50% by 2025;
- Achieve 100% of recycled plastics by 2025;
- Reduce CO₂ gas emissions by 8 million tonnes by increasing plastic recycling;
- Create 300,000 new jobs;
- Halve the amount of waste sent to landfill by 2025;
- Reuse 70% of construction waste by 2020;
- Standardise the sorting of five main types of waste (glass, metal, paper, wood).

The Future Investment Projects (Projets D’Investissement d’Avenir – PIA) programme was first launched in 2010 and additional funds were granted in 2014 and 2017. A new version of the programme with an additional budget taken from the European Stimulus plan is in preparation for 2020-2023. Originally intended as a temporary measure to stimulate the French economy, the PIA

has become a long-standing budgetary policy to modernise the French economy.

The objective of the PIA is to support the development of innovative products and services, from idea to market. The objective is to stimulate the French economy by funding innovative projects in strategic sectors for the “future economy”: transition to renewable energy; circular economy; sustainable solutions; industrial sovereignty; digital economy; etc¹⁰.

The fourth PIA call for projects (Appel a à Manifestation d’intérêt) is due to launch in January 2021. Table 1 lists the four activity lines and the focus areas within each.

Table 1: PIA call 4 topics (January 2021)

Creation of ecological products and services

- Improving product lifespan and functionalities, fight against “planned obsolescence”;
- Creation of products and offer adapted to new products. New business models to reduce the pressure from raise in consumption of new products and services;
- Increase in the share of recycled raw materials, reused materials or more efficient materials used in the produced good;
- Conception of products using less resources and more resistant;

Improving efficiency and production processes

- Optimisation of water and raw materials usage and production processes. Promoting the reuse of by-products;
- Development of synergies between industrial actors to develop circular economy using and promoting materials that are yet insufficiently exploited;
- Improvement of energetic performance and

efficiency in production processes. Integration of renewable energies in the same process. Reduction and or capture of greenhouse gas;

- Reducing the impact of waste on the environment;

Production of secondary resources and prevention of waste

- Preventing and setting up innovative solutions for collection, sorting and processing and valorising wasters. Improvement of flows of waste and reducing the amount of waste produced;
- Production raw materials from recycled products;
- Usage of waste as energy source through innovative technologies to act as substitute for fossil fuels;

Improving the water management lifecycle

- Security and safety of infrastructure and installations of water collection and processing;
- Limitation of pollution, runoff of water in agriculture, urban and industrial situation;
- Innovation to fight against micro, macro and nano waste (e.g.: plastic particles).

Source: WinBids¹¹

The PIA and the Circular Economy Fund (CEF) both run calls for project proposals. Proposals are assessed by ADEME, the NSI, and are jointly validated by the NSI and the French Prime Minister. Circular economy projects are then implemented and managed by ADEME.

All projects must aim to develop innovative products, services, technologies or business models in agriculture, industry and water. Submitted projects can address the following topics¹²:

- Eco-design of products and services;
- More efficient production in terms of resources (materials and energy);
- Prevention of waste production;
- Optimisation of waste collection or treatment;
- Transformation of waste into secondary materials or energy resources;

- Water collection, treatment and distribution; new solutions for saving and managing resources; and innovative business and management models for the water sector.

In addition, projects must comply the following eligibility criteria¹³:

- Minimum total project cost of EUR 2 million;
- Applicants, including consortium partners, cannot be considered a “company in difficulty”, as per the definition in European legislation;
- The project coordinator must be a private company;
- Maximum of 5 partners in any consortium bid;
- Project call topics must be respected.

The progress of funded projects is monitored by governmental institutions. PIA programme implementation periods range from 10 years (PIA 1) to 15 years (PIA 2). Funding is provided incrementally over the implementation timeframe. The PIA works with projects that are expected to generate significant return on investment and are therefore only co-financed by the State¹⁴.

The proportion of the PIA budget allocated to circular economy projects is not easily identifiable. The new PIA launched in 2020 allocates EUR 20 million for building construction, excluding public works. The objective for circular construction projects is to develop circular business models and encourage the recycling and reuse of materials. Projects need to show that the solutions they develop can be replicated, scaled up and taken up by industry¹⁵.

