

29. TAIWAN

29.1 Legal Framework – Waste Management Plans and Strategies

29.1.1 National Legislation concerning CDW

The Construction and Planning Agency, Ministry of the Interior has set up a “Recycling green concrete label of green building” to encourage the use of CDW in construction work.

The Environmental Protection Administration (EPA), Taiwan Government provides the policy to guide the recycling of the CDW.

29.1.2 Waste management plans (WMP) and Strategies

The development of the city provides a large number of job opportunities to promote the migration of the population to the city. The growth of the population leads to the increase in the number of new construction projects, together with the urban renewal of the old buildings, the demolition of illegal structures, and the removal of waste from the Government. The amount of production is very impressive, but for the narrow, thick space buried in Taiwan, the case will undoubtedly cause serious environmental problems.

Construction waste, including metal chips, glass debris, plastic, wood and bamboo chips are still available as the waste resources. In order to increase its reuse value, in 1991, the Ministry of the Interior announced the "Recycling management construction of waste" including: increasing CDW resources recycling pipeline; reducing the construction of waste disposal of the situation occurred. In 1994, the Government began to control the amount of the construction project as well as the CDW generated. In 1997, they announced the delivery of waste to build the removal of vehicles should be installed satellite positioning system (GPS) to implement the management of the construction waste.

Using the concept of urban mine and sustainable material management, the Government has completed the "Construction Waste Management Strategy" to encourage the operators to implement waste reduction and sorting operations at the construction site, implement the construction of waste flow management and enhance the resources of the recycling organizations, set up technology to promote the development of renewable green building materials industry, and then produce environmentally friendly renewable green building materials, reduce the consumption of natural resources and reduce the environmental effects. By the ways, this can make the national health living in high quality green building environment, and further to achieve the establishment of resource recycling green city goal.

29.1.3 Legal framework for sustainable management of CDW

In Taiwan, the CDW has been considered as a useful resource that is greatly recyclable and reusable. This kind of waste can be recycled as the aggregate that is commonly used in many construction activities, especially in concrete production.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723583



The CDW does not allow to be dumped to any public area. It should be reused in order to: (1) reduce the environmental impacts due to the generation of CDW and (2) reduce the use of natural resources then reduce the overall cost of final products.

The ministry of Interior has set up a recycling green concrete label of green building to encourage the use of CDW in construction work.

29.1.4 Targets

No data on this topic was available.

29.1.5 End of Waste (EoW) status

No data on this topic was available.

29.2 Non legislative instruments (best practices, guidelines, recommendations...)

Taiwan local Government strongly encourages the use of CDW in the construction industry.

Many research works and projects have been conducted using CDW as a part of construction material. These works were carried out not only in the local area but also in international cooperation.

Discussion on this topic has been performed regularly through workshop, conference, experience sharing in order to improve each activity regarding the recycle of CDW.

Build-up the SOP and guidelines for recycling and reusing of CDW. Do the technical transfer from research to the industry and work-field.

The Ministry of Interior and Environmental Protection Administration (EPA) have the policy to guide the recycling the CDW.

29.3 CDW management performance – CDW data

29.3.1 CDW generation data

Generally, there is a thousand ton of CDW is generated each year, but no specific data were found.

29.3.2 CDW treatment data

In Taiwan, the primary treatment options for CDW is including:

- Reuse directly as a material for backfilling.
- Recycling into fine or coarse aggregates for making construction materials, e.g. concrete, brick.

There are some companies collecting the CDW and producing construction materials, but no published data were found.

29.3.3 CDW exports/imports data

No data on this topic was available.

29.3.4 CDW treatment facilities data

Fish port project used thousand ton of CDW
Many recent construction projects are ongoing

29.3.5 Future projections of CDW generation and treatment

No data on this topic was available.

29.3.6 Methodology for CDW statistics

The information reported here collects from the local CDW recycling companies and report from previous projects.

29.4 C&D waste management in practice

29.4.1 CDW management initiatives

The agreement and close connection between the Government & Construction commission, the scientific research & association, the academy, the engineering society, the business & industry.

29.4.2 Drivers / barriers to increase CDW recycling

- - Local Government strongly encourages the recycling of CDW
- - However, turning CDW into construction material costs money
- - Considering the low quality of CDW as compared to natural resource

29.5 CDW sector characterization

29.5.1 CDW materials (CONCRETE, BRICKS, TILES AND CERAMIC, ASPHALT, WOOD, GYPSUM)

Product description and applications

- High-performance concrete for building
- Concrete for producing tetrapod
- Construction bricks for building
- Tiles and ceramics for building and pavement

Quantitative analysis

No specific data on this topic

Recovery techniques

The CDW is recycled into fine and coarse aggregates for the production of concrete, bricks.

Environmental and economic impacts of CDW waste management

- Less using natural resources
- Low CO2 emissions
- Reduce the pollution due to the generation of waste

Drivers / barriers to increase recycling

- Local Government strongly encourages the recycling of CDW
- However, turning CDW into construction material costs money
- Considering the low quality of CDW as compared to natural resource

29.5.2 Recycled materials from CDW

Major recycled materials from CDW are concrete, construction bricks, and ceramics

29.5.3 Market conditions / costs and benefits

No data about this topic