

2021

Sector Sustainability Update



14 LIFE
BELOW WATER

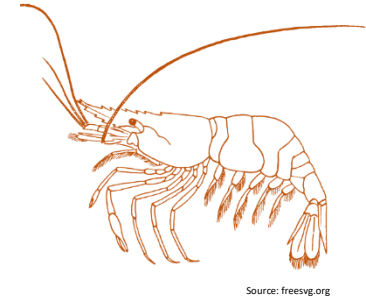


LARGE SHRIMP

March 2022

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2021 Sector Sustainability Update



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SUMMARY

Production and trade

- **Large shrimp** remains **one of the largest and fastest-growing seafood sectors**, by production and traded volume.
- Production in **2019** totaled **9.5 million tonnes**. **Seventy-four percent was from aquaculture**, which is responsible for the steady annual growth in production observed in the sector over the past three decades.
- **Asia** accounts for **80 percent** of the production. **China** remains the **top producing country**, with **3.3 million mt** produced in 2019, 75 percent of which comes from aquaculture.
- **Ecuador** and **Argentina** (the fifth and seventh top shrimp producers, respectively) are the only non-Asian countries in the top ten.
- Shrimp also remains one of the most economically important seafood commodities globally, with reported trade of more than USD 24 billion in 2019.
- **India (21 percent)** and **Ecuador (15 percent)** are currently the **top exporters by value**, and also the two countries with the highest increase in market share in the last decade. The **United States** and **Europe** remain the **most important importers**, together accounting for more than 50 percent of shrimp imports by value in 2019.

T75 status and current strategy priorities

- **10.4 percent** (c. 1 million mt) of global large shrimp production is currently estimated to be either **sustainable** or **improving**.
- To reach the 75-percent target, it will be vital to **improve the sustainability of China's farmed and wild production**, as well as that of **farmed shrimp from Ecuador**.
- High bycatch levels and bycatch of endangered, threatened, and protected (ETP) species is one of most critical environmental issues in shrimp fisheries.
- Farmed production remains constrained by a lack of public information with which to assess the effectiveness of industry's management of environmental impacts, and a lack of adoption of approaches to mitigate cumulative impacts and shared risks.
- The improvement work on the main shrimp sources of SFP's partners is facilitated via three Supply Chain Roundtables (SRs): [US Gulf of Mexico Shrimp](#), [Mexican Shrimp](#), and [Asian Farmed Shrimp](#).

DISCLAIMER

This report was prepared with information from multiple sources, accessed in late September 2021. The report is not intended to be a comprehensive review of the sector, but rather a summary of progress against the Target 75 initiative, with some selected key highlights and improvement needs for the sector. For more detailed information on seafood production, trade, or the status and attributes of particular certifications and improvement projects, the original sources should be consulted.

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Whiteleg shrimp (*Litopenaeus vannamei*) © Shutterstock

THE TARGET 75 INITIATIVE

Sustainable Fisheries Partnership (SFP) applies a sectoral approach to its mission of making actionable information available to the seafood supply chain, in order to leverage market forces to achieve improvements in fisheries. Seafood sectors may be defined in terms of the shared biological characteristics of harvested species, as well as their role in defined markets.

In 2017, SFP launched the Target 75 (T75) initiative, as a dedicated and concrete benchmark on the way to our ultimate goal of 100-percent sustainable seafood. **T75 aims to ensure that 75 percent of seafood (by volume) in 13 key sectors is either sustainable or making regular, verifiable improvements.** Together, these T75 sectors cover most of the main types of seafood consumed in North America and Europe, and a significant portion of what is consumed in Japan and Oceania.



LARGE SHRIMP SECTOR

This sector consists primarily of **farmed shrimp** and **wild warmwater shrimp**.

It also includes larger coldwater shrimp, such as Argentine red shrimp and spot prawns, that are used in a manner more similar to large warmwater shrimp than small coldwater shrimp. Species are typically larger than 100 shrimp per pound in body size.