The governance of the PIA is innovative. It is provided by the National Secretariat for Investment (NSI), previously known as the General Investment Commissariat (Commissariat général à l’investissement, CGI), under the direct supervision of the Prime Minister. The NSI directly engages with public administrations without the ministries acting as intermediaries. This is a new type of governance structure in France¹⁶.

Underneath the NSI, the French Ecological Transition Agency, ADEME is responsible for all circular economy projects. ADEME also manages the Circular Economy Fund.

Tables 2 and 3 provide a breakdown of the budget allocation for each PIA phase. Table 2 gives a

general overview and Table 3 segments the budget in more detail.

Table 2: Budget envelope for the Future Investment Programmes (PIA)

| PIA Phase | Budget (EUR billion) |
|-------------------|---|
| PIA 1 (2010-2013) | 35 |
| PIA 2 (2014-2016) | 12 |
| PIA 3 (2017-2019) | 10 |
| PIA 4 (2020-2022) | 20 (11 of which will be allocated to the PIA under the European Stimulus plan) |
| Total | 77 |

Source: *Gouvernement Français*¹⁷

Table 3 provides a breakdown of the PIA 1 and 2 budget by funding category and shows the percentage share of each category. Circular economy objectives and project account for a modest share of the total budget.

Table 3: Budgetary details for PIA 1 and PIA 2

| PIA | PIA 1 | | PIA 2 | |
|-------------------------------------|-------------|------------|-------------|------------|
| | EUR bn | % | EUR bn | % |
| Private loans | 0.5 | 3 | 1 | 8 |
| Ecology and sustainable investments | 3.6 | 10 | 1.9 | 16 |
| Economy | 7 | 20 | 1.7 | 14 |
| Work and employment | 0.5 | 1.5 | 0.2 | 1 |
| Teaching | 0.5 | 1.5 | 0.2 | 1 |
| Research and higher education | 21.9 | 62.5 | 5.3 | 45 |
| Defence | NA | NA | 1.5 | 13 |
| Direction of governmental action | NA | NA | 0.2 | 1 |
| Sport and associative life | NA | NA | 0.1 | 1 |
| Cities and accommodation | 0.5 | 1.5 | NA | NA |
| Total | 34.5 | 100 | 12.1 | 100 |

Source: *Cour des Comptes, 2015*¹⁸

Funded by a percentage of taxation on polluting activities, the Circular Economy Fund aims to help local authorities and companies to build a circular economy.

The Circular Economy Fund (CEF) was created in 2009 and has operated with a budget of approximately EUR 200 million per year. More recently, the 2020 European Stimulus Plan has allocated a further EUR 500 million to the Fund for 2020-2022¹⁹.

The fund's new budget is allocated as follows²⁰:

- EUR 274 million for the incorporation of recycled plastic, reduction of plastic use and reuse of plastic;
- EUR 226 million for the modernisation of waste management tools.

2.

Achieved or expected results

The Future Investment Projects (PIA) programme has granted a total of EUR 500 million, thus far, to support energy efficient residential renovations. The objective is to push circularity in the construction industry by encouraging building renovations rather than new builds. New builds require about 40 times more materials than a renovation project²¹.

Between 2010 and 2015, a total of 130,000 residential energy efficient renovations were supported. The PIA also developed a complementary premium (paid as a refund on a share of the total renovation cost) for renovation work that can improve a home’s energy efficiency by 25%²².

In 2018, the PIA supported an additional 7,000 residential renovations with a total budget allocation of EUR 50 million. This funding has generated a positive social impact as 45% of beneficiaries are under the poverty threshold²³.

However, these figures should be contextualised. The PIA has funded a total of 137,000 home renovations between 2010 and 2019. In contrast, the French housing stock features 36.6 million homes²⁴. The number of renovated homes therefore amounts to just 0.004% of the French housing stock.

The PIA is judged by the French Court of Audit (Cour des Comptes) to have had a positive impact at the micro-level with limited influence at the macro-level. The Court of Audit contends that the PIA has been effective at developing useful projects, but has not created the expected macro-economic impact at national level. PIA’s contribution to its key objectives (France’s unemployment rate, its operational expenditure and economic structure) is negligible²⁵.

