
SHEUNG SHUI TO LOK MA CHAU SPUR LINE

Environmental Committee Meeting

Minutes of Meeting No. 44 held at 4:00pm
on Tuesday, 17th January 2023,
via Webinar (Microsoft Teams)

Present:		
Dr. Xianji Wen	WWF Hong Kong	Member (NGO)
Mr. Yat-tung Yu	The Hong Kong Bird Watching Society	Member (NGO)
Mr. Chiky Wong	Friends of the Earth (Hong Kong)	Member (NGO)
Mr. Siu-cheong Lau	Civil Maintenance Team	Member (MTR)
Ms. Catherine Leung	Environmental Team	Member (MTR)
Ms. Kenny Yiu	Environmental Team	Member (MTR)
Mr. Peter Choi	Environmental Team	Member (MTR)
Mr. Paul Leader	Ecological Consultant	Member (consultant)
Ms. Elizabeth Wu	Ecological Consultant	Member (consultant)
Mr. Linus Hung	Ecological Consultant	Member (consultant)
Absent with apology:		
Mr. Matthew Wong	Civil Maintenance Team	Member (MTR)

Attachments	
Annex A	Presentation Material of EC Meeting No. 44

<u>Item/Description</u>	<u>Action By</u>
1. Welcomed Members to the EC Meeting No. 44.	Noted
<u>Confirmation of minutes of Meeting No. 43</u>	
2. There were no comments on the minutes of Meeting No. 43 and the minutes were confirmed.	Noted
<u>Ecological Enhancement Works and Monitoring – an Update on Management Works and Look Ahead</u>	
3. <u>A member (consultant)</u> reported on the major habitat enhancement, modification works, ecological monitoring and management works undertaken from January to December 2022 at the LMC EEA (detailed in Annex A) as follows:	
3.1 <u>A member (consultant)</u> reported that 630 Grass Carp and 19,977kg Tilapia were stocked.	Noted
3.2 <u>A member (consultant)</u> reported that two dogs were trapped in the period. There were 37 Red Imported Fire Ant nests treated.	Noted
3.3 <u>A member (consultant)</u> reported that Apple Snails were removed manually and Camellia seed was also applied to control them.	Noted
3.4 <u>A member (consultant)</u> reported on the performance of the numerical bird target species. Most target species had met the target level in 2022 and over the last five years. Density of Great Egret at LMC EEA was lower than that at the Control Areas; the reason was not known but fish stocking was increased this winter in the LMC EEA and hopefully the situation would be improved.	Noted
3.5 <u>A member (consultant)</u> further reported on the non-numerical bird target species.	Noted
3.6 <u>A member (consultant)</u> reported the roost count data.	Noted
3.7 <u>A member (consultant)</u> reported that most of the bird nest boxes provided were occupied, with 78 pairs of White-shouldered Starlings.	Noted
3.8 <u>A member (consultant)</u> reported the other breeding birds recorded in the LMC EEA, including localised breeding species Cinnamon Bittern, Common Moorhen and Greater Painted-snipe, all rare Hong Kong breeding species.	Noted
3.9 <u>A member (consultant)</u> reported on the globally threatened bird species recorded, including a maximum of 10 Falcated Duck and Yellow-breasted Bunting.	Noted

<u>Item/Description</u>	<u>Action By</u>
<p>3.10 <i>A member (consultant)</i> reported that Eurasian Otter was not recorded which may be due to the disturbance from trespassers (which involved activities at night-time) at Pond 2. Pond 2 was drained and all fish removed, this and the coming fence repairing works will hopefully address this issue. Two artificial otter holts were constructed at Ponds 2 and 4.</p> <p>3.11 <i>A member (consultant)</i> reported that all three reptile target species were recorded, including a female Chinese Soft-shelled Turtle preparing to lay eggs.</p> <p>3.12 <i>A member (consultant)</i> reported on the number of Red-eared Slider recorded. Red-eared Slider occurred in most of the ponds. A license of trapping was obtained from AFCD. Trapping was attempted on 3 consecutive days in September and October in Ponds 12 and 15, but none were trapped.</p> <p>3.13 <i>A member (consultant)</i> reported that there were seven amphibian species recorded, including the exotic Greenhouse Frog for the first time, but not Chinese Bullfrog, which is a target species.</p> <p>3.14 <i>A member (consultant)</i> reported that 27 dragonfly species were recorded. Marsh Skimmer was recorded for the first time.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>
<p><u>Any Other Business</u></p> <p>4. <i>A member (NGO)</i> enquired if there is any action to attract the Eurasian Otter, in addition to the artificial holts. <i>A member (consultant)</i> replied that the measures would focus on reducing trespassing at Pond 2. Eurasian Otter previously preferred Pond 2 probably because it was relatively isolated and less visited.</p> <p>5. <i>A member (NGO)</i> enquired the progress of fence reinstatement works. <i>A member (MTR)</i> replied that the reprofiling pond bund works at Pond 2 is planning to carry out in 2023 and 2024 (where the fence has collapsed due to the instability of bund). The fence would be reinstated as part of this work.</p> <p>6. <i>A member (NGO)</i> enquired why Little Egret was not meeting the target. <i>A member (consultant)</i> replied that this species mostly occurred in drained ponds. Commercial fishponds are drained once every few years, which can provide more food when drained; while this is not easy to replicate this at LMC EEA as the number of ponds is low. Another issue is the high number of Great Cormorants at LMC EEA which also feed on fish. Other ways to meet target include establishing an egretty on site, however, this has not yet been successful after many years of effort.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p>
<p><u>Date of Next Meeting</u></p> <p>7. The date of the next meeting will be advised.</p>	<p>MTR</p>

