

2020 Tokyo Olympics and Health Impact Assessment

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Abstract

Although it is a relatively small project, the development site needs an Environmental Impact Assessment (EIA). Furthermore, a Health Impact Assessment (HIA) should be implemented. The Olympic Games, in general, require large-scale construction, and the host city has an obligation to mitigate all associated impacts. Naturally the EIA is an essential requirement, but also extensive care of and consideration for the health of the athletes needs to be extended, to further promote the Olympic Assessment in a more integrated manner.

The point is that any impact on health comes first at the super-local/individual-person level, directly affecting the athletes' health. Then, environmental impact at the next-local/regional level follows, and this spills over, creating the global level impact. We've been focusing our attention on the HIA and the EIA separately, but we should now incorporate the HIA process explicitly within the formal process of the EIA.

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In this presentation, we firstly overview the system of the EIA for the Tokyo 2020 Olympics, to find the link between the EIA and HIA. In fact, the HIA improves the quality of the EIA, as the impact regarding health comes first, directly from the project—we define this stage as the super-local level of the impact assessment. Then, we consider the specific sites for the triathlon games and marathon swimming with reference to maintaining the quality of water at desirable levels. We also consider the walking space for athletes, and pedestrians, whose comfort will be evaluated in the formal process of the Tokyo Olympics EIA.

2020 TOKYO OLYMPICS AND HEALTH IMPACT ASSESSMENT



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**May 11, 2016, Session: HIA as a creation of deliberative society for
sustainable development at room 222, 14:30-16:00.**

TABLE OF CONTENTS

1. Introduction

2. The EIA for Tokyo 2020 Olympics



-- Considered with reference to [HIA*](#)
[Health Impact Assessment](#)

3. The Site for Triathlon and Marathon Swimming

-- The case we will consider is [Odaiba Marina Park**](#)
[Center of the Development Area \(Tokyo Bay Zone\)](#)

4. Concluding Remarks

1. Introduction

1. Introduction

- The development site needs an **Environmental Impact Assessment (EIA)**.
- Furthermore, a **Health Impact Assessment (HIA)** should be implemented.
- **The host city of the Olympics** has an obligation to mitigate all associated impacts.



The EIA is an essential requirement, but also extensive care of and consideration for the health of the athletes needs to be taken into consideration, to further promote the Olympic Assessment in a more integrated manner.

✓ The point is that...

- **Impact on health**

comes first at the super-local/individual-person level.

--This impact **directly affects the athletes' health**.



