

# Progress on treatment of debris in coastal municipalities from the three most affected prefectures by the Great East Japan Earthquake

## Treatment of debris and tsunami deposit

- In coastal municipalities of the three most affected prefectures, 5.38 million tons (approx. 30%) out of 18.02 million tons of generated debris has been treated as of the end of October, 2012. The treated quantity increment in October, 2012 was 0.44 million tons (3%).
- Those municipalities that have completed the treatment of more than 50% of generated waste are Hirono town, Fudai village, Ofunato city (Iwate prefecture), and Rifu town, Matsushima town, Miyagi East block (Shiogama city, Shichigahama town, Tagajou city).
- 1.07 (approx. 11%) million tons out of 9.56 million tons of tsunami generated deposits have been treated. The treated quantity increment in October, 2012 was 0.18 million tons.

## Progress on debris treatment from 37 coastal municipalities in the three prefectures (Iwate, Miyagi, Fukushima) as of the end of Oct. 2012

Prefecture	Estimated quantity of debris and tsunami deposit (10 thousand t)	Debris				Tsunami deposit				No. of temporary storage sites
		Estimated quantity (10 thousand t)	Treatment			Estimated quantity (10 thousand t)	Treatment			
			Quantity (10 thousand t)	Ratio (%)	Midterm goal (%)		Quantity (10 thousand t)	Ratio (%)	Mid-term goal (%)	
Iwate	525	395	103	26	58	130	0.6	0	50	68
Miyagi	1,873	1,200	397	33	59	672	104	16	40	116
Fukushima	361	207	37	18	—	153	2.3	2	—	31
<b>Total</b>	<b>2,758</b>	<b>1,802</b>	<b>538</b>	<b>30</b>	<b>—</b>	<b>956</b>	<b>107</b>	<b>11</b>	<b>—</b>	<b>215</b>

※Total number may not be consistent because of rounding of fractions.

## Cooperation from non-affected areas on debris disposal

- Iwate and Miyagi prefectures have requested other prefectures to cooperate in the disposal of a part of their debris (1.36 million ton). 50 projects in 10 prefectures have already started and treated 0.14 million tons of debris in total (0.5 million ton has been scheduled to be accepted).
- In October, 2012, 6 new projects of debris disposal have started.
- Several more non-affected prefectures are preparing / considering to start cooperate projects.

### Debris quantity requested by Iwate and Miyagi prefectures for cooperation (Unit: 10 thousand t)

	Combustible	Waste wood	Non combustible	Fishing equipment	Total
Iwate	18	12	7	8	45
Miyagi	39	39	13	—	91
<b>Total</b>	<b>57</b>	<b>51</b>	<b>20</b>	<b>8</b>	<b>136</b>

## Recycling

- Recycled materials from concrete debris and tsunami deposits, etc. are utilized in public works including projects of the central government.

### Major central government projects using recycled material from debris

(Unit: 10 thousand t)

	Projects	Recycled material	Quantity
Iwate	Coastal disaster prevention forest restoration (Miyako city)	Tsunami deposit	3
	National park restoration (Miyako city)	Concrete debris	0.07
Miyagi	Coastal embankment restoration (Sendai city, Natori city)	Tsunami deposit Concrete debris	47
	Coastal disaster prevention forest restoration (Sendai city)	Tsunami deposit Concrete debris	38
	National park restoration (Kesenumma city)	Tsunami deposit Concrete debris	3

## Progress on debris treatment and approach toward the goal (completion by March 2014)

- The rate of debris treated in October 2012 is not sufficient for achievement of the mid-term goal.
- The speed of treatment of concrete debris, non-combustible waste, and tsunami deposit, are not sufficient in Iwate prefecture. On the other hand, the speed of treatment of combustible waste, non-combustible waste, and tsunami deposit are not sufficient in Miyagi prefecture.
- Therefore, the approaches outlined below have to be addressed.

### 【Iwate】

- Implementing steady treatment of concrete debris, non-combustible waste, tsunami deposits to produce recycled materials
- Securing new public works projects to accept recycled material
- Promoting the utilization, by clarifying the required properties of recycled material for reconstruction works according to the usage

### 【Miyagi】

- Treating combustible waste by starting operation of additional temporary incinerators and implementing cooperation from non-affected areas
- Securing new public works projects to accept non-combustible recycled material and tsunami deposits
- Demolishing affected public buildings and accelerating the production of recycled material

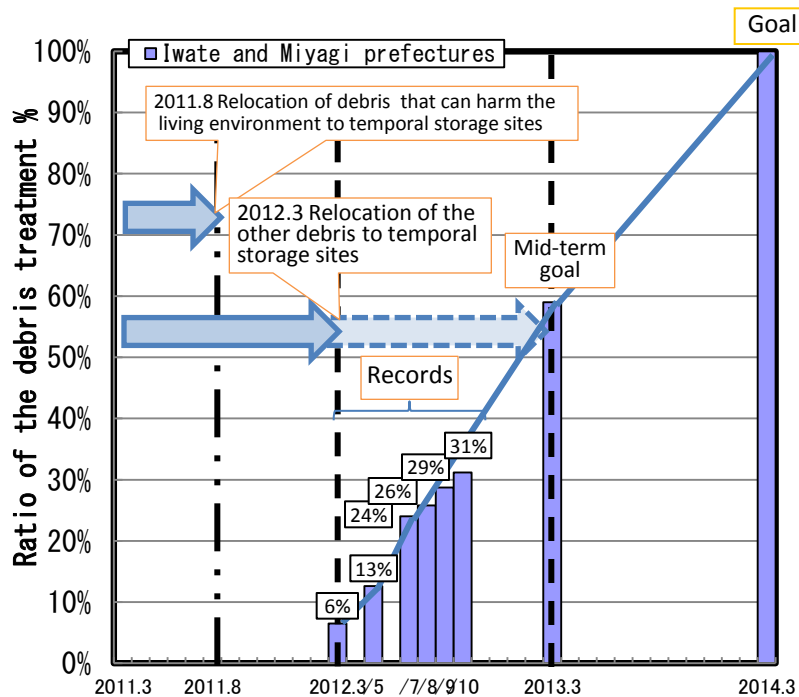
### 【Fukushima】

- Coordinating with affected municipalities to establish temporary storage sites and incinerators for the treatment by central government as alternate or direct implementer, to set the goal as early as possible

## (Reference) Strategy for achieving the goal (completion in March 2014) agreed in 5<sup>th</sup> ministerial meeting

- For achievement of the mid-term goal (due on March 2013), the 5<sup>th</sup> Ministerial Meeting for the promotion of debris treatment (October 19, 2012) agreed on the approaches below to be tackled by December 2012:

- By December 2012, reinforcing the treatment capacity in affected areas and pursuing the total arrangement of cooperation with municipalities in non-affected areas that currently propose an offer, by implementing test treatment
- Clearing up temporary storage sites (removing the obstructions for reconstruction) by steady usage of recycled materials in public works such as coastal embankments and disaster prevention forests. Especially, moving forward on the approach regarding specifying the usage of recycled material from non combustibles and tiles, which are still not used, in the specifications of public works directly managed by the related ministries.
- Through these approaches, completing the arrangement of treatment of all debris in Iwate and Miyagi prefectures by March 2013



Goal and records of treatment of debris in coastal municipalities in Iwate and Miyagi prefectures