The most relevant species by production volume are Whiteleg shrimp (*Penaeus vannamei*), Giant tiger prawn (*Penaeus monodon*), and other warmwater prawns (*Penaeus* spp.), which are mostly from farmed production.

More information on the definition and scope of this and other Target 75 sectors is available [here](#).



Fresh shrimp in street stall of local market of San Blas Town, Mexico. ©Shutterstock

2 SCOPE AND OBJECTIVES

This report provides a quick summary update on progress so far for the [large shrimp sector](#) against the 75-percent goal, in terms of volume of production that is already considered either sustainable or improving. The update also includes highlights on which sources of production had the most relevant changes, as well as the most recent trends in production and trade.

For the purposes of this analysis, we define a fishery as “sustainable” if it is Marine Stewardship Council (MSC)-certified or green-listed in SFP’s [Metrics](#) tool. We define a fishery as “improving” if it is certified by one of the following programs: MarinTrust, ASMI RFM, Iceland Responsible Fisheries, Fair Trade USA; if it is under full assessment in the MSC program; or if it is in a fishery improvement project (FIP) that is making good progress (i.e., with a progress rating of A, B, or C, or formed within the last 12 months but still unrated), using SFP’s [FIP Evaluation Tool](#). We define farmed production as improving if it is certified by one of the following programs: Aquaculture Stewardship Council (ASC), Best Aquaculture Practices (BAP), GlobalG.A.P’s GCN; or if it is in a formal aquaculture improvement project (AIP).

Data on production refers to 2019 production and is from the [FAO FishstatJ](#) database. Status in terms of certifications and fishery, and FIPs and AIPs refers to September 2021.



Aerial view of shrimp farms in Mamuju (Sulawesi), Indonesia © SFP



Shrimp fishing vessels in the Gulf of Mexico © Megan Westmeyer

3 PRODUCTION

Large shrimp is one of the largest seafood sectors in the world, with average global production of about 9 million tonnes per year in the last five years (FAO 2021a). It is also one of the sectors with the fastest growing levels of production, with average annual growth rates of 6 percent since 2000. The high growth rates in production are mostly due to aquaculture, which currently accounts for 74 percent of total large shrimp production (Figure 1).

The ten top producing countries account for 90 percent of total large shrimp production. Seven of these countries are in Asia, which currently contributes nearly 90 percent (c. 8 million tonnes) of the shrimp produced worldwide (Figure 2). China continues to be the largest producing country (35 percent of the sector total), with approximately 3.3 million tonnes produced in 2019, 75 percent of which comes from aquaculture. Three other major Asian producers are Indonesia, India, and Vietnam, contributing 13, 12, and 10 percent of global production, respectively. Latin American remains the second-most important region in terms of production, with most shrimp coming from Ecuador (where virtually 100 percent is farmed), Mexico (farmed and wild), and Argentina (all wild) (Figure 3) (FAO 2021a).

Farmed production is dominated by two species: Whiteleg shrimp (75 percent of total farmed production), and Giant tiger prawn (11 percent). The top capture species remain Southern rough shrimp, Giant tiger prawn, and Argentine red shrimp. Nearly one-third (31 percent) of the total wild capture is still poorly reported in broader categories such as “Natantian decapods nei” (Appendix I).

Figure 1 | Time series of wild and farmed large shrimp production (area) and annual shrimp exports (bars)