- **Environmental impact** comes at the next-local/regional level

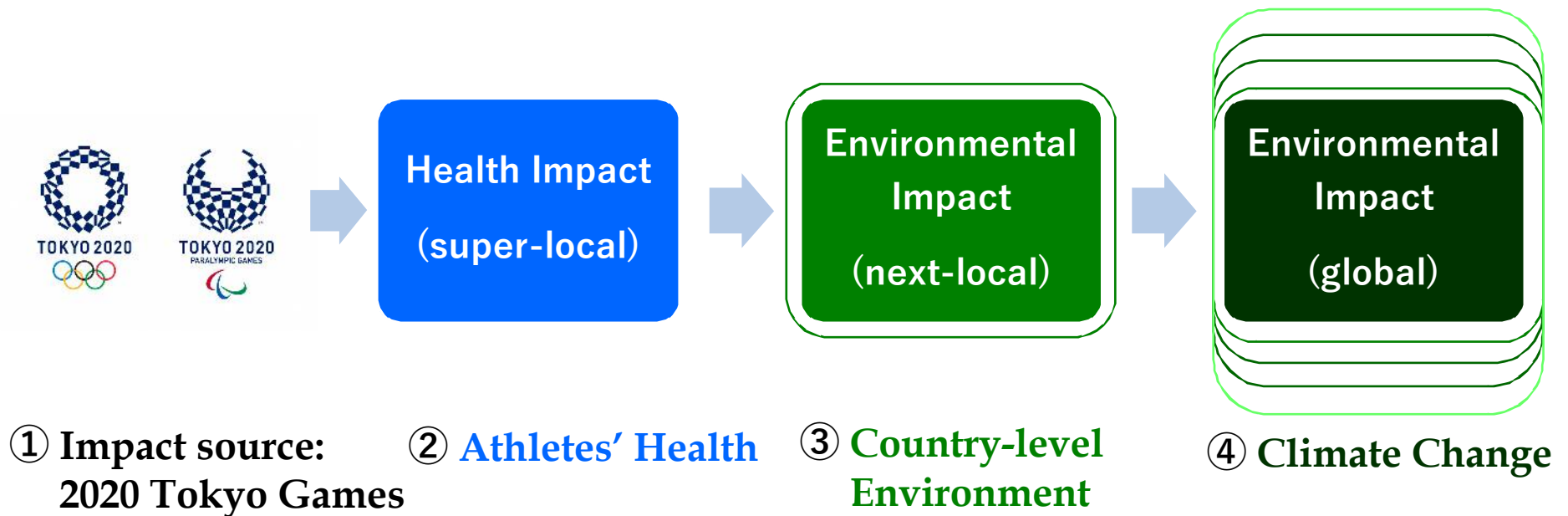
--This spills over and

creates the global level impact.

We've been focusing our attention on the **HIA** and the **EIA** separately, but

we should now incorporate the HIA process explicitly within the formal process of the EIA.

✓ **Figure 1.**
Integrated, Health-Conscious, EIA for Olympics



2. Overview of the EIA for Tokyo 2020 Olympics

2. The EIA for Tokyo 2020 Olympics

in 1993:

The Basic Environmental Act of Japan (Act No.91 of 1993)

was enacted

↓ ... It included the provisions for EIA

In 1994:

The Olympic Charter formally addressed the importance of environmental protection.

↓ ... It included “environment” as a consideration.

*For 2020 Olympic Games,
all the candidate cities should submit EIA report*

↓ Tokyo took a decisive step to introduce the IEE on voluntary basis

... to comply with the request of the IOC

to reach the highest, sustainable level of EIA

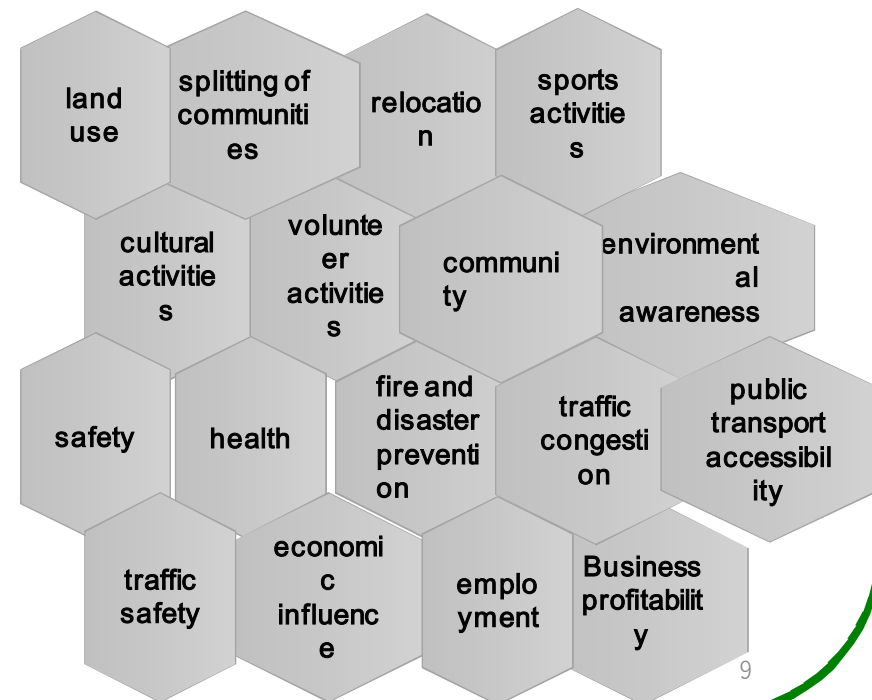
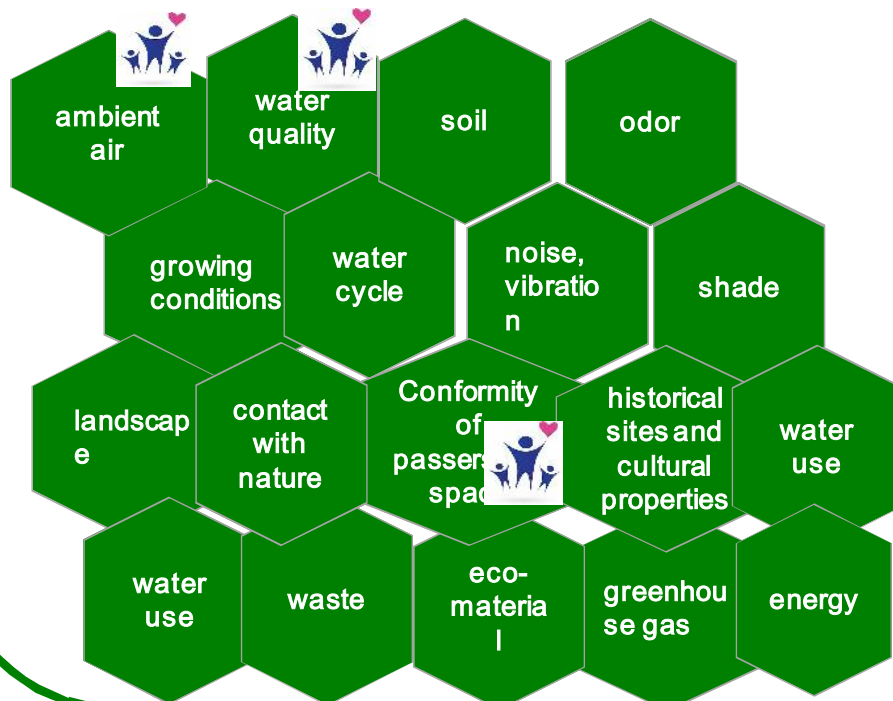
✓ Impacts on Athletes' Health