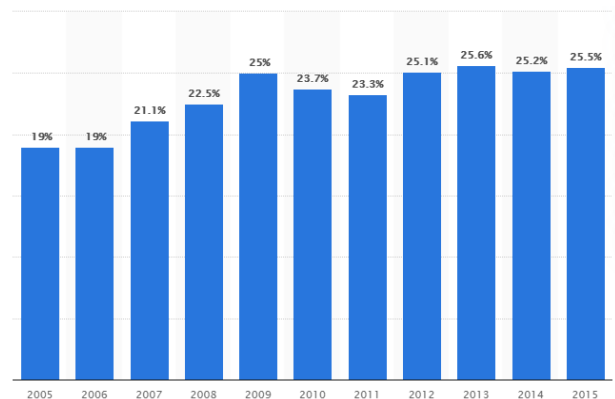
The Circular Economy Fund (CEF) has allocated a total budget of EUR 1.6 billion, thus far. Over the last three years, the CEF has supported over 6,000

circular economy initiatives, including communication, studies, support and R&D, for a total funding spend of EUR 687 million. That equates to circular economy investments of around EUR 229 million per year, which is a modest increase on the CEF’s budget allocation in previous years²⁶.

A general conclusion is that the PIA and the Circular Economy Fund (CEF) have been set overly ambitious objectives that are not commensurate with their available budget. The same observation applies to the different sub-objectives of both initiatives.

For example, both the PIA and the CEF aim to recycle 100% of all plastics by 2025. However, that target is unlikely to be achieved as neither initiative is having the expected impact on the plastic recycling rate. Figure 3 shows the annual plastic recycling rates in France between 2005 and 2015. Over that decade, the highest annual recycling rate recorded was 25.6% in 2013. In 2018, according to industry figures, the rate fell to 24.2%²⁷, less than one quarter of the target. In fact, since the CEF and PIA were launched in 2009, the plastics recycling rate has not significantly improved.

Figure 1: Plastics recycling rate, France (2005-2015)



Source: STatista, 2018²⁸

According to the REPAR programme (another monitoring programme managed by ADEME), the

reuse of materials remains a complex task for entrepreneurs in construction. Decisions on whether or not to reuse materials in a construction project tend to be within the remit of the construction project manager (maître d'oeuvre). As a consequence, despite the projects funded by the CEF or the PIA, it is still very difficult for companies to position themselves directly in the circular construction economy. Interesting initiatives therefore typically happen at the project level and on a local/regional scale²⁹. As a result, it is difficult to conclude that the Circular Economy Initiative has been successful in creating a new industrial sector for the use and reuse of construction waste.

In 2015, more than 30 R&D projects were selected for the circular economy aspect of the PIA. They account for a total funding spend of EUR 103 million³⁰.

ADEME has published a fairly high-level qualitative assessment of 18 funded circular economy R&D projects. Taken together, the projects have helped to develop new solutions to prevent waste generation and new industrial sectors for waste reuse, and they have reduced the danger and impact of waste³¹. A couple of specific examples include the development of waste reporting system and the mapping of existing tools used to identify generated waste³². However, the aggregated effect of all of the circular economy projects in economic or quantitative data sets is

not provided. It is therefore difficult to assess how these projects have contributed to the overall circular economy objectives of the CEF or the PIA. Moreover, it is even more difficult to assess the impact of these projects.

Most of the available impact studies focus on the next steps and what should be achieved. They contain insufficient detail on what has been achieved and how successful initiatives have been. A more comprehensive monitoring and evaluation system for circular construction and circular economy projects is needed.

The ANR (National Research Agency) is in charge of monitoring the PIA's achievement, whereas ADEME is responsible for monitoring circular economy projects³³. However, both agencies provide limited insights on the achievements specific to the circular economy or the circular construction economy.

On the initiative's main objective, however, the target has almost been reached, with 67% of construction waste now being recycled in France. That is just three percentage points below the 70% target. However, there are large discrepancies by type of waste. For example, plaster waste is still recycled at a modest rate of 16%³⁴.

3.

Perspectives and lessons learned

Many of the objectives of the Circular Economy Initiative, to be delivered through its two main instruments (CEF and PIA), are unlikely to be met within the specified timeframe and with the available budget.