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17th Jan 2023




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Management Works: Fish Stocking

- 630 Grass Carp and 19,977kg of Tilapia were stocked



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Management Works: Pest Management

Dog Trapping


- 2 trapped.

Pest Management (Red Imported Fire Ant)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. of Nests Treated	790	1,760	1,211	1,333	939	969	269	254	366	157	37

Pest Management (Apple Snail)

- 232kg of Apple Snails was manually removed from Ponds 5, 18, 20 – 22;
- A total of 400kg of Camellia seed was applied.



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Numerical Bird Target Performance in the Past 5 Years

Year	2018			2019			2020			2021*			2022*		
	Species/Density (mean/ha)	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA
Great Cormorant	8.9	0.5	18.7	8.4	0.3	28.8	12.1	0.2	65.7	8.5	0.2	38.7	8.3	0.7	12.1
Grey Heron	2.2	0.1	15.8	1.7	0.1	11.8	2.2	0.2	13.8	1.7	0.2	9.8	1.2	0.2	5.8
Great Egret	1.9	0.4	4.6	1.2	0.4	2.9	2.5	0.8	3.1	1.3	0.4	2.9	0.6	0.6	0.9
Little Egret	0.7	0.7	0.1	0.5	0.6	0.8	1.5	0.9	1.6	0.7	1.0	0.8	0.4	0.7	0.6
Chinese Pond Heron	1.6	0.7	2.4	0.9	0.4	2.2	1.2	0.5	2.3	0.8	0.5	1.6	0.5	0.5	1.0
Black-faced Spoonbill	0.5	0.1	7.8	0.4	<0.1	45.9	0.4	<0.1	11.5	0.4	0.1	5.6	0.2	<0.1	5.4
Eurasian Teal	0.3	<0.1	51.3	3.0	<0.1	63.1	1.6	<0.1	165.9	0.3	<0.1	9.1	0.4	<0.1	64.2
Greater Spotted Eagle	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC
Eastern Imperial Eagle	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC	<0.1	-	LMC
Japanese Quail	<0.1	-	LMC	<0.1	0.8	-	-	-	<0.1	-	LMC	<0.1	-	LMC	<0.1
Eurasian Coot	<0.1	-	LMC	<0.1	3.8	<0.1	2.6	<0.1	<0.1	1.5	<0.1	<0.1	1.4		
Pheasant-tailed Jacana	<0.1	<0.1	51.8	<0.1	<0.1	60.4	<0.1	-	LMC	<0.1	<0.1	125.8	<0.1	-	LMC
Greater Painted-snipe	<0.1	-	LMC	<0.1	-	LMC	<0.1	<0.1	22.2	<0.1	-	LMC	<0.1	-	LMC
Black-winged Stilt	0.1	0.2	0.5	0.4	0.2	1.9	0.6	0.4	1.5	0.5	0.7	0.7	0.3	0.7	0.4
Pintail/Swinhoe's Snipe ¹	0.1	<0.1	79.7	<0.1	<0.1	14.0	<0.1	<0.1	56.7	<0.1	<0.1	69.0	0.1	<0.1	15.8
Common Snipe	<0.1	<0.1	2.0	0.1	<0.1	7.6	<0.1	<0.1	8.0	<0.1	<0.1	2.3	0.1	<0.1	6.8
Bluetit	<0.1	<0.1	1.1	<0.1	<0.1	12.3	<0.1	<0.1	7.4	<0.1	-	LMC	<0.1	<0.1	16.9
Pallas's Grasshopper Warbler	<0.1	<0.1	46.9	<0.1	<0.1	28.8	<0.1	-	LMC	<0.1	<0.1	13.2	<0.1	<0.1	59.1
Zitting Cisticola	0.1	<0.1	2.0	0.1	<0.1	7.4	0.1	<0.1	2.5	0.1	<0.1	3.4	<0.1	<0.1	14.3
Japanese Yellow Bunting	<0.1	<0.1	CA	-	-	-	-	-	-	-	-	-	<0.1	<0.1	CA
Red-billed Starling	3.2	0.2	16.9	2.9	0.1	30.3	2.5	<0.1	92.3	2.7	0.1	43.1	2.9	0.2	15.8