Possible Health Impacts on:
 ambient air, water quality, conformity of passersby's space

Tokyo 2020 Olympic EIA

Tokyo's Environmental Evaluation: + Tokyo's Socioeconomic Evaluation:
 18 items 17 items



3. The Site for Triathlon And Marathon Swimming: Odaiba Marine Park

3. Triathlon and Marathon Swimming Site

- Odaiba Marine Park:
the site for triathlon and marathon swimming
located in the center of the bay zone

... a highly metropolitan, or industrialized venue



Water quality problem



✓ Offshore Water Quality Survey (1)

Spot 1: offshore of Daiba rainbow park
Spot 2: offshore of Daiba station

Survey result (weather: clear, 25 January 2016)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	7.9	More than 7.0 less than 8.3
		2	7.9	
DO	mg/L	1	8.2	More than 2mg/L.
		2	8.1	
COD	mg/L	1	1.4	Below the 8mg/L
		2	2.7	
The whole nitrogen	mg/L	1	1.7	Below the 1mg/L
		2	1.8	
Total phosphorus	mg/L	1	0.11	Below the 0.09mg/L
		2	0.1	

✓ Offshore Water Quality Survey (2)

Survey result (weather: rainy, 20 January 2016)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	7.6	More than 7.0 less than 8.3
		2	7.6	
DO	mg/L	1	7.5	More than 2mg/L.
		2	7.2	
COD	mg/L	1	5.2	Below the 8mg/L
		2	5.5	
The whole nitrogen	mg/L	1	<u>4.6</u>	<u>Below the 1mg/L</u>
		2	<u>4.1</u>	
Total phosphorus	mg/L	1	<u>0.29</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.21</u>	

✓ Offshore Water Quality Survey (3)

Survey result (weather: clear, 18 November 2015)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	7.6	More than 7.0 less than 8.3
		2	7.5	
DO	mg/L	1	4.9	More than 2mg/L.
		2	4.8	
COD	mg/L	1	2.6	Below the 8mg/L
		2	3.5	
The whole nitrogen	mg/L	1	<u>2.5</u>	<u>Below the 1mg/L</u>
		2	<u>2.9</u>	
Total phosphorus	mg/L	1	<u>0.15</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.19</u>	