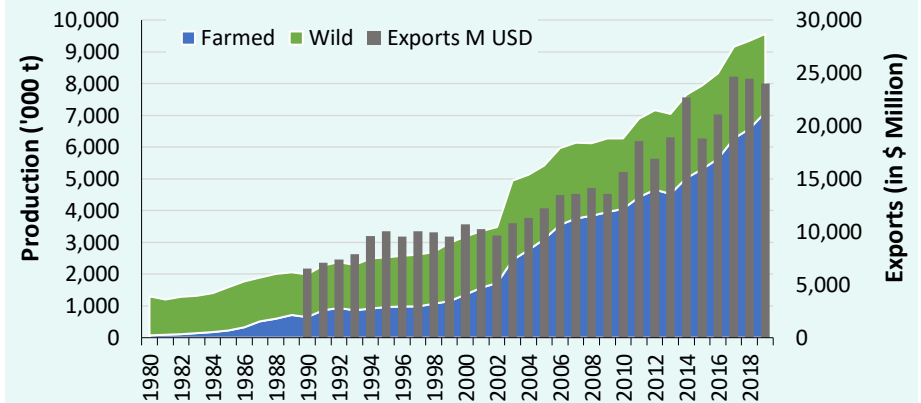


Figure 2 | 2019 Shrimp production by continent and production type

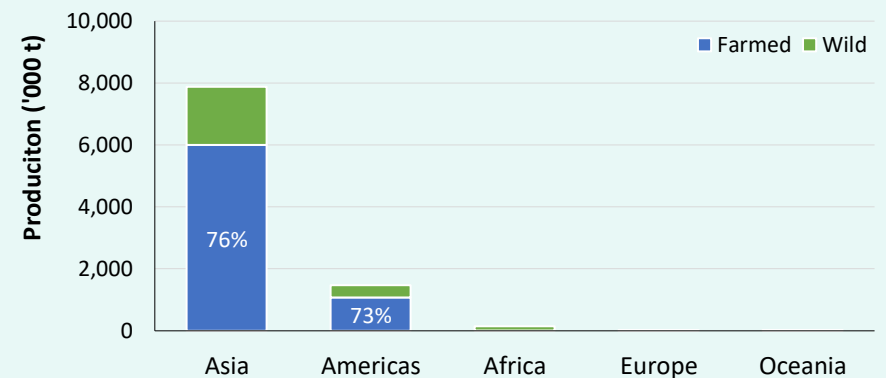
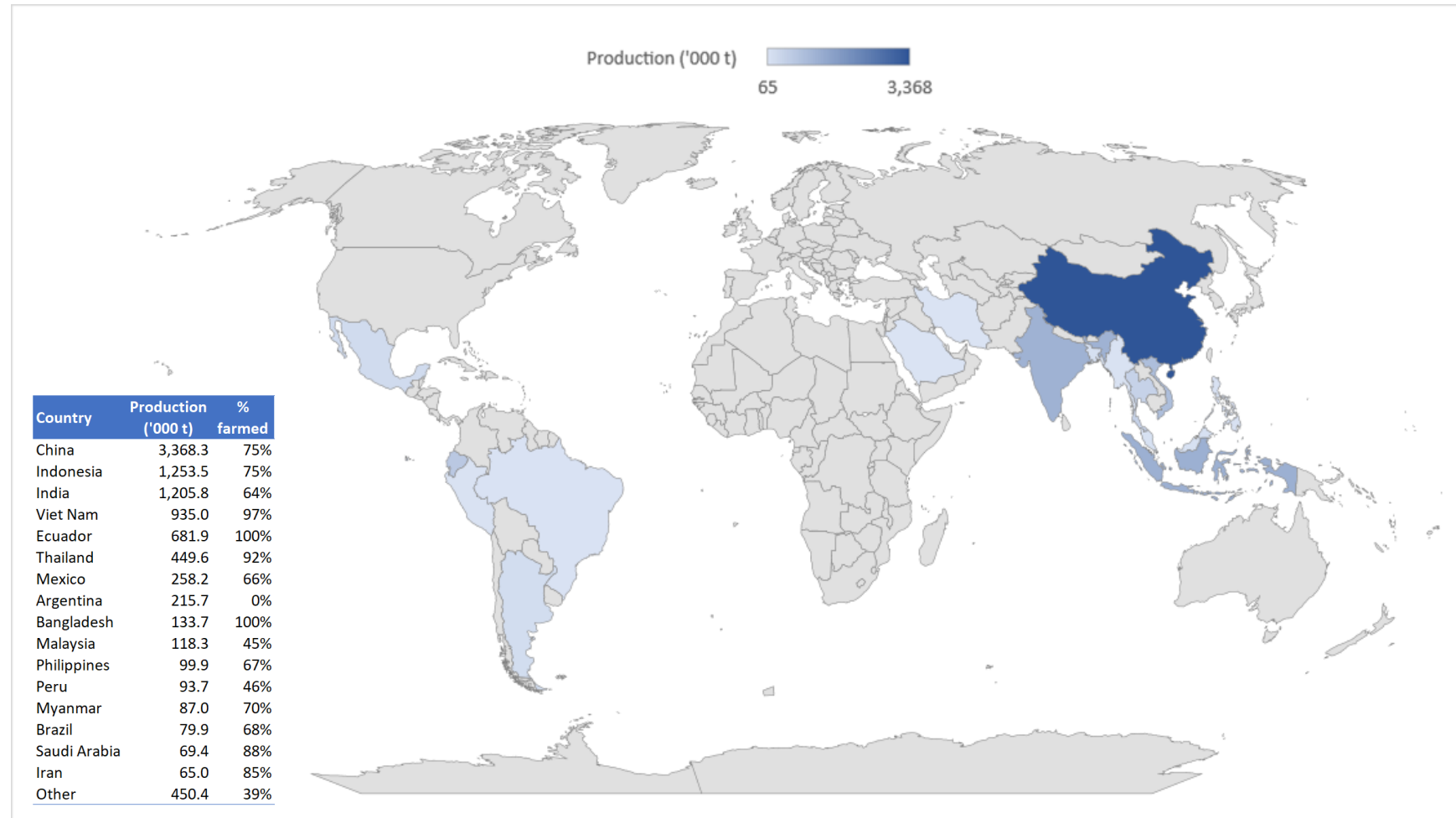