France now has one of the most developed legislative frameworks for the development of a circular economy. However, the scale and budget of the CEF and the PIA are not commensurate with very ambitious objectives they were tasked with achieving. Both initiatives can, however, be considered as positive first steps towards a transition to a circular economy³⁵. This view is also highlighted by the French Court of Audit (Cour des Comptes), in their conclusion that the PIA can be credited with positive achievements³⁶.

The overall budget for these circular economy initiatives is rather modest. With an approximate budget of EUR 250 million per year to support the transition of the entire French economy to a circular economy (with only a part of that budget allocated to construction), the programme's funding is too limited to meet its objectives. To give a comparison, the French GDP was estimated to be EUR 2,427 billion in 2019³⁷.

If the goal is to transition the French economy to a circular economy, to reduce unemployment and instigate a profound shift in operational expenditure, there ought to be clear evidence at this stage to demonstrate impact in that direction. However, to date, there is no evidence that the initiatives have had a statistically meaningful impact at an aggregated level³⁸.

The fragmented nature of the Circular Economy Initiative has limited its effectiveness.

The design of the initiative was not fit to achieve its objectives. The initiative features a number of different initiatives that are grouped together under the leadership of the French Eco-Transition Agency, ADEME. This appears to have been done

for management expediency rather than by design, as part of a holistic framework of complementary measures. The fact that the PIA was originally created as a temporary measure, and only later became a permanent measure, may offer some explanation for the complicated structure managed by ADEME.

The fragmented nature of the Circular Economy Initiative does not appear to have raised any serious issues at the project implementation level. However, it does complicate the management, coordination, monitoring and evaluation of constituent programmes and initiatives.

PIA projects, for example, are monitored independently by the NSI, the CNR and ADEME. There is no common approach to monitoring and evaluation (e.g.: common indicators, methods, etc). Projects are also funded under different mechanisms that are pursuing different objectives. Assessing and comparing the progress, performance and impact of projects, programmes and multiple programmes is therefore difficult.

Unclear and changing programme objectives and targets have hindered the success of the Circular Economy Initiative, and the PIA in particular³⁹.

The PIA was created to fund strategic projects that would act as multipliers. To date, however, there is no clear evidence that PIA projects have achieved a multiplier effect.

According to a representative of the Union of French Deconstruction, Demolition and Recycling Companies (Syndicat des entreprises de déconstruction, démolition et recyclage), **the PIA programme has been hindered by the lack of detailed objectives**. Waste is a generic term that should have been broken down by type of waste: wood, plaster, dangerous, etc. The needs of individual (sub)sectors and the difficulties they face vary from one to another. More detailed and

sector-specific targets would have been helpful to stakeholders involved⁴⁰.

In addition, the current approach looks at the entire construction industry as a whole, ignoring the specific incentives and constraints for construction actors. For example, the fight against illegal landfill aims to increase circularity and targets all players equally. However, those that are principally responsible are either: very small players that lack the financial incentives to sort and recycle waste; or illegal operations. Smaller actors are best encouraged to change through the provision of economic incentives. To counter illegal operations however, tailored controls and penalties – as part of a broader legal framework, are required. This would in turn contribute to level the playing field⁴¹.

Following the PIA programme consultation phase, which took place during the design of the programme, construction stakeholders raised concerns about the final programme strategy and specifications. They felt that the programme design did not sufficiently reflect the recommendations made by stakeholders during the consultation. As a result, the PIA was perceived by the sector to be too generic, i.e. it did not address the need for new business models⁴².

For example, the current programme places great emphasis on the reuse of materials. However, construction and recycling companies view reuse as a lower impact objective than other circular economy targets. Indeed, they argue that the reuse of materials is sometimes not possible, because standards have changed (e.g.: a door or a window from 20 years ago cannot be reused). Moreover, the business model (and business case) for the

reuse of materials does not yet exist, as it is often more expensive than producing a new item. Finally, they consider reuse to have a marginal impact in terms of volume. Consequently, they contend that it should not be one of the main targets but rather a long-term objective to be achieved by the end of the programme lifecycle⁴³.