✓ Offshore Water Quality Survey (4)

Survey result (weather: clear, 14 September 2015)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	8	More than 7.0 less than 8.3
		2	7.3	
DO	mg/L	1	11.5	More than 2mg/L.
		2	6.2	
COD	mg/L	1	3.7	Below the 8mg/L
		2	3.4	
The whole nitrogen	mg/L	1	<u>3.2</u>	<u>Below the 1mg/L</u>
		2	<u>3.1</u>	
Total phosphorus	mg/L	1	<u>0.25</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.26</u>	

✓ Offshore Water Quality Survey (5)

Survey result (weather: clear, 21 July 2015)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	8.8	More than 7.0 less than 8.3
		2	8.5	
DO	mg/L	1	16	More than 2mg/L.
		2	14.3	
COD	mg/L	1	5.9	Below the 8mg/L
		2	5.8	
The whole nitrogen	mg/L	1	<u>1.9</u>	<u>Below the 1mg/L</u>
		2	<u>2.7</u>	
Total phosphorus	mg/L	1	<u>0.24</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.25</u>	

✓ Offshore Water Quality Survey (6)

Survey result (weather: rainy, 10 June 2015)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	8	More than 7.0 less than 8.3
		2	7.4	
DO	mg/L	1	9.4	More than 2mg/L.
		2	5.1	
COD	mg/L	1	4.6	Below the 8mg/L
		2	4	
The whole nitrogen	mg/L	1	<u>3.7</u>	<u>Below the 1mg/L</u>
		2	<u>3.5</u>	
Total phosphorus	mg/L	1	<u>0.38</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.37</u>	

✓ Offshore Water Quality Survey (7)

Survey result (weather: clear, 11 May 2015)

The item	The unit	Spot	Measurement results	Environmental standard which affects water contamination (The standard value)
pH	-	1	9.2	More than 7.0 less than 8.3
		2	9	
DO	mg/L	1	23.4	More than 2mg/L.
		2	20.4	
COD	mg/L	1	16	Below the 8mg/L
		2	9.7	
The whole nitrogen	mg/L	1	<u>4.3</u>	<u>Below the 1mg/L</u>
		2	<u>3.4</u>	
Total phosphorus	mg/L	1	<u>0.72</u>	<u>Below the 0.09mg/L</u>
		2	<u>0.51</u>	

✓ Conflict between value and risks

VALUE


we create value by hosting the games in the near-urban sea

- The environmental impacts on athletes and visitors
... more than satisfactory

e.g., pleasant variations of eco-friendly public transport

RISKS

we, particularly **athletes**, might be **exposed to the health related risks** during the water games

- The health impacts on athletes and visitors 
... may prove the opposite

e.g., some evaluation items set for water quality are **currently above the national**.

(They may well **pass a lower standard** set by the national triathlon union.)

4. Conclusion

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The Olympic EIA should not be completed without the **HIA**.



... thus extending comprehensive health considerations for both athletes, and visitors.

✓ **As one final point in our presentation,
we would like to mention...**

**the comfort of walking spaces for athletes,
and pedestrians, will be evaluated
in the formal process of The Tokyo Olympics' EIA.**

*... We should also consider the open spaces
that surround the venue.*

*... In particular for the Summer Olympic Games in Japan,
we need to control heat, to mitigate its impact on
both athletes and visitors.*

... Climate change might exacerbate this particular problem.

- ✓ **Additionally, the assessment process is expected to help promote the green growth.**

... Economic tools for the advanced stage of environmental protection must be acceptable to every stakeholder with regard to specific construction or specific projects.

This could be a key to achieve both “Green” and “Growth” simultaneously.

✓ **The remaining issues concern time and effort**

... The current complicated system needs to be simplified

...At the decision making stage, the more that public opinion can be reflected in the details of the project, then the more favorable the outcome we can expect.

...the implementation of this reflection of public opinion must be seen earlier to ensure positive effects of the EIA at more extensive levels.