Figure 3 | The 16 top producing countries of large shrimp (wild and farmed production combined).



4 TRADE STATISTICS

Shrimp remains one of the most economically important seafood commodities globally. Worldwide shrimp trade (exports) totaled more than USD 24 billion in value in 2019. In the past decade, there was a nearly 50 percent increase in the annual global shrimp trade, up from USD 15 billion USD in 2010 (**Figure 1**) (FAO 2021b).

Asia accounts for almost two-thirds of the reported large shrimp exports by value, with India (21 percent of total exports in 2019), Vietnam (14 percent), China (7 percent), Indonesia (7 percent), and Thailand (7 percent) as the main exporting countries from this region. Ecuador (15 percent) and Argentina (4 percent) are also two important exporters for this commodity (**Table 1**). India (14-percent increase in market share) and Ecuador (11-percent increase) have seen the largest growth in shrimp exports since 2010. This growth is mirrored by the significant increase in farmed shrimp production in these two countries. In contrast, Thailand has had the most significant decrease (-13 percent) in market share since 2010 (FAO 2021b).

As with other key seafood commodities, the United States and Europe continue to be the largest importers for large shrimp. With reported large shrimp imports in 2019 of about \$6 billion and 0.7 million tonnes each, Europe and the US represented more than half of global shrimp imports. China (incl. Hong

Kong) is the third top importer, with 20 percent, followed by Japan (9 percent) (**Table 1**; FAO 2021b).

Bilateral trade flows from the main shrimp exporters follow this same pattern, with the United States, Europe, China, and Japan as the key importers for this commodity (**Table 1**).

Table 1 | Main shrimp exporters in 2019 and their top trade partners, by percentage of each country's total exports.