New and standard circular solutions may not be the best approach in all (sub)sectors. Leveraging value from existing solutions may, in some cases, be more effective and cost-efficient.

According to a representative of the Union of French Deconstruction, Demolition and Recycling Companies (Syndicat des entreprises de déconstruction, démolition et recyclage), there are three key elements to achieving a circular economy:

- Appropriate economic incentives to sort waste;
- The existence of a recycling sector;
- Local recycling capacities (it is not profitable to transport waste over long distances)⁴⁴.

These three elements highlight a possible alternative approach – to focus on removing bottlenecks in different sectors rather than adopting a similar approach across all waste sectors. For example, the rate of recycled plaster waste stood at a mere 16%, despite the existence of an efficient initiative and a sustainable business model. The problem is the lack of a widespread network to facilitate plaster recycling. The low cost of plaster means that transporting recycled plaster is not profitable. Developing this type of network could be advantageous⁴⁵.

4.

Conclusion and recommendations

The Circular Economy Initiative is a series of projects that are situated at the intersection of different programmes, rather than being a specific programme in its own right. The Future Investment Programme (PIA), launched in 2010, and the Circular Economy Fund (CEF), launched in 2009 were the main instruments to support circular development projects.

The CEF and PIA initiatives were set very ambitious targets, such as decreasing the unemployment rate, ensuring the transition of France toward a circular economy, and developing strategic sectors to stimulate the French economy.

The discrepancy between the scope of the objectives and the funding of these initiatives was identified as one of the main factors explaining their limited results.

With an annual budget of EUR 230 million, the circular economy initiatives represent a mere 0.012% of France's annual GDP (EUR 2,427 billion in 2019). These figures illustrate the striking mismatch between the means available and the objectives set.

Evidence demonstrates that the PIA has managed to achieve significant impact from a qualitative standpoint and at a project or local level. However, as highlighted by the French Court of Audit (Cour des Comptes), the programme did not manage to achieve visible quantitative impacts at the aggregated level. The same holds true for the part of the programme focused on the circular economy.

Despite some clear positive achievements and projects, the programme lacks an effective monitoring and evaluation system to track achievements and progress in the transition to a circular economy, and more specifically, to a circular construction economy.

Looking forward, four recommendations are suggested to help improve the impact of the Circular Economy Initiative:

- Construction sector stakeholders should be more involved throughout the design and implementation stages of the initiative. Beyond engagement in the consultation process, stakeholder involvement in the early strategic design and planning phases is particularly important⁴⁶;
- General and overarching objectives should be complemented by more detailed targets by type of waste (dangerous waste, wood, plaster, etc);
- The plan should build on what already exists and is successful. Recycling sectors and circularity initiatives already exist. The objective should therefore be to identify the recycling sectors where sustainable business models already exist. The advances made in those sectors can then be adapted and/or extended to other sectors and across the country, with public sector support. This approach would be more efficient and less costly;
- An effective monitoring and evaluation framework should be developed to assess performance and progress, and enable remedial action to be taken where necessary.

Overall, the Circular Economy Initiative is rated a "3-star good practice measure" on a scale of 1 (low) to 5 (high).

This score is based on the attention given to the initiative and the genuine efforts made by policy-makers to provide the needed legislative additions and modifications. The lack of a clearer monitoring system, however, makes it difficult to assess progress. In addition, the initiative included a number of overly ambitious objectives. Greater use and exploitation of existing circular solutions, where they have demonstrated success, may have been more cost-effective, based on the available

budget. Stakeholders were also not sufficiently involved in the early design phase.

The Circular Economy Initiative is rated a “2-star transferable measure” on a scale of 1 (low) to 5 (high).

This score is based on the fragmented nature of the initiative. The funding mechanisms are spread between different mechanisms (ADEME fund and the PIA). This makes the programme more difficult

to navigate and also makes its objectives less visible. It is very easy to get confused with the PIA’s objectives and the differentiation/links between the different programmes lacks clarity.

In addition, the structure of the programme is very closely linked to the French political system, arena and structure. It is therefore difficult to view the initiative as easy to replicate in other contexts.

Endnotes

- 1 The budget includes funding for the Circular Economy Fund and the PIA.
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