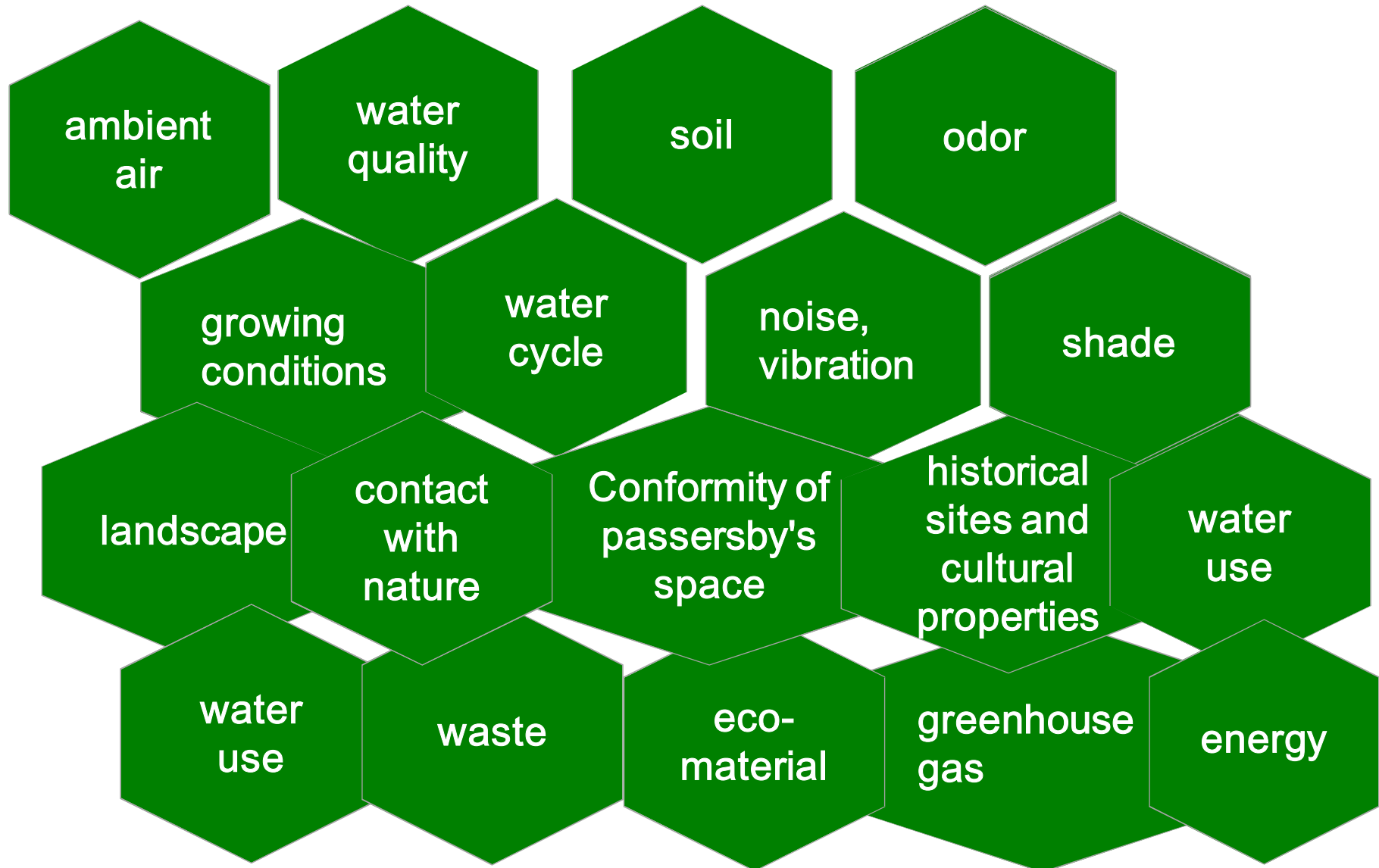
... The post-project evaluations, as well, will facilitate those endeavors in more sustainable directions, and we are now facing the question of how those responsible for Tokyo's 2020 Games might well conduct this process.

Appendix

✓ Map of Odaiba Marine Park



Environmental Evaluation: 18 items

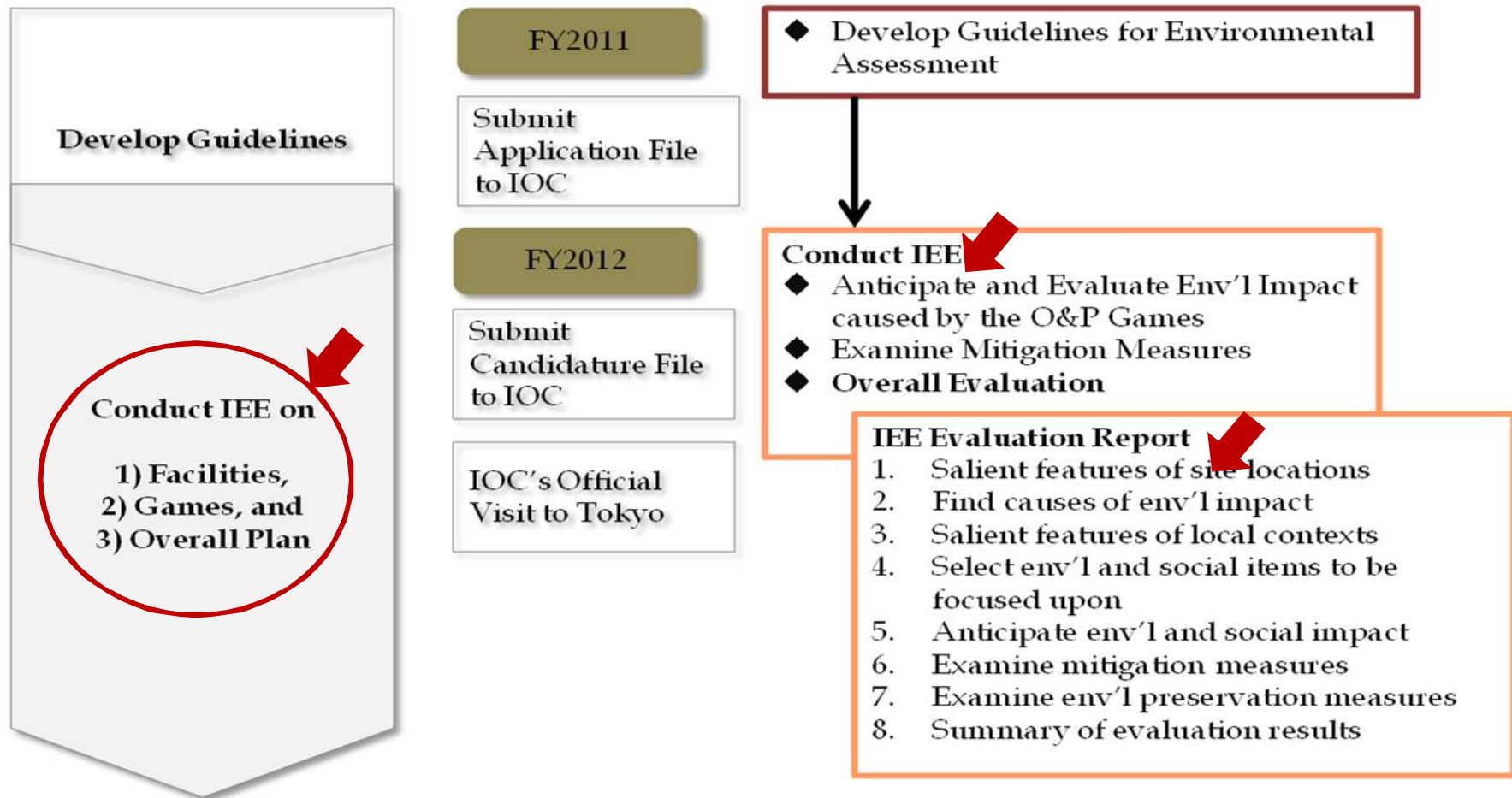


Socioeconomic Evaluation: 17 items



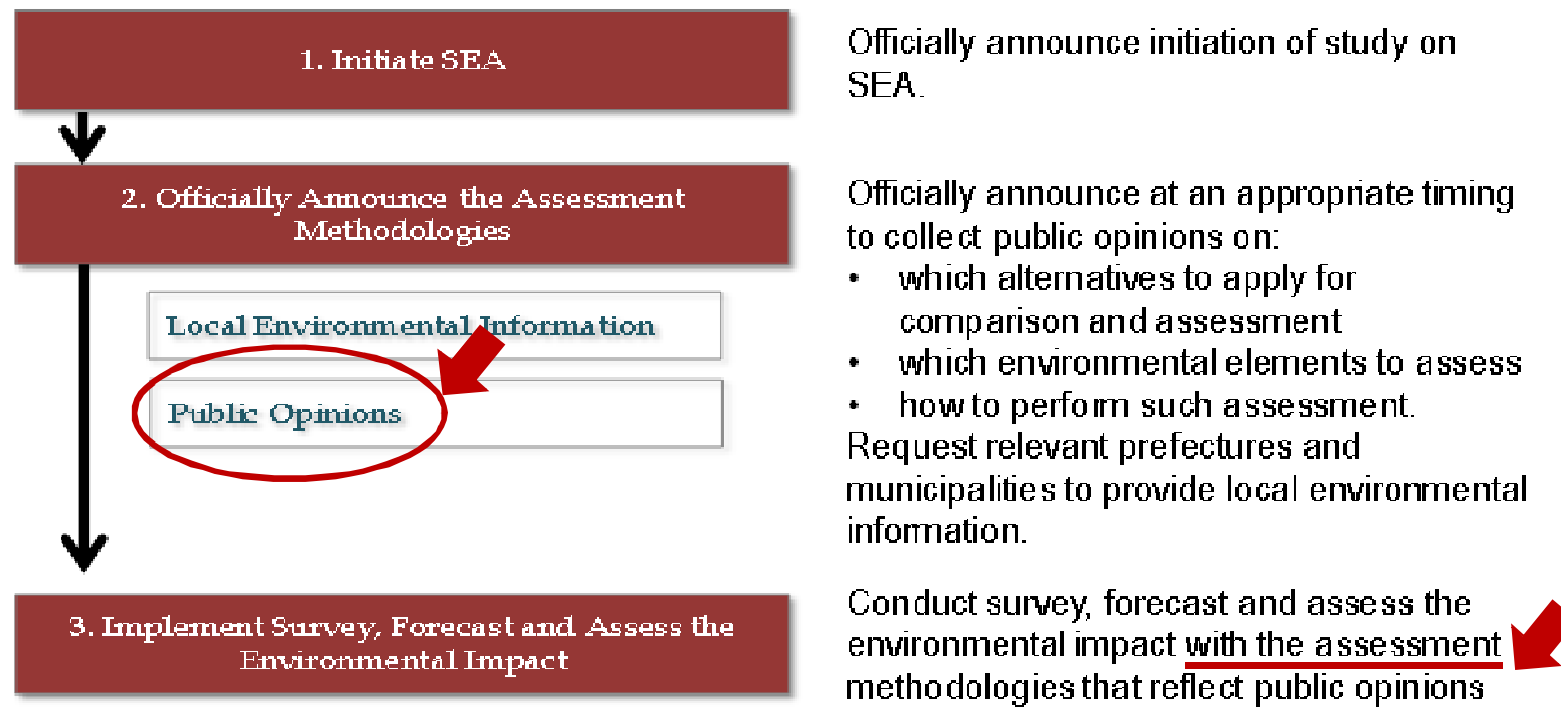
✓ Tokyo took a decisive step to introduce the IEE on voluntary basis, to comply with the request of the IOC.

Overall Flow of Environmental Assessment for Tokyo 2020 Olympic and Paralympic Games



- ✓ **At the decision making stage, the more the public opinion can be reflected in the details of the project, then the more favorable the outcome we can expect.**

Procedure of SEA Implementation



the implementation of this reflection of public opinion must be seen earlier to ensure positive effects of the EIA at more extensive levels.

- ✓ **The post-project evaluations, as well, will facilitate those endeavors in more sustainable directions.**

Overall Flow of Environmental Assessment for Tokyo 2020 Olympic and Paralympic Games