Importer Exporter	EU / EEA / UK	United States	China*	Japan	South Korea	Canada	Taiwan	Russia	Other	Total 2019 exports (USD billion)	% of total exports
India	11%	48%	19%	7%	0%	2%	0%	2%	11%	4.9	21%
Ecuador	18%	12%	55%	0%	2%	0%	0%	1%	12%	3.7	15%
Viet Nam	22%	20%	15%	19%	10%	5%	0%	0%	9%	3.3	14%
China	7%	14%	0%	9%	7%	6%	15%	3%	39%	1.8	7%
Indonesia	5%	66%	4%	19%	0%	1%	1%	0%	3%	1.7	7%
Thailand	4%	29%	23%	24%	4%	4%	3%	0%	10%	1.7	7%
Argentina	42%	3%	25%	5%	0%	0%	1%	4%	20%	1.1	4%
Netherlands	97%	0%	1%	0%	0%	0%	0%	0%	2%	0.6	3%
Mexico	1%	72%	20%	3%	0%	0%	0%	0%	4%	0.4	2%
% of total imports	27%	27%	20%	9%	3%	2%	1%	1%	9%		

(*) Includes Hong Kong

Source: FAO 2021c

China has seen the largest growth in terms of imports by value, with a 17-percent increase in market share between 2009 and 2019. In contrast, Japan showed an 8-percent market share loss in the last decade (FAO 2021b).

5 PROGRESS AGAINST THE 75% TARGET

Currently, about 1 million tonnes, or **10.4 percent**, of global large shrimp production is considered **sustainable or improving**. Sustainable production (i.e., from MSC-certified fisheries) still represents only 0.1 percent of the total sector. This production comes from four MSC-certified North Australia warmwater shrimp fisheries. Most of the improving production (860,000 t, or about 87 percent) is from farmed certified production or from formal AIPs, most of which are in top producing countries such as Ecuador, India, Thailand, and Indonesia (list of fisheries available [here](#)).

Compared to the same period in 2020, the large shrimp sector overall showed no change in percentage of volume that is either sustainable or improving. This was mainly due to a drop in improving wild production. At least two important shrimp FIPs, the [Argentina onshore red shrimp - bottom trawl FIP](#) and the [Mexico Pacific Ocean shrimp - bottom trawl FIP](#), that were making good progress in 2020 are currently stalled.

The volume of certified farmed production, on the other hand, continues to increase, maintaining the trend observed in recent years. This was driven by a combination of improved data provided by certification organizations and subsequent increases in certified farm volume for several countries, particularly India and Thailand.



6 CHALLENGES TO SUSTAINABILITY

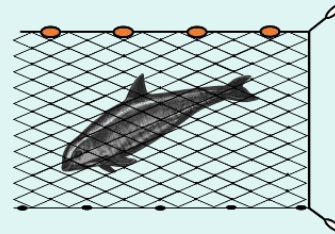
The improvement work on the main shrimp sources of SFP's partners is facilitated via three Supply Chain Roundtables (SR). Two focus on mitigating bycatch, the main sustainability issue in wild shrimp fisheries. The [US Gulf of Mexico Shrimp SR](#) undertakes improvement actions at a national scale (e.g., improving information on bycatch) and monitors/supports FIP progress to maintain the fishery's position as a role model for establishing best practices for wild shrimp fisheries worldwide. The [Mexican Shrimp SR](#) seeks to fight the extensive laundering of illegal gillnet-caught shrimp from the upper Gulf of California that is done to circumvent US embargoes associated with vaquita bycatch and maintain access to the US market.

The [Asian Farmed Shrimp SR](#) focuses on accelerating the adoption of a zonal management approach for aquaculture, to increase the sustainability of shrimp farming and address issues such as habitat destruction, disease, pollution of shared waterbodies, and poor labor practices. The SR currently focuses on the major source countries of Indonesia and Thailand and plans to expand into Vietnam and India.

To reach Target 75, it will be vital to improve the sustainability of China's farmed and wild production, as well as farmed shrimp from Ecuador.

FISHERIES

BYCATCH is one of the main sustainability issues in shrimp fisheries.



Vaquita (*Phocoena sinus*; [Critically Endangered](#)), one of the affected ETP species in the Mexico Pacific shrimp fisheries



Shrimp gillnet fishery, GOC, Mexico © JM Garcia

AQUACULTURE



SFP's approach to aquaculture is based on its [Framework for Sustainably Managed Aquaculture](#).

Key to this is a concept known as zonal management, which recognizes that farms are interconnected and industry growth should be based on an assessment of disease risk and the ecosystem's carrying capacity.

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8 GLOSSARY

AIP	Aquaculture Improvement Project	MSC	Marine Stewardship Council
ASC	Aquaculture Stewardship Council	MSC C	Marine Stewardship Council Certified
ASMI	Alaska Seafood Marketing Institute	MSC FA	Marine Stewardship Council Full Assessment
BAP	Best Aquaculture Practices	MBAq	Monterey Bay Aquarium
EEZ	Exclusive Economic Zone	NEI	Not Elsewhere Included
ETP	Endangered, Threatened, Protected species	NGO	Nongovernmental Organization
FAO	Food and Agriculture Organization	SFW	Seafood Watch
FIP	Fishery Improvement Project	SIOTI	The Sustainable Indian Ocean Tuna Initiative
GLOBALG.A.P.	Worldwide Standard for Good Agricultural Practices	SR	Supply Chain Roundtable
GCN	GLOBALG.A.P.'s certified, responsible farming and transparency label	TUNACONS	Tuna Conservation Group
IRF	Iceland Responsible Fisheries	T75	SFP Target 75 initiative
ISSCAAP	International Standard Statistical Classification of Aquatic Animals and Plants	UoC	Unit of Certification (for a fishery under the MSC program)
MARINTRUST	Global Standard for Responsible Supply of marine ingredients (Formerly IFFO RS)		

Appendix I | Top large shrimp species for farmed and wild production, with 2019 reported production levels

Farmed production

Common name	Scientific name	2019 production ('000 t)	% of total
Whiteleg shrimp	<i>Penaeus vannamei</i>	5,446.0	77%
Giant tiger prawn	<i>Penaeus monodon</i>	774.5	11%
Giant river prawn	<i>Macrobrachium rosenbergii</i>	273.7	4%
Oriental river prawn	<i>Macrobrachium nipponense</i>	225.3	3%
Penaeus shrimps nei	<i>Penaeus spp</i>	142.3	2%
Metapenaeus shrimps nei	<i>Metapenaeus spp</i>	72.3	1%
Kuruma prawn	<i>Penaeus japonicus</i>	52.5	1%
Fleshy prawn	<i>Penaeus chinensis</i>	38.6	1%
Other		63.6	1%

Wild production

Common name	Scientific name	2019 production ('000 t)	% of total
Natantian decapods nei	<i>Natantia</i>	756.9	31%
Southern rough shrimp	<i>Trachypenaeus curvirostris</i>	243.1	10%
Giant tiger prawn	<i>Penaeus monodon</i>	229.1	9%
Argentine red shrimp	<i>Pleoticus muelleri</i>	216.4	9%
Fleshy prawn	<i>Penaeus chinensis</i>	215.6	9%
Penaeus shrimps nei	<i>Penaeus spp</i>	191.8	8%
Siberian prawn	<i>Exopalaemon modestus</i>	98.0	4%
Oriental river prawn	<i>Macrobrachium nipponense</i>	98.0	4%
Metapenaeus shrimps nei	<i>Metapenaeus spp</i>	90.1	4%
Banana prawn	<i>Penaeus merguensis</i>	87.3	4%
Deep-water rose shrimp	<i>Parapenaeus longirostris</i>	29.2	1%
Yellowleg shrimp	<i>Penaeus californiensis</i>	29.2	1%
Blue shrimp	<i>Penaeus stylirostris</i>	27.3	1%
Other		164.2	

Source: FAO Fishstat (FAO 2021a)



Shrimp fisherman on the coast of the state of Nayarit, Mexico © Tomas Castelazo

FURTHER INFORMATION

<http://www.sustainablefish.org/>

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Sustainable Fisheries
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14 LIFE
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