Blue – Target met (i.e. density in EEA at least twice that in Control Areas)
 Yellow – Target not met, although density higher than in Control Areas
 Red – Target not met and density lower than in Control Areas
 1. Includes one species pair, Pintail/Swinhoe's Snipe, not distinguishable in the field. 2. Due to the safety of the lower hole, there was LMC bird tower count survey during Weeks 44-47.

Data is calculated based on the maximum count of all surveys since 2020 i.e. also include the afternoon and roost counts.
 * Due to the inaccessibility, areas of San Tin CA is reduced from Week 49, there was no LMC bird tower count survey during Weeks 49-51.
 * Due to the safety of the lower hole, there was LMC bird tower count survey during Weeks 44-47.



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Non-numerical Bird Target Performance in the Past 5 Years

Year	2018			2019			2020			2021*			2022*		
	Species/Density (mean/ha)	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA
Eurasian Wigeon	<0.1	<0.1	7.1	0.2	<0.1	83.4	0.1	<0.1	77.1	<0.1	<0.1	0.6	0.1	<0.1	15.8
Little Grebe	1.0	0.9	1.1	0.9	0.7	1.3	0.9	0.8	0.8	0.7	0.6	1.0	0.6	0.7	0.8
Yellow Bittern	-	-	<0.1	<0.1	4.0	<0.1	<0.1	3.4	<0.1	<0.1	6.5	<0.1	<0.1	2.9	
Cinnamon Bittern	<0.1	<0.1	4.9	-	<0.1	CA	<0.1	-	LMC	<0.1	-	LMC	<0.1	<0.1	7.6
Black-crowned Night Heron	0.4	<0.1	8.8	0.2	<0.1	7.4	0.6	<0.1	21.4	0.5	0.1	7.6	0.4	<0.1	8.6
Intermediate Egret	0.1	<0.1	11.4	<0.1	<0.1	6.5	<0.1	3.3	<0.1	<0.1	1.5	<0.1	<0.1	1.4	
Wood Sandpiper	-	-	0.4	<0.1	8.9	0.3	<0.1	5.7	0.2	0.1	3.3	0.5	0.1	6.6	
White-cheeked Starling	0.3	<0.1	10.8	0.6	<0.1	161.2	0.4	<0.1	75.8	0.3	<0.1	116.8	0.6	<0.1	386.8
White-shouldered Starling	1.1	0.1	10.7	1.1	0.1	14.7	1.6	<0.1	42.1	1.6	<0.1	39.5	1.4	<0.1	37.4
Yellow-breasted Bunting	<0.1	<0.1	23.4	<0.1	-	LMC	<0.1	<0.1	5.5	<0.1	<0.1	69.0	<0.1	<0.1	6.6

Blue – Density in LMC EEA at least twice that in Control Areas
 Yellow – Density higher in LMC EEA than in Control Areas
 Red – Density in LMC EEA lower than in Control Areas

Data is calculated based on the maximum count of all surveys since 2020 i.e. also include the afternoon and roost counts.
 * Due to the inaccessibility, areas of San Tin CA is reduced from Week 49, there was no LMC bird tower count survey during Weeks 49-51.
 * Due to the safety of the lower hole, there was LMC bird tower count survey during Weeks 44-47.



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Roost Count in the Year

- Roost is mainly located at Pond 2.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Black-crowned Night Heron	-	-	-	-	-	-	-	-	-	7	-	1
Chinese Pond Heron	3	7	12	5	-	-	2	6	-	-	5	3
Eastern Cattle Egret	-	-	19	32	-	-	-	12	-	-	-	-
Grey Heron	-	-	-	-	-	-	-	2	-	2	7	61
Great Egret	21	43	32	17	-	-	18	64	-	52	67	125
Little Egret	8	4	24	24	-	-	9	43	-	44	17	11
Great Cormorant	419	1,134	7	-	-	-	-	-	-	11	449	545
Total of Large Waterbirds	451	1,188	94	78	0	0	29	127	0	116	545	746

* The species occurred on site or recorded droppings into the main site during the surveys.



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Nest Box Occupation in the Year

- 88 nest boxes accessible for survey;
- 78 occupied by White-shouldered Starlings and 1 by Oriental Magpie Robin.



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Breeding Birds (in addition to nest boxes)

- Number of pair/ juvenile recorded:

Little Grebe	12 pairs
Cinnamon Bittern	1 pair
Yellow Bittern	1 pair
White-breasted Waterhen	12 pairs
Common Moorhen	2 pairs
Greater Painted-snipe	2 pairs displaying, in which one pair was mating
Chinese Grosbeak	1 pairs

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Globally Threatened Bird Species – peak count per month

Species	IUCN	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Falcated Duck	NT	1	1	-	-	-	-	-	-	-	10	6	2
Ferruginous Duck	NT	-	-	-	-	-	-	-	-	-	-	1	-
Japanese Quail	NT	-	-	-	-	-	-	-	-	-	-	2	1
Black-faced Spoonbill	EN	36	58	14	4	-	-	-	-	-	21	41	78
Greater Spotted Eagle	VU	2	1	1	-	-	-	-	-	-	1	1	2
Eastern Imperial Eagle	VU	1	2	-	-	-	-	-	-	-	-	-	-
Northern Lapwing	NT	-	-	-	-	-	-	-	-	-	-	2	-
Curlew Sandpiper	NT	-	-	-	5	-	-	-	1	-	-	-	-
Red-necked Stint	NT	-	-	-	3	-	-	-	6	-	-	-	-
Grey-tailed Tattler	NT	-	-	-	-	-	-	-	1	-	-	-	-
Collared Crow	VU	2	2	4	2	4	3	1	1	3	3	2	3
Manchurian Reed Warbler	VU	1	-	1	1	-	-	-	-	-	-	-	-
Rustic Bunting	VU	-	-	-	-	-	-	-	-	-	-	-	1
Yellow-breasted Bunting	CR	2	-	1	-	-	-	-	-	4	-	7	10

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Mammal Targets Recorded in the Past 10 Years

- Eurasian Otter was not recorded
- Leopard Cat was recorded on 54 days with an OI of 22.4

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Eurasian Otter <i>Lutra lutra</i>										
Maximum Count	1	2	0	1	1	1	1	1	1	0
No. of Records ¹	13 [#]	5 [#]	0	1	2	5	6	19	1	0
Leopard Cat <i>Prionailurus bengalensis</i>										
No. of Records ² /OI ²	111	871	114 [#]	65, 25.2	51, 24.1	54, 22.6	70, 31.2	53, 53.6	50, 24.1	54, 24.2

Note:
1. Number of dates recorded by all installed cameras plus direct observations.
2. Occurrence index (since 2016).

Key:
Including one dead individual found at LMC EA
* Including direct observation of one individual at Pond 12
% Footprints were recorded

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Otter Holt





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Reptile Targets Recorded in the past 10 years

- Number of surveys recorded is indicated in the table, whereas the numbers in brackets are the maximum count per survey.

Species	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Reeves' Turtle	-	-	2 (1)	4 (2)	8 (2)	-	2 (1)	1 (1)	0 (0)	5 (1)
<i>Mauremys reevesii</i>	-	-	2 (1)	4 (2)	8 (2)	-	2 (1)	1 (1)	0 (0)	5 (1)
Chinese Soft-shelled Turtle	2 (1)	2 (1)	2* (1)	*	3 (1)	1 (1)	0 (0)	1 (1)*	1 (1)	1 (1)
<i>Pelodiscus sinensis</i>	2 (1)	2 (1)	2* (1)	*	3 (1)	1 (1)	0 (0)	1 (1)*	1 (1)	1 (1)
Burmese Python	1 (1)	3 (1)	1* (1)	1 (1)	0 (0)	0 (0) #	0 (0)	1 (1)	2 (1)	2 (1)
<i>Python bivittatus</i>	1 (1)	3 (1)	1* (1)	1 (1)	0 (0)	0 (0) #	0 (0)	1 (1)	2 (1)	2 (1)

Key:
* Include one record of track
It was recorded in the Clean-up Reedbed
* It was recorded by the installed camera

Female digging before laying eggs


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Red-eared Slider Recorded since 2016

- A maximum of 11 individuals were recorded on one day (in December) this year;
- Recorded in all Compartments;
- Maximum number recorded in the past years:
 - 2021 – 4;
 - 2020 – 6;
 - 2019 – 7;
 - 2018 – 19, egg laying also noted;
 - 2017 – 14, mating also noted;
 - 2016 – 2, egg laying also noted.

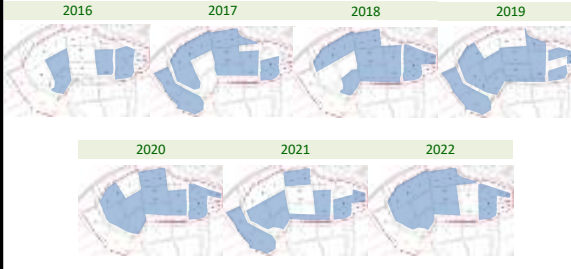



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Red-eared Slider Recorded since 2016

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Maximum Number of Red-eared Slider Recorded in Each Pond since 2016

Pond	Year						
	2016	2017	2018	2019	2020	2021	2022
2	-	2	-	1	-	1	-
3	-	1	3	2	2	-	1
4	-	1	-	1	1	1	1
5	-	2	1	-	-	-	2
6	1	-	-	2	2	1	3
7	1	-	3	1	2	1	2
8	-	1	1	-	2	1	3
9	-	1	3	2	1	-	1
10	-	1	1	2	3	-	1
11	1	4	17	3	1	1	-
12	1	7	2	4	1	2	2
13	1	-	1	1	1	-	-
14	-	-	6	1	-	2	-
15	1	1	1	-	1	4	11
16	-	1	-	1	-	-	1
17	-	-	1	2	-	-	-
18	-	-	1	-	1	-	1
19	1	-	7	1	1	-	1
20	-	-	3	3	5	1	5
21	-	-	1	1	-	4	-
22	-	-	-	-	-	-	-



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Red-eared Slider Trapping

- 3 consecutive days in September and October respectively
- 1 trap in Pond 12
- 1 trap in Pond 15
- None trapped




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Amphibian Findings since 2006

- Target species, Chinese Bullfrog, was not recorded this year.

Species/ Maximum Total Number of Individuals Recorded in All Ponds in LMC EEA	2006-2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Asian Common Toad	<i>Bufo melanostictus</i>	4	2	7	1	7	15	6	8	3	3
Asiatic Painted Frog	<i>Kaloula pulchra</i>	2	-	-	-	-	1	2	1	1	2
Buller's Pigmy Frog	<i>Microhyla butleri</i>	2	-	-	-	-	45	-	3	-	-
Ornate Pigmy Frog	<i>Microhyla ornata</i>	128	4	-	-	-	20	18	-	4	38
Marbled Pigmy Frog	<i>Microhyla pulchra</i>	-	1	-	-	-	50	-	-	-	-
Paddy Frog	<i>Fejervarya limnocaris</i>	35	1	10	35	19	13	6	7	9	64
Chinese Bullfrog	<i>Hoplobatrachus chinensis</i>	4 (9)	1 (2)	0 (0)	0 (0)	4 (9)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
Günther's Frog	<i>Rana guentheri</i>	157	293	115	82	342	172	127	73	65	130
Two-striped Grass Frog	<i>Rana taipehensis</i>	2	-	2	-	-	-	-	-	-	-
Brown Tree Frog	<i>Polypedates megacephalus</i>	33	7	3	6	6	1	5	7	5	4
Greenhouse Frog	<i>Eleutherodactylus planirostris</i>	-	-	-	-	-	-	-	-	-	3
American Bullfrog	<i>Lithobates catesbeianus</i>	-	-	-	-	-	-	-	-	1	-
Number of species recorded		9	7	5	4	5	8	7	7	6	7

Maximum count (per survey) is indicated in the table; for Chinese Bullfrog, the number in brackets are the total number of individuals recorded in the year.



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Dragonfly Findings since 2006

- 1 new species recorded:
 - Marsh Skimmer - Abundant

Dragonfly Recorded as Adults or Exuviae at LMC EEA	2006-2013	2014	2015*	2016*	2017*	2018	2019	2020	2021	2022
Number of Species Recorded	31	21	17	21	25	21	24	24	27	27
Total Number of Species Recorded	39									

Key: * A Midget species was also recorded.



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Thank